YOUTHINKGREEN

TREE OF HOPE

HOW WE CAN CHANGE THE WORLD



A HANDBOOK
FOR THINKING GLOBALLY
AND ACTING LOCALLY

Konrad
Adenauer
Stiftung

TREE OF HOPE

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A HANDBOOK FOR THINKING GLOBALLY AND ACTING LOCALLY

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DID YOU KNOW?

"youthinkgreen – a special, perhaps even unique, concept."
Dr Angela Merkel, Chancellor of Germany

"This initiative is hugely important. I hope that the Tree of Hope becomes a forest. This extraordinary handbook gives us that hope. Very persuasive and inspiring!"
Prof Hans Joachim Schellnhuber, Director, Potsdam Institute for Climate Impact Research

"A ground-breaking book for my students! I've been looking for this kind of workbook for a long time. This helps us to become better people."
Anna Goio, teacher at the Liceo Linguistico Sophie Scholl in Trento, Italy

"Tree of Hope supplies expert answers and ideas that can be put into practice straight away. Very impressive!"
Prof Ernst Ulrich von Weizsäcker, Co-President of the Club of Rome

"Your project is unique in Europe and builds bridges between nations. You show us how we can work hand-in-hand for a cleaner, healthier world."
Bernard de Montferrand, Former French Ambassador to Berlin

"Tree of Hope offers exemplary field work projects that are worth emulating and excellent guidelines for workshops."
Carsten Antoni, teacher, Darmstadt

"We can all do something. Youthinkgreen is an outstanding example of this. I love it!"
Prof Claudia Kemfert, German Institute for Economic Research

"For a long time I have been wondering how I can live in a way that is more sustainable and environmentally conscious. Tree of Hope provides me with valuable tips and ideas for action. A wonderful book!"
Elisabeth Reinhardt, student, Hagen

"I admire your passion and respect. What you are doing is important for our survival – today and for the generations to come."
Martina Gedeck, actress

"It is rare to find such levels of joy, preparation and skill in young people."
Dr Dietmar Kress, Greenpeace

"Tree of Hope speaks to us, gets us moving and inspires us. I love it!"
Nora Guzu, student, Wellington (New Zealand)

"You'll really make a difference. Your group is great. Please keep up the wonderful work!"
Lang Lang, pianist

Of course we all know that it's high time for us to face up to the challenges of climate change. This book has the potential to finally make us do something. Thank you for that!"
Jana Fries, high school student, Bad Iburg

"The films convey the enthusiasm of a generation that no longer want to talk but to act. Their enthusiasm for more sustainable use of our natural resources is infectious. A very motivating book."
Thomas Frickel, AG Dok

"youthinkgreen – a happiness pill."
Hannes Jaenicke, actor

Nachhaltigkeit lernen
Weltdekade der Vereinten Nationen 2005-2014
Bildung für nachhaltige Entwicklung
UNESCO
Offizielles Projekt der Weltdekade 2013 / 2014



AN INVITATION TO GET INVOLVED

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In our daily lives we find ourselves faced with all kinds of questions:

Can I handle everything that life throws at me? How do I find my place in civil society, in a world that is constantly changing? What demands does this place on me? How and where can I find fellow campaigners for change? How do I build a social network? How do I want to live? What do I need to be happy? Am I willing and strong enough to hear, respect and appreciate the opinions of others?

We know that school grades are declining. Does this tell us something about young people's potential and the way they are being equipped for the future? About how they handle the ups and downs of everyday life, seize their opportunities and are prepared to act in the interests of our civil society and build bridges? Shouldn't these considerations be given a more prominent place in our lives?

These are fundamental questions that require legitimate answers. At *youthinkgreen* we believe our Tree of Hope will help us to identify and negotiate these challenges.

This book is more than simply a record of a unique project. It allows readers to delve into the

lives of young people all over the world. It is a treasure trove of global participation that allows young people to stand up for nature and say yes to being involved in building a sustainable, socially responsible world where everyone can find their place in freedom and dignity.

The contributions, records and examples in this book illustrate how creating change for peace has to begin with ourselves. We are all invited to get involved.

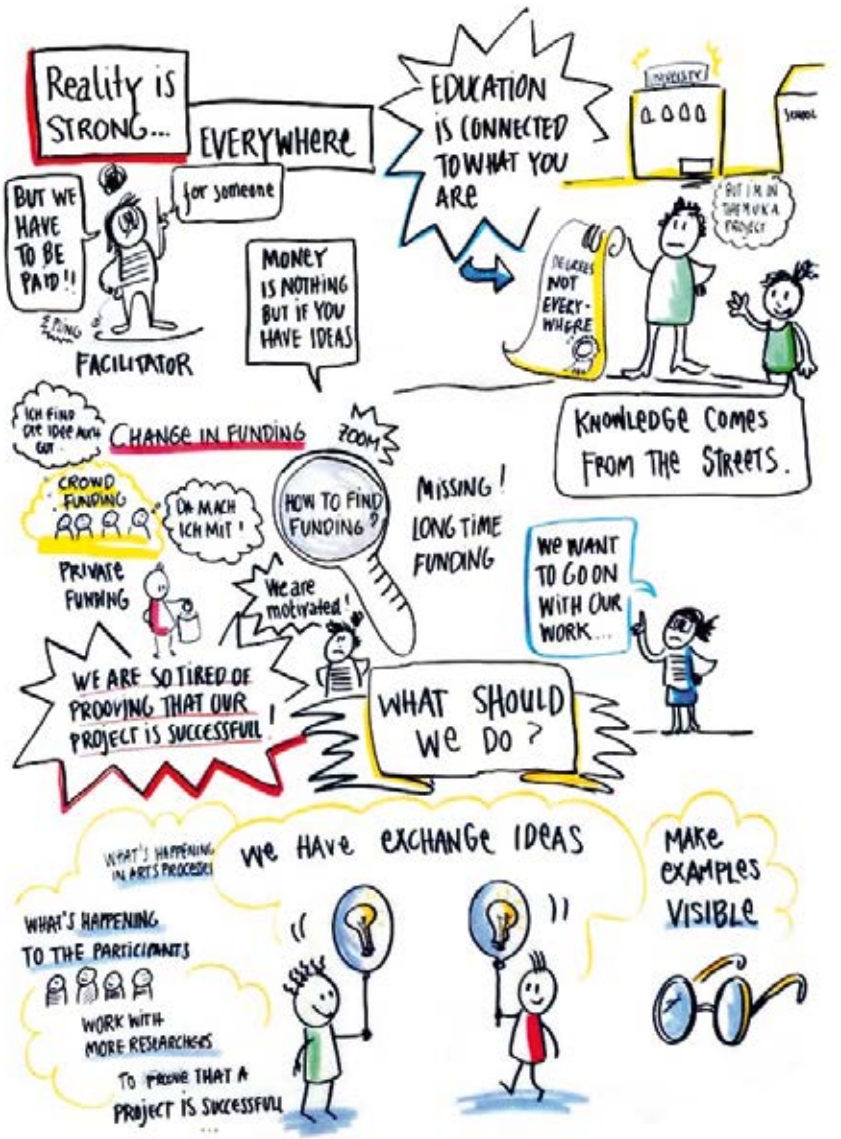
The Tree of Hope documentary on the accompanying DVD and the short videos about the environment are impressive examples of how to think and act in ways that display solidarity and an open attitude, underlining the basic mental attitude that we need to adopt for our continuing global co-existence.

We call out to young people everywhere: it is up to you to be the master builders of a global world. We hope our Tree of Hope project will open your eyes, arouse your curiosity, excite you and give you the strength in your daily lives to choose paths of solidarity that serve the global community.

In short, we hope it will inspire you to get involved and take responsible action for the sake of the common good.

If you get involved you will learn, grow and discover many more positive sides to yourself. Civil society is looking forward to getting to know more about your life and sharing your ideas.

This is the kind of report card we should be aiming for. Come and join us!



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TABLE OF CONTENTS

Page

Foreword

- Dr Angela Merkel, Chancellor of Germany 10

When a vision becomes action… – An introduction to the book 12
By Thomas Frick, Ariane Missuweit and Helmut Spiering

Topic 1: »Generation G – Green and Global«:
Lifestyles and the commitment of young people to greater sustainability worldwide 18

- Introduction 20
- How to Become a Changemaker: 22
  an interview with Wolfgang Gründinger *by Nora Marie Zaremba*
- "Our aim is to plant a billion trees": 28
  an interview with Felix Finkbeiner *by Gregor Landwehr*
- The post-growth economy – an elitist Utopia? 34
  By Niko Hübner
- My shrinking ecological footprint: a personal experiment. 40
  By Alisa Reimer
- The courage to change – thanks to the "school of life". 47
  By Johanna Krüger
- My path: from shy outsider to the world stage of climate policy. 54
  By Alexander Brock (Namibia)
- Green storytelling – a journalism workshop from *youthinkgreen* 60
  By Ariane Missuweit and Christian Vock

Topic 2: We are the change! – From the work of the *youthinkgreen* initiative

2.1. *youthinkgreen* compact 86

- Our *youthinkgreen* Philosophy: Strengthening the Engagement and Voices of Young People 90
  By Nadine Böttcher and Ariane Missuweit
- Globally Unifying Symbols: "Green Thread" and "Tree of Hope" 97
  By Nadine Böttcher, Ariane Missuweit, Helmut Spiering
- youthinkgreeners at UN Conferences: Slip into the Role of a Delegate – 106
  Experience Politics Up Close and Help Shape It
  By Dr. Tobias Romberg
- An Historical View of Intercultural Encounters: Laying the Right Foundations 113
  By Gerd Westphal, Dr. Tobias Romberg, Judith Gebbe and Nicolás Marin
- Open Competition – How We Expand Our Network: 128
  With an Application Piece *by Khoi Anh Dang*
- A Look Behind the Scenes of a "World Youth Parliament": 133
  How was the *youthinkgreen* Manifesto Developed?
  By Kiara Worth
- The *youthinkgreen* Manifesto: For Sustainable Living 138
- The "Tree of Hope" Documentary – Sample Field Work Projects in Moving Pictures 141
  By Rasmus Sievers

2.2. Field work projects leave a sustainable legacy

- Plastic Bag Free Osnabrück – Germany 152
  By Vanessa Kalisch
- School-Bike-Bus in Windhoek – Namibia 157
  By Alexander Brock
- Consolidating Environmental Ideas in Collaboration with GRIPS Theatre – Bulgaria 162
  By Anne Herrmann
- The Fog Catcher – Using Water Sustainably in Peru 167
  By Pablo Portal

- A Successful Green Start with Solar Energy in Egypt – Inspiring Activities by Committed Young Students 172
- The "Green Corner" of *youthinkgreen* – A Challenge for Your Group 177
  By Felix Beyers
- Project Workshop: Ideas Are Turned into Action 181
  By Nadine Böttcher
- Welcome to the Island of Meybie: Experience and Try out Alternative Modes of Consumption 190
  By Ariane Missuweit and Nadine Böttcher
- Television lies – We explain: From the script workshop of *youthinkgreen* 201
  By Thomas Frick

Topic 3: Climate protectioin and sustainability as the greatest global challenge

3.1. Rethinking: Anchoring sustainable development as a guiding principle in society 230

- Introduction
- Changing the world together – thinking and acting appropriately for the future 234
  By Jakob von Uexküll
- Thinking for yourself – thinking laterally – committing yourself: to a world with a future that is worth living in 240
  By Yvonne Zwick
- Do we have a right to a "good life"? 249
  By Dr. Thomas Fatheuer
- Politics in practice: Creating new worlds with "buen vivir" 255
  By Prof. Alberto Acosta
- The forest – a perfectly coordinated team 258
  By Dr. Erwin Thoma
- Living for the forest: Interview with forester Norbert Schmelz 266
- Practical education: Teaching and learning pathways in the forest 271
  By Josef Gebbe
- Environmental guardians versus entrepreneurs: Interview with Dr Fritz Vorholz *by Isabelle Tisson* 282
- Why traditional media have trouble with reports about "sustainability" 288
  By Eva Mahnke
- School subject of "Saving the World" – or: Is it actually possible to learn sustainability? 298
  By Dr. Marianne Dehne

3.2. Crisis: Global warming and the destruction of key ecosystems 306

- Introduction
- "More than hot air": Interview with climate consequences researcher Prof. Dr. Schellnhuber 309
  by Karoline Kmieciak & Ariane Missuweit
- The Amazon rainforest – a lifesaver in dire need 320
  By Dr. Thomas Fatheuer
- Hoping for rain 327
  By Dr. Auma Obama
- Practical education: Helping people help themselves in Kenya 328
- Water is life – the Global Peace Service charity (Weltfriedensdienst e.V.) is fighting against water theft 333
  By Katrin Steinitz
- The Secret of the Underwater Cave – a story 344
  By Ulrike Sinzel
- Why the ocean is slowly but surely becoming acid 349
  By Ulrike Sinzel
- The eternal ice is melting – a habitat is disappearing: An interview with Arved Fuchs *by Ariane Missuweit* 355

3.3. Tour de force: The international battle for climate protection and climate justice 366
- Introduction
- Climate refugees: Do we need to extend the scope of human rights? 368
  By Univ. Prof. Dr. Manfred Nowak
- The human face of climate change 375
  By Dr. Andrea Schapper
- Paths to climate justice: The battle for multilateral agreements 382
  By Prof. Dr. Mary Robinson
- From real life: The climate campaign of the German Red Cross Youth 389
  By Jessica Fritz

Topic 4: Exploring other paths – Solution initiatieves and courses of action

4.1. Insights into new social and economic models 398
- Introduction
- How ecological modernisation can succeed world-wide: a plea 401
  By Prof. Dr. Ernst Ulrich von Weizsäcker
- On the path to a post-growth economy:
  A brief guide to overcoming the "Dictatorship of Consumption and Growth" 409
  By sub. Prof. Dr. Niko Paech
- The economy for the common good – an economic model with a future?! 416
  By Dr. Christian Felber

4.2. Promoting and sharing responsibility for the energy transition 424
- Introduction
- Business People need more investment security 427
  An interview with Max Schön *by Judith Gebbe*
- Power rebels: The rocky road to "people's power" 434
  By Ursula Sladek
- The germany energy transition – a boon fo exports? 440
  By Dr. Christian Hübner
- China: Green revolution in a stinking boom? 448
  By Lea Deuber

4.3. Live sustainably and be mobile, but how? 456
- Introduction
- Alternative housing concepts – from hobbit holes to containers 458
  By Felix Simon
- Mobility – a high-quality asset! 466
  With input *from Gerd Würdemann, Lena Kasper and Prof. Dr. Peter Seeger*
- The battle for sustainable urban development: mobility in Brasília 478
  By Hanna Marzinkowski

4.4. Fully embracing the consumer revolution 484
- Introduction
- What really nourishes bodies and souls: 486
  An interview with Sarah Wiener *by Sandra Kirchner & Ariane Missuweit*
- Alternative forms of consumption: share, trade, borrow 498
  By Maike Gossen
- Fairly and sustainably produced: The latest smartphone trends 506
  By Christian Wölbert
- "Everything is repaired in the jungle": 513
  An interview with Catherina Rust *by Helmut Spiering*

4.5. A new look at our needs 522
- Introduction
- Ways to go from "wanting to have more" to "being able to have less" 524
  By Boris Woynowski
- Setting an example through happy frugality – triggering social change 530
  By Prof. Dr. Rainer Dollase
- "Enthusiasm is fertiliser for the brain": 538
  Christian Vock interviews André Stern

Topic 5: Looking ahead – Contemplating trends and questions for the future

5.1. Prospects for the Future and Scopes for Action 548
- Introduction
- Remedies against Futurephobia 551
  By James Goodman
- Design your future: Why it's important to think about the future 563
  By Prof. Dr. Stephan Rammler
- Ten future trends – Ten future questions 571
  By Prof. Dr. Armin Nassehi
- Agile futures: Mobility behaviour and technology use in an up-and-coming generation 574
  By Wolfgang Müller-Pietralla
- Always one step ahead of politics: The city of Freiburg 581
  By Prof. Dr. Rainer Grießhammer

5.2. Looking beyond of one's own nose – abroad 591
- Introduction
- Emerging India: Our elixir of life is under threat 593
  By Sunita Narain
- A political case study: Turning a vision into reality in Rwanda 603
  By Dr. Rose Mukankomeje
- No plastic bags? No problem! The small African country of Rwanda leads the way 606
  By Charlotte Zink
- Sustainability in Israel 614
  By Nora Marie Zaremba
- Sharing the fruits of communal labour in New Zealand: 620
  An interview with Mel Beirne *by Nora Guzu*

5.3. Sustainability as a Matter of Education 626
- Introduction
- From Practical Experience: Becoming More Courageous and More Political – Global Learning with Germanwatch e. V. 629
  By Inga Zinck und Stefan Rostock
- Looking towards New Learning Cultures: A Plea for Greater Freedom of Action 636
  By Prof. Dr. Gerald Hüther
- The School of the Future – A Vision from New Zealand 641
  By Nora Guzu
- Future and ideas workshop – from *youthinkgreen's* workshop 653
  By Nadine Böttcher and Georgina Guillen-Hanson
- More than tomorrow's music – courage to act: Our *youthinkgreen* song 661

Appendix
- List of keywords 664
- Image and source references 668
- *youthinkgreen* says: Thank you! 671
- Be part of it 672

FOREWORD

By Dr Angela Merkel, Chancellor of Germany

In 2013, Pakistani educational activist and winner of the Nobel Peace Prize Malala Yousaf-zai ended her speech to the United Nations in New York with the words: "One child, one teacher, one book and one pen can change the world."



The belief that a great deal can be achieved with limited resources is also a guiding principle behind the youth initiative *youthinkgreen – jugend denkt um.welt.* For some years now, this initiative has been working to promote greater sustainability and environmental awareness. Its work is based on a simple concept: bringing together children and young people. They develop their own ideas, proposals and strategies and then work together to put them into practice.

The Tree of Hope book is an impressive record of these activities. The contributions present a range of analyses, ideas for solutions and groundbreaking projects. They send out positive signals about the commitment of today's younger generation to act now for the sake of the generations to come.

We need to ensure that we have enough food, water and energy for our planet's growing population. In order to achieve this, we have to preserve our natural resources and limit the effects of climate change. This is why the United Nations backed the model of sustainable development at the Rio Summit in 2012.

Now we have to follow up on this commitment and take action – not only to initiate change but also to ensure that this change will last.

The German government is pursuing these goals in a number of ways. It has drawn up a sustainability strategy and set specific guidelines for combating climate change over the coming decades. At the European level, Germany is also driving an ambitious climate agenda, the increased use of renewable energies and a range of measures aimed at protecting the environment. We are committed to supporting and advancing the international sustainability process in line with the 2030 Agenda, as well as to an ambitious agreement on climate change.

The G7 summit in Elmau was a step in the right direction. The world's leading industrial nations pledged to reduce emissions so that average global warming is limited to below two degrees, and to decarbonise the world economy by the end of the century.

Climate change, the environment, food and education – the voices of young people deserve to be heard on all these global issues. Children and young people have an excellent sense of what is fair and right. They have an unbiased interest in creating a better world. They want to create change and make things better. The *youthinkgreen – jugend denkt um.welt* initiative helps young people to turn ideas on increased sustainability into reality. As their patron, I am delighted to lend them my support. Sustainability can only be achieved through the combined efforts of many people.





WHEN A VISION BECOMES ACTION ...

– An introduction to the book

© Sinan Onur Altinuç

It is 6 o'clock on the evening of Saturday 19 May 2013. At the Konrad-Adenauer-Stiftung in Berlin, more than 160 young climate ambassadors from over 30 developing, emerging and industrialised nations are hugging each other. After ten eventful days of lively discussions and inspiring workshops at the 1st World Youth Sustainability Summit they have agreed on a wide-ranging list of political demands – a manifesto. They have grown into an amazing team that has earned widespread recognition and approval, including from UN officials, who praised the summit initiated and organised by *youthinkgreen* as being "something unique that sets a good example for our planet".

A call to action

For most of the young people, attending the Berlin summit was an important milestone in their work with local environmental projects in their home countries, and it also inspired them to launch new projects. They all pulled together and felt the power of being part of an international movement. This led to a desire to create a detailed record of the work they had done so far. *"I need a concrete record of the path we have travelled together, a document that looks to the future and inspires people to get involved with the issue of sustainable development. This is what I want for my home country, for my fellow students and for my local area, so that more people will open their eyes to new perspectives and start to change the way they live."*

With our Tree of Hope media package, we are trying to satisfy this desire, which has also been expressed by our partners in politics, business and civil society. We want to bring together the voices of our generation of green, global thinkers, give them more power to express themselves and encourage our readers to get involved in the international Education for A Sustainable Development (ESD) programme.

What is special about the Tree of Hope media package?

Young people from more than 15 countries have been given an opportunity to express themselves in a variety of ways: in the book as authors, interviewers and committed world citizens; in the documentary film as impressive protagonists of their exemplary field work; and in the short environmental videos as creative and professional scriptwriters. Their voices arouse curiosity, their passion inspires and encourages people to think in new ways. Because it is about their own future!

The participants think about and question everyday life in different ways against the backdrop of global, environmental and social challenges, and experts from all over the world give their



© Aspects of Education for Sustainable Development, English Translation by Streissler A. of Stelzer I., Garczyk S., Streissler A., „Aspekte einer Bildung für nachhaltige Entwicklung" in: FORUM Umweltbildung (ed.) „bildung.nachhaltig.regional" 2012, p. 7

views. In their articles they outline the problems and provide suggestions for adjustments and solutions. We would like to encourage our readers to get involved in existing initiatives and start their own projects. We all have to work together to find and implement solutions that will help to increase global justice, protect the environment and tackle climate change.

We have prepared all the articles so that they can be used for educational purposes, bringing together project ideas and discussion topics under the heading **"Learn • Understand • Act."** Sustainability is a controversial and complex issue that has to be critically examined, debated and made tangible. In this way we are seeking to build a bridge between theory and practice and equip young readers to work on projects and in teams. To echo the words of Gandhi: **"Be the change that you want to see in the world."**



Which topics are included?

We understand that sustainability is a cross-cutting theme that is part of every school and college subject. If possible it should be integrated into all educational institutions and learning facilities. Educational programmes on sustainable development focus on connections and cross-linkages between the different disciplines, and this is something we are also trying to achieve with our media package. Therefore many aspects and questions in the different sections overlap, re-emerge in other places and in other forms, and are assessed in different ways by the young authors.

Section 1

In "Generation G – Green and Global", the authors give an insight into the values, beliefs, lives and engagement of a young generation that are generally referred to as "Millennials" or "Generation Y". It is clear that these young people think globally, and – thanks to digitisation, social networks and greater opportunities for travel – they are much more connected to people around the world than was the case for their parents and grandparents.

Of course young people's lives vary from country to country and region to region, so they also promote and practice sustainability in different ways.

Section 2

This presents the varied work undertaken as part of *youthinkgreen*: reports from youth groups about their local projects, the experiences of *youthinkgreen* delegates at the UN conferences in Rio de Janeiro (Brazil) and Doha (Qatar), impressions from our international meetings and ideas for innovative youth projects. Unlike many civil society organisations, we have not set ourselves



a specific theme but work on a range of environmental projects: for example the use of renewable energies in Egypt, green mobility in Namibia, plastic-free lives in Germany, barter schemes in Brazil, sustainable water use in Peru and recycling in India. At *youthinkgreen* we may all work in different ways to promote sustainable development, but of course we have a lot in common. We have created two symbols to strengthen our sense of unity: the Green Thread (a green wool armband) and the Tree of Hope. This is made from discarded waste to create the trunk and branches, and green paper leaves on which everyone can write their wishes, hopes and demands. We hope that the stories of the young people in this section will motivate and inspire our readers because they show that anything is possible if we are prepared to set off down unusual, untrodden paths!

Section 3

Renowned experts from different fields provide us with food for thought about why sustainable development and preventing climate change are the greatest challenges that humanity is facing. Climate change, dwindling natural resources and shortages of food and water bring many dangers that will directly affect us now and in the future. But rather than simply talking about these issues and providing warnings, the authors outline potential ways out of these complex crises. It is abundantly clear that we have no time to lose and that these issues not only relate to the environment but are also about justice and our very existence. We have to find new ways of thinking and finally take action to change the way we live. We all have to take individual action but also work together. Alongside our small individual actions towards greater sustainability we must never lose sight of the big picture. From politicians we urgently need binding international agreements.



Section 4

This section seamlessly follows on from these considerations and examines them in even more depth. The authors give insights into alternative economic and social models (4.1), renewable energies (4.2), trends for sustainable mobility and living (4.3), and into the challenges involved in alternative consumption and healthy eating (4.4). In this section (4.5) we also ask how a sustainable lifestyle can be combined with our individual quests for fulfilment, happiness and personal growth.

Section 5

Here we look ahead to the near future, discuss visionary ideas, introduce pioneers from Rwanda, New Zealand and Israel and confront readers with a number of questions: How can we maintain a basic attitude of optimism and find new, innovative ways of living sustainable lives? Ideally, who and what should inspire us? Which character traits and attitudes will help us to take responsibility for shaping the future? We also want education to play a more important role in sustainable development, so we are experimenting with new educational concepts.

The Tree of Hope media package is much more than just a record of our work. It is an invitation to get involved.



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How youth groups and schools can use the media package

Tree of Hope is aimed at a broad audience, particularly among schools, universities, youth projects, volunteers, educators, foundations, youth associations, clubs and other educational institutions. The wide range of topics means that the book can be usefully integrated into almost any school subject. It can also be used for extra-curricular environmental programmes, BNE programmes and for workshops in line with the concept of global learning. Its many practical examples are also ideal for helping children and young adults to launch their own projects.

The authors' views do not always totally reflect the views of *youthinkgreen*. Instead we have tried to include a broad range of views and potential paths towards sustainable development and to transmit these through a variety of narrative styles (objective and neutral, journalistic and balanced, and strongly opinionated). So it is up to the younger readers to question, discuss and examine the authors' views and statements and to make up their own minds.

We have created **"workshops"** to help young people to start their own projects and practice how to communicate sustainability strategies. In the **Scriptwriting Workshop** we provide the tools and knowledge to critically examine advertising. We also learn how to write challenging scripts for short videos on environmental and climate issues, and then film them (see 2.2). In the **Writing Workshop for Journalists** we show our readers step-by-step how they can become storytellers of green themes (see 1). In the **Future Ideas Workshop** (5.3) and the **Project Workshop** (2.2) we describe in detail how successful projects can grow from the visions of young people.

BNE calls for the engagement and participation of citizens of all ages and social strata. We hope that many young people and adults will be inspired by the workshops and will be motivated to get involved, make their own lives more sustainable and above all pass this on to others.



Festival of Utopia in Braunschweig
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Accompanying DVD with documentary film and environmental videos

On the accompanying DVD we present the results of our international scriptwriting workshops: a selection of short videos on the environment, written by young people, which show how we can use the media for our own purposes, such as for promoting green lifestyles. And the one-hour documentary film "Tree of Hope" by Rasmus Sievers allows us to share in the personal growth of young climate ambassadors in India, Namibia, Germany and Qatar as they developed their projects. It encourages us to get involved and face up to the huge challenges of sustainable development and leading a sustainable life.

We have put together the following tips and guidelines for our young readers:

INFO 1: BACKGROUND TO THE CONCEPT OF "LEARN • UNDERSTAND • ACT"

Our authors' articles provide information, explanation, and inspiration, and provide a great deal of interesting food for thought. The exercises in **Learn • Understand • Act** are designed to examine the issues raised in each article. By doing additional research you can learn, build a sound knowledge base and gather a wide range of opinions.
Knowledge is power. But knowledge can also be too theoretical and abstract. You probably already know something about the devastating effects and consequences of our lifestyles on the environment and climate. But sometimes it feels that our actions are too small to really make a difference. So it is important that we use our knowledge to draw the best conclusions and use it in the right way.



Brunnenbau im Damaraland (YTG Namibia)

Intensive discussions in your study groups, talks from experts and witnesses, excursions and workshops help you to understand the issues in a more real and tangible way. This helps you to really **understand** natural processes, related social issues, and so on.
The final step is to use your knowledge and understanding to play an active, responsible role in a sustainable future that is worth living. You can get involved in a wide range of campaigns and projects, discover and expand your talents and skills, and strategically pursue and achieve your team's goals. Look for supporters among your friends and family. Don't be afraid of talking about your issues and ideas. Tell people about them, ask them questions and open their eyes. Encourage others to get involved and act, rather than simply waiting and passing the responsibility to others.
We hope you will enjoy making your voice heard and helping to shape a future that is worth living for you and the generations to come. Figuratively speaking, this trio of Learn • Understand • Act are the rungs on your ladder of success, which will allow you to live in the best possible harmony with nature and your fellow humans.

INFO 2: TIPS AND REMARKS

In many articles we make reference to online sources, online research and email communication. We would like to encourage you to make use of green alternatives such as Ecosia (search engine), Posteo (e-mail provider), energy-saving computers, etc (the keyword is "green IT").



This book can be read from front to back, but it is also ideal for dipping into. Just start with the section and articles that interest you the most. Each of the five sections includes a detailed introduction to its contents.
For all questions and requests please contact the *youthinkgreen* office in Berlin: info@youthinkgreen.org

"GENERATI
– GREEN AN



From 10–20 May 2013,
youthinkgreen organised the 1st World Youth Sustainability Summit in Berlin.
In the "garden of the world" – a place for cultural exchange
that brought together different faiths and lifestyles –
the young people recorded their optimism and solidarity
through a symbolic Tree of Hope.

Konrad
Adenauer
Stiftung

ON G
D GLOBAL":

Lifestyles and the commitment of young people to greater sustainability worldwide

Introduction
Page 20
How to become a changemaker: an interview with Wolfgang Gründinger. By *Nora Marie Zaremba*
Page 22
"Our aim is to plant a billion trees": an interview with Felix Finkbeiner. By *Gregor Landwehr*
Page 28
The post-growth economy – an elitist Utopia? By *Niko Hübner*
Page 34
My shrinking ecological footprint: a personal experiment. By *Alisa Reimer*
Page 40
The courage to change – thanks to the "school of life". By *Johanna Krüger*
Page 47
My path: from shy outsider to the world stage of climate policy. By *Alexander Brock (Namibia)*
Page 54
Green storytelling – a journalism workshop from *youthinkgreen* By *Ariane Missuweit* and *Christian Vock*
Page 60



Introduction

Researchers call our generation the "Millennials" or "Generation Y" ("Why"). This is probably because we are prone to questioning – the world of work, our lifestyles, how we run our economic system. But instead of pursuing great, idealistic ideas many of us prefer pragmatic solutions. Generation Y tends to focus on what is feasible, on the here and now. Most of us have a good education and believe that the working world should fit in with our ideas of justice and with our needs – more autonomy, opportunities for personal fulfilment, more time with family and friends, and not the other way round. This is why some sociologists consider us to be egocentric.

Studies of young people also show that social engagement in green issues is important to us. We understand that a critical questioning of society – in the sense of "why" – also has to be backed up by personal initiative, proposed solutions and a willingness to act. Passive resistance or simply hiding away in our private idylls is not enough. We are shocked by the crises and global challenges that we face (see topic 3.2) and we have long understood that we can't go on like this, that there is an urgent need to transform ourselves and our social systems, and that we have to sow today what we want to reap tomorrow. But solidarity is not all about shouting the loudest and protesting in the streets. It begins locally, but it does not end there.

The online revolution and advent of the social networks mean that it is now much easier to cut across cultural and geographic boundaries. More than any generation that went before, we are globally connected. We love to travel and see the world through different eyes. And we no longer rely on getting our information from classical media sources.

This is why we have named this topic "Generation G – Green and Global".

Of course young people today all lead different lives and so also interact with green issues in different ways and in different contexts. In this section we introduce you to some young, committed people.

Wolfgang Gründinger and his foundation advocate generational equity and the right to vote from birth. We asked him what caused him to give his time to this issue. He told us about the skills people need to become changemakers in society, and what young people can do to be heard, including by politicians.



Felix Finkbeiner decided to get involved in the fight against climate change from a young age. After working on "The End of the Polar Bears", a school project on the climate crisis, he joined with his teachers and classmates to create the "Plant for the Planet" campaign, which now involves children and young people worldwide.

We asked **Niko Hübner,** a board member of Germany's BUNDjugend organisation, to look at the issue of the post-growth economy and the theories of Niko Paech (see chapter 4.1). Niko examines the extent to which Paech takes into account young people's very diverse lives and whether his proposed personal "environmental balance sheets" can really offer a solution.

Young journalist and yoga teacher **Alisa Reimer** conducted her own experiment when she followed a strict CO_2 diet for 7 days in order to reduce her carbon footprint. She found it easier to give up eating particular foods than to deal with the sidelong glances and questions of her friends.

Johanna Krüger (from Germany) and **Alexander Brock** (from Namibia) take a detailed look at how they changed their lives. They describe how it is necessary to have the encouragement and support of mentors, role models and teachers in order to develop a sense of social and environmental responsibility and be involved in real processes of change.

One thing is clear: sustainability must not only be lived, but also communicated. This is why **Ariane Missuweit** and **Christan Vock** finish off by introducing us to the art and craft of "green storytelling" in the journalistic writing workshop run by youthinkgreen. We can only steer societies towards sustainable development if we work together as a large community; if we succeed in convincing more people to think about how they live their lives and take action.



HOW TO BECOME A CHANGEMAKER

An interview with Wolfgang Gründinger

Wolfgang Gründinger published his first book "Öko-Revolution" when he was just 17. Other books have followed ("Aufstand der Jungen", "Wir Zukunftssucher" and "Lobbyismus im Klimaschutz"). His early political engagement in many aspects of generational equality meant that in Germany he became known as the "young people's advocate". However, he would prefer to be known as an independent "lobbyist for the future". In an interview, Wolfgang tells us what sparked his desire to get involved in social policy – and how it is possible to become a changemaker at a young age. ***By Nora Marie Zaremba for youthinkgreen***

***youthinkgreen*:** Wolfgang, what do you think are the main challenges that our world is facing?

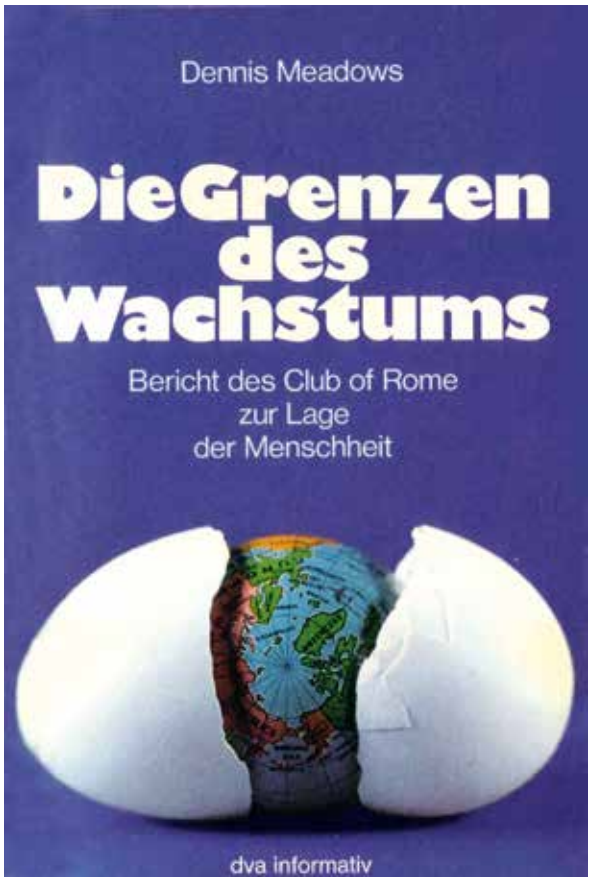
Gründinger: There are many unresolved issues that are closely interwoven, beginning with financial inequality. And although we are producing enough food, 50 million people still go to bed hungry every day. This is closely linked to the issue of education. More than 100 million children do not even have an opportunity to go to primary school, so they have no prospect of a better life. Girls and women still face discrimination, both in education and in the labour market. And of course we urgently have to rethink the way we produce and consume. For example, we eat far too much fish, which is having a catastrophic and probably irreversible effect on the world's ecosystems. And last but not least we have to make drastic cuts in CO2 emissions. Millions of people today are living with the constant threat of natural catastrophe, and climate change will only make these problems worse.



© Hiking Artist_Frits Ahlefeldt

***youthinkgreen*:** When and how did you begin getting involved with all these very complex issues?

Gründinger: I'm afraid my story is quite boring, even a little sad. As a young teenager I had no close friends, no fulfilling hobbies



and very little money. So I used to spend a lot of time in the little library in my home town of Tirschenreuth. One day I read "The Limits to Growth", published in 1972 by the Club of Rome. The main point of this report was that if the global population keeps growing and we continue with the same levels of industrialisation, pollution and resource consumption, then we will reach our planet's limits within the next hundred years. By then we will be faced with the prospect of ecological collapse. Today these fears have become almost an irrevocable truth. At first this really shocked me. But then I wanted to get seriously involved in saving the world.

Tearing down walls

***youthinkgreen*:** So this report by the Club of Rome was the trigger for today's involvement in social and political issues?

Gründinger: In fact it started much earlier. I would almost go as far as to say that politics is in my blood. My mother likes to tell me stories about this, though I don't remember what happened. For example when I was five years old we watched the fall of the Berlin Wall on TV. I was very impressed by all the people celebrating on the wall, although I obviously didn't understand the political issues involved. My mother simply explained to me that the people were happy because the wall had come down. So I thought: walls separate people so walls have to come down. The next day I picked up a hammer and tried to pull down the wall between us and our neighbours. Of course they weren't very happy about this. Since then I have always got involved in demonstrations and protests. I no longer wanted to be on the sidelines. The Club of Rome book clearly showed me that there are a lot of things that are wrong in our world. I could no longer stand by and watch them happen.

***youthinkgreen*:** So what did you do next and how did you find people with similar views?

Gründinger: I decided to get involved in politics and joined the SPD. I was active in the Young Socialists in the SPD organisation in Bavaria. I also began researching online to find out more about the Club of Rome, but this was difficult because they didn't even have a website and didn't seem to be very forward-thinking. But I stumbled



Gründinger in an interview with ZDF
© Behörden Spiegel / Klaus Dombrowksy

upon the Foundation for the Rights of Future Generations. They put me in touch with students and helped us to set up a cross-party, international youth network, the Youth for Intergenerational

Justice and Sustainability (YOIS). We only had between 10 and 20 students who were active members and at 17 I was the youngest. Unfortunately we had to dissolve the association after a couple of years because we had fewer and fewer active members, partly because of disagreements and quarrels in our ranks, and partly because many of them had to focus on starting their careers.

youthinkgreen: You talk about the right of young people to have a voice in politics. Do you think politics is the main way of bringing about change, perhaps your best chance of making things happen?

Gründinger: Politics is not the only way. There are many innovative initiatives that have come solely from citizens, for example the Silent Climate Parade – a silent dance protest on the streets of the world's major cities in support of doing more to prevent climate change – or the Occupy movement with its legitimate critiques of capitalism. There are also other useful approaches, such as carrot mobbing, campaigns against plastic waste, and youth projects such as Felix Finkbeiner's Plant for the Planet. But if we are to achieve real transformation we also need political support, regulations and laws. For tactical reasons, the political parties generally do what they think the majority of its citizens want. This is why I think it is time to remove the age limit on the right to vote. This would mean that the needs and opinions of children and young people – who make up 17% of our ageing population – would have a much bigger impact on politics.

THE AUTHOR

Nora Marie Zaremba (b.1987) is a freelance journalist (including for WiWo Green, der Freitag) and works in the campaigns department of an environmental foundation. She was motivated to devote herself to the environment, climate change and sustainability after spending a year working in India.



youthinkgreen: But you still had some amazing opportunities at this time; when you were just 17 you were a delegate at the UN Climate Change Conference in Bonn and one year later at the UN Sustainable Development Summit in South Africa. Did you feel that the politicians took you seriously at these summits, despite your age?

Gründinger: No, of course not. In Johannesburg I have to admit I was totally overwhelmed; it was the first time I had been abroad on my own; in fact it was the first time I had ever been on a plane. It wasn't easy to communicate in my schoolboy English. Everything was new to me, including all the English acronyms used by international organisations. I really wasn't very well prepared. But even years later when I was a student, I still felt that adults didn't take us seriously. Their attitude was more like: "First you need to study hard, grow up, graduate and get some work experience. After that, once you've gained the necessary expertise, maybe you'll be allowed to join the debate." And as for the politicians, they just seem to want young people to stick to planting trees and protecting wildlife. But this has nothing to do with being involved in political decisions. As a young person, politicians only take you seriously when you have gained a certain standing – success in your profession or the media.

"We want to vote" campaign

youthinkgreen: So are you saying you want the right to vote from birth? How would that actually work?

Gründinger: Absolutely, and I'm sure that I'll see the law changed in my lifetime. Our campaign is called "We want to vote". In the 2013 German parliamentary elections once again millions of people under the age of 18 were not allowed to vote. This situation is no longer acceptable. This is why the Foundation for the Rights of Future

Generations joined 15 children and young people to make a formal protest against the elections, but it was rejected by the Bundestag. But this has not stopped us and now we have made a complaint of unconstitutionality to the Constitutional Court in Karlsruhe. I am convinced we will be successful. This will finally improve generational equality and democracy in Germany.

is just a small, simple action, but it is designed to encourage politicians to think about sustainability and the lives of future generations when making their decisions.

***youthinkgreen*:** What have you learned from your work as a "lobbyist for the future"? Looking back, what mistakes have you made and what has been your biggest success?



YTG climate ambassadors in talks with environmental spokespersons for German parliamentary parties.

***youthinkgreen*:** How else can young people get politicians to listen to them?

Gründinger: Online petitions are a good way. Nowadays it's much easier gather signatures quickly and make your demands known, compared to collecting signatures in the street. At the Foundation for the Rights of Future Generations we have created a legislative prize. This recognises excellent legislation rather than people. And recently we awarded certificates to members of all parties in the Bundestag for deciding that Germany will stop generating nuclear power. This

Gründinger: There's a saying that I like very much: "A mosquito can't hurt a rhino. But a thousand mosquitoes can force a rhino to change direction." So you either have to join an existing group or set up your own group, such as a green company in your school. One of the mistakes I made in the early days was trying to do too much at once. I belonged to a number of think tanks and rushed around from event to event, but in the end I had my finger in too many pies and didn't really achieve anything. I also found it frustrating to sit alone in my room writing, which is what

I did when I began my studies. But now things are different. With my work at the Foundation I can set up projects without much in the way of financial resources and I have found a fantastic team. I am no longer a reclusive bookworm or a lone fighter.

Conquering the fear of failure

***youthinkgreen*:** What does it take to be a changemaker?

Gründinger: I think the most important thing is simply to get started. The right strategy becomes clear as you go along. Rather than starting something on your own, it's better to find a group of people who share your vision. When you're in a group you can keep each other motivated when you experience setbacks. And it's vital that you conquer your fear of failure. This is something that is very widespread in Germany. We all know what it's like to freeze during a panel discussion or speech; to panic when something goes wrong when you're organising an event; or perhaps your application has been rejected. But it's not the end of the world. If you fall flat on your face, just dust yourself off and start again. It's known as "failing forward". You can take something good from every mistake and learn from it. This attitude has always helped me in my voluntary work and my career.



youthinkgreen-Teamwork

LEARN • UNDERSTAND • ACT

1. Gründinger was not born a changemaker..

a) What were the main circumstances that led Gründinger to become a changemaker? Talk about it together.
b) How did he change as a result of his commitment to social issues?
c) Discuss his view of the main global challenges.
d) What have you learned from Gründinger's article? Are there any areas where he is a role model for you?

2. Everyone can instigate innovative, entrepreneurial, social change.

a) In your own words, describe the role of a changemaker.
b) How can you find committed people who share your vision?
c) You want to get a particular message across in civil society. Gründinger recommends that you simply get started. But others believe that you should first examine your message, for example in terms of its social benefits, specific goal and a viable strategy. Discuss the pros and cons of these two approaches.

3. Experts criticise the fact that young people in Germany are wasting their potential for getting involved in social issues.
Discuss why it is important to take on the role of changemaker at a young age and take action.

4. Competition: We Are Changemakers!

a) Work together with your school, parents and student representatives to get involved in the We Are Changemakers! competition and come up with ideas for green projects in your school.
b) Present as many ideas as possible in an appropriate way and decide which of these ideas you will work on together.



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"OUR AIM IS TO PLANT A BILLION TREES"

An interview with Felix Finkbeiner

It all began with a school project about climate change in the fourth grade. At that time, in 2007, Felix Finkbeiner was nine years old, and since then he has been obsessed with this issue. He and his fellow students soon realised that the problem couldn't be solved simply by talking about it. Inspired by reforestation campaigns in Africa, they began planting trees and encouraging their schoolmates to do the same. From this small school campaign Felix and his fellow students gradually developed the international youth initiative Plant for the Planet, with the aim of linking climate protection to social justice. Many supporters all over the world have helped them to plant almost 13 billion trees. Now they have set their sights on the trillion mark.

By Gregor Landwehr for youthinkgreen

***youthinkgreen*:** Felix, nine-year-old schoolboys are interested in all sorts of things such as cars, football and tree houses, but they tend to be less interested in complex phenomena such as man-made climate change. So why were you different?

Finkbeiner: I first heard about climate issues when I was at primary school. While I was working on a project on climate change, my granddad showed me Al Gore's film "An Inconvenient Truth". And my father often used to discuss political issues, globalisation and social injustice in the world at the dinner table. So I already knew quite a lot about it when I finally presented "The End of the Polar Bears" to my class. This was the name of my talk because I particularly liked and admired polar bears. My favourite soft toy was a giant polar bear.

My classmates and I soon realised that it wasn't only about animals becoming extinct, but also about the future of the human race – our future. We knew we had to act fast.

Inspiration from Kenya

***youthinkgreen*:** You had the idea of planting trees to fight climate change. That's an obvious idea, but how did you actually go about it?

Finkbeiner: We followed the example set by Kenyan Nobel Prize winner Wangari Maathai. While preparing for my talk I did some research online and found out about her project. With her women's organisation the Green Belt Movement, Wangari Maathai has planted 30 million trees in Kenya in the space of 30 years, a very impressive figure. So we thought we would do something to help. It was a team project right from the start. My fellow students and teachers at the Munich International School in Starnberg were keen to support my idea.

Two months after my presentation, I planted my first tree, a beautiful apple tree, right by the school entrance. From the get-go we gave a lot of presentations about our idea, first at my school and then in other schools.

We produced a flyer which we sent out to 20,000 schools all over Germany. Many of them expressed an interest, and we also talked to educators. They suggested that we organise one-day events so that we could tell other children about the project and its background. This led to our Plant for the Planet academies.

After attending one of these academies, a lot of children were keen to set up their own activities, or they continued working on projects that they had begun in their groups at the academy. It's a big help when they get support and advice from parents and teachers.

***youthinkgreen*:** Did you have an elaborate strategy or a recipe for success?



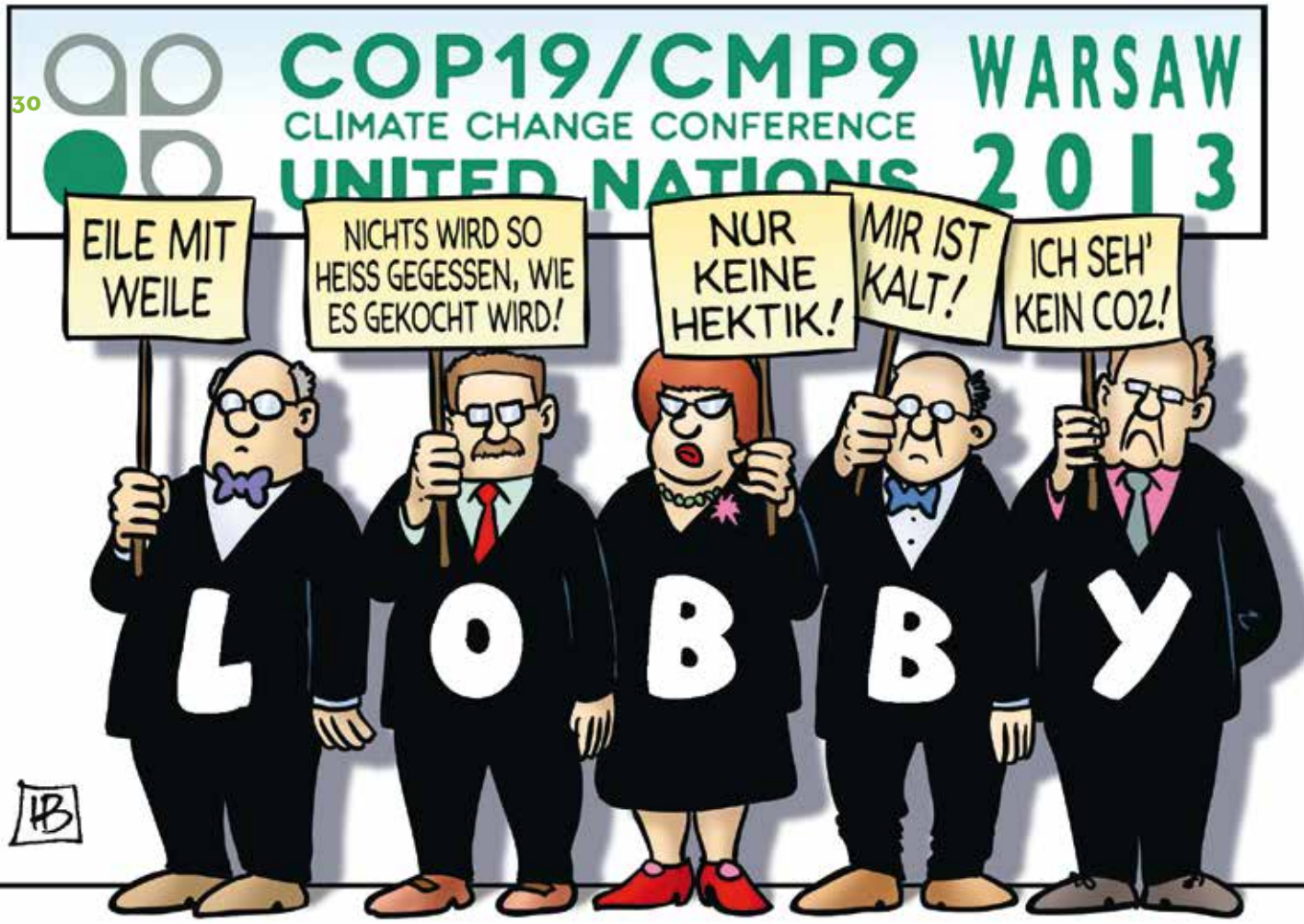
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Finkbeiner: Our success was basically down to the fact that it is very easy to put our idea into practice. Anyone can do it and it's easy to explain the point of it to children all over the world. Three years ago we spent a month in Kenya. We ran twenty Plant for the Planet academies in all kinds of different places – one day we were in a slum, the next in a private school. Regardless of their social status and education level, the children immediately understood that something had to be done and were keen to help.

***youthinkgreen*:** t that time, how were you helped to turn your little school project into a global initiative?

Finkbeiner: We managed to get Klaus Töpfer, the former German Environment Minister and Chair of the United Nations Environment Programme (UNEP) to be our patron. After about a year we started getting more and more invitations and requests. In 2008 I took part in the UNEP Children and Youth Conference in Norway and presented my vision, namely that children should plant one million trees all over the world. The following year at the conference in South Korea, Plant for the Planet became an international movement. Children from more than 50 countries joined in with our initiative.

My parents run their own foundation, so of course my father helped us to set up structures for the project and to deal with bureaucratic and legal issues. Then a company paid for our first full-time employee, who worked in our house. But as we got more and more enquiries we had to look for more staff and find ourselves an



office. This meant that we needed help from adults fairly quickly. In 2010 we founded the Plant for the Planet Foundation in order to coordinate our activities in a better and more targeted way.

A tax on the future?

youthinkgreen: What setbacks and frustrations did you have to deal with along the way?

Finkbeiner: Of course as a small foundation you never have enough money, and there are strict rules about how you can spend money from donors. Then we had the idea of creating a "future fee", a kind of tax on the future. We wanted companies to voluntarily commit to donating 0.01% of their annual turnover to our project. But at our launch event we were unable to persuade a single company to get involved. This was really disappointing.

But since then some confectionery manufacturers have changed their minds. The lack of results from international climate conferences is also pretty frustrating. We discovered that politicians can do more damage by doing nothing than we can achieve through our actions. The UN Climate Conference in Cancun, Mexico in 2010 was very demotivating. We spent six months preparing for it – a lot of young people were there – and our T-shirts bore the slogan: "We're here to protect the future – why are you here?" A lot of people told us they had lost all hope of reaching an agreement. This made us feel very depressed. But the UN and their subsidiary organisations are the best that we have, so we have never stopped hoping that something will change – perhaps next year, or at the next conference.

youthinkgreen: You attracted a huge amount of media coverage when you first started out. Do you need to reach the public in order to achieve change?

Finkbeiner: Of course the media coverage was very important in order to get our idea out there and find more people who were interested in getting involved. Without this coverage we would have found it much more difficult to raise money for the project. Of course I hope that we have raised public awareness of the problems involved in fighting climate change. We never approached journalists ourselves, but we also never refused to do interviews. It was an advantage that we were so young when we first started planting trees. It meant we really stood out.

youthinkgreen: You are now in the 12th grade and will soon be leaving school. Have you thought about how you and the project will go on from here?

Finkbeiner: Yes, I have to concentrate on my studies so this year I haven't been as active as in the past. But that's not so bad because now I'm just a small part of this organisation. My level of involvement doesn't make such a big difference any more. Now we have more than 100,000 helpers and I am no longer the leading light of our project.

Since 2011 Plant for the Planet has had a democratic structure. All the children and young people vote online to elect a global board which makes the important decisions. On a personal note, when I leave school I am hoping to study abroad and of course I will continue to work on Plant for the Planet campaigns on the ground. Wherever possible, youth projects need to in-

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Gregor Landwehr (b. 1983) is a freelance journalist, shareholder in the Academy for New Journalism and publisher of the magazine Debatare. www.gregorlandwehr.de



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volve a large team and be set up so that they will continue, even if you have to step back a little or indeed grow out of the project. This has been the case for us at Plant for the Planet.

youthinkgreen: There is no doubt you have achieved a huge amount. So is it difficult to set yourself new goals?

Finkbeiner: No, quite the opposite. By 2050 we have to ensure that 100 percent of our energy comes from renewables and that we have drastically reduced our CO_2 emissions. This has been demonstrated by the latest study from the German Advisory Council on Global Change.

By 2020 we hope to have planted a trillion trees around the world and expanded our global network. More specifically, we want to motivate and train at least a million children to become ambassadors for climate action. So we have only taken our first steps along the path.

LEARN • UNDERSTAND • ACT

1. In 2010 Felix and his fellow campaigners set up the Plant for the Planet Foundation.

a) What specific circumstances contributed to this idea becoming a global movement?
b) What was special about this idea? Who did he seek out as role models? Why did he do this?
c) What kind of support did they receive?

2. Every success is accompanied by difficulties. What frustrations did he experience?

3. Felix hopes that his long-term goals will be reached in a specific period of time. What social circumstances contribute to this hope?

4. Even when they were at primary school, Felix and his schoolmates realised that the problem of climate change was bound up with their own future.

a) How did he and his schoolmates come to understand this?
b) What conclusions do you draw for yourself from Felix's interview? Discuss your thoughts with the group and perhaps come up with your own wish list.

5. Action: Plant trees. Join us!

a) What do you have to think about before you can start planting trees? Write a list of your questions and get in touch with forestry organisations or forest rangers. Do some research online.
b) Your school wants to sponsor a piece of forest. How would this enrich your school life? Are there any arguments against it? What would you need to do? Produce a flyer designed to get people involved.



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THE POST-GROWTH
AN ELITIST UTOPIA?

Von Niko Hübner

Niko Paech calls on us to radically rethink the way we live and our consumption habits (see Section 4.1.). He argues that previous efforts to protect the environment have all failed and that people who fly halfway around the world to attend conferences and educational programmes – in the name of of "sustainability" – are actually contributing to the problem of climate change rather than coming up with just solutions. But to what extent does the model of the post-growth economy actually tie in with the very different lives led by young people? How realistic are Niko Paech's demands? As young people, where do we reach the limits of what we can do, and shouldn't we be thinking more critically about systems and authority?[1]



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"Does your foot fit on this planet?" this is the first link and the heading of a popular online article that I found recently when I typed the words "ecological footprint" into a major search engine. As a German, I unfortunately have to answer with a resounding "No", and I can't do much about it through my own efforts. I joined the environmental movement three years ago and began changing my consumer behaviour. I live in a shared house and have second-hand furniture in my room. And of course we use green electricity. In the last two years I have bought 95 percent of my clothes second-hand. I reuse envelopes for writing notes in lectures and I hardly possess a book, because I can borrow the ones I need from Berlin's libraries.

1) My thanks go to Janna Aljets and Yannick Ecker for their valuable assistance.

H ECONOMY –
?

But two years ago things were very different. At that time I was happy to dig deep into my pockets and treat myself to the latest green, fair trade fashions. But since then I have seen through the game of "ecological hide-and-seek" that Niko Paech warns of in his writing and talks. Many of my friends and acquaintances love to take part in clothing exchange parties or have joined food cooperatives in order to buy locally-grown (of course organic) produce at a reasonable price.

And I prefer to travel around Germany using car share schemes or long distance buses, or I take my holidays in my home town of Berlin rather than flying half way around the world every six months to attend a conference or practical training session. It's a long time since I took my first – and last – flight, from Hamburg to London and back. In a year I make around 20 longer journeys within Germany – either to visit my family or to carry out my voluntary work.

Everyday sins

But these efforts still don't excuse me or other young people for the fact that our feet are too large, we consume too much and contribute to climate change.

I have to admit to my little sins in this respect: a three year old smartphone, a used laptop (according to Amazon) and occasional evenings out in Berlin's clubs. The latter certainly involves a lot of electricity and produces a considerable amount of waste. But Niko Paech is right when he says that these individual decisions are not enough when we think about the amount of energy used by society as a whole. From 1966 to 2012 our ecological footprint has doubled and is still growing. It is currently at 18 billion global hectares (gha), or 2.7 gha per person. If we want climate justice for the whole world then we have to reduce our CO_2 consumption in such a way that every person has a footprint measuring no more than 1.8 hectares, so that we conserve existing resources and do not exceed the biocapacity of the planet.

In Germany the average ecological footprint is currently around 4.6 gha, because we have to add our personal consumption to the collective footprint. This includes the CO_2 emissions involved in building and running national infrastructures – educational institutions, water supplies, hospitals, authorities and ministries, public broadcasters and electricity grids. Just the ecological footprint of Germany's public systems (infrastructure, authorities, etc) equates to around 2 ha per person. What can we do as citizens, as young people, to save energy and resources in this respect? Will people in Germany ever be prepared to accept the restrictions involved?

And I'm not even sure whether our public system in Germany needs to shrink. Instead I fear that calculating individual environmental balance sheets – as called for by Niko Paech and others – will only make a limited contribution to building a post-growth society. Unfortunately, the willingness of me and my friends to reduce our own carbon footprints can quickly run aground on fossilised social structures and existing legislation. One question keeps going round in my head: how can society make such a huge transition when most top positions in politics, business, the

civil service, the media and academia are held by middle-aged or elderly white, heterosexual, male academics, meaning that power is in the hands of one particular group in our society? We will never make any real progress unless we start asking fundamental questions about how we are governed.

The model of the ecological footprint was also developed by "elite" groups as a kind of resource accounting, based on a capitalist world view. And yet we – the majority in society – are expected to simply accept this idea? We are expected to restrict how we live our lives while the older generations incessantly used up our CO_2 quotas and continue to do so? Are young people who are committed to sustainability allowed to fly less than senior politicians, company bosses, lobbyists and climate researchers? Of course not. I don't mean that it is not worth aiming to reduce the ecological footprint to a per-capita average of 1.8 hectares. But we cannot allow politicians to dictate how we achieve this, unless it is with laws and regulations that apply to everyone equally and that are backed by everyone equally.

Involving everyone in the transition

Many young people are attracted by the idea of a 20-hour week, so doing less work and having more free time than their parents' generation. If we can live on it, then fine. But at the end of the day, worries about financial independence, career interruptions and the resulting exclusion tends to hold us back from insisting that we want to work part-time to potential employers when applying for 40-hour-a-week jobs. And what should I say to a single mother who works 60 hours a week because she is studying and doing part-time jobs in order to put food on the table?

ABOUT THE AUTHOR



Niko Hübner (b. 1992) studied geography in Berlin and is a board member of BUNDjugend. Since 2010 he has been giving his time to work on initiatives in the fields of nutrition, agriculture, sustainable business, post growth and urban development.







Yes, I know many people in my generation are prepared to restrict the amount of clothes they buy or the flights they take. But what should I say to my fellow students who need to take trips abroad or get work experience in other countries in order to complete their studies? What should I say to my neighbours, a family on a low income who can never normally afford to go on holiday, but now want to treat themselves to a long weekend in Spain? Niko Paech has no answer to this. How do we involve people at the point that they are in their lives? How do we deal with the huge range of different lives that people lead in Germany and around the world?

The environmental crisis has to be tackled by transforming society as a whole, which – despite equal rights and obligations for all – has to take into account the material and non-material needs of different groups and individuals. Otherwise we will never be able to effect significant change, and we will find ourselves stuck fast, halfway along our path to a post-growth society.

Paech calls for schools and educational institutions to focus more strongly on "non-monetised supply practices" and "practical skills". But I believe it is more important to acquire, develop and pass on skills relating to non-violent communication, anti-discrimination, gender equality, creating participative processes and overcoming rigid hierarchies. This is necessary if we are to hear, and really listen to, the voices of people who have been ignored in the past, people whose needs and ideas have never made it onto media and political agendas.

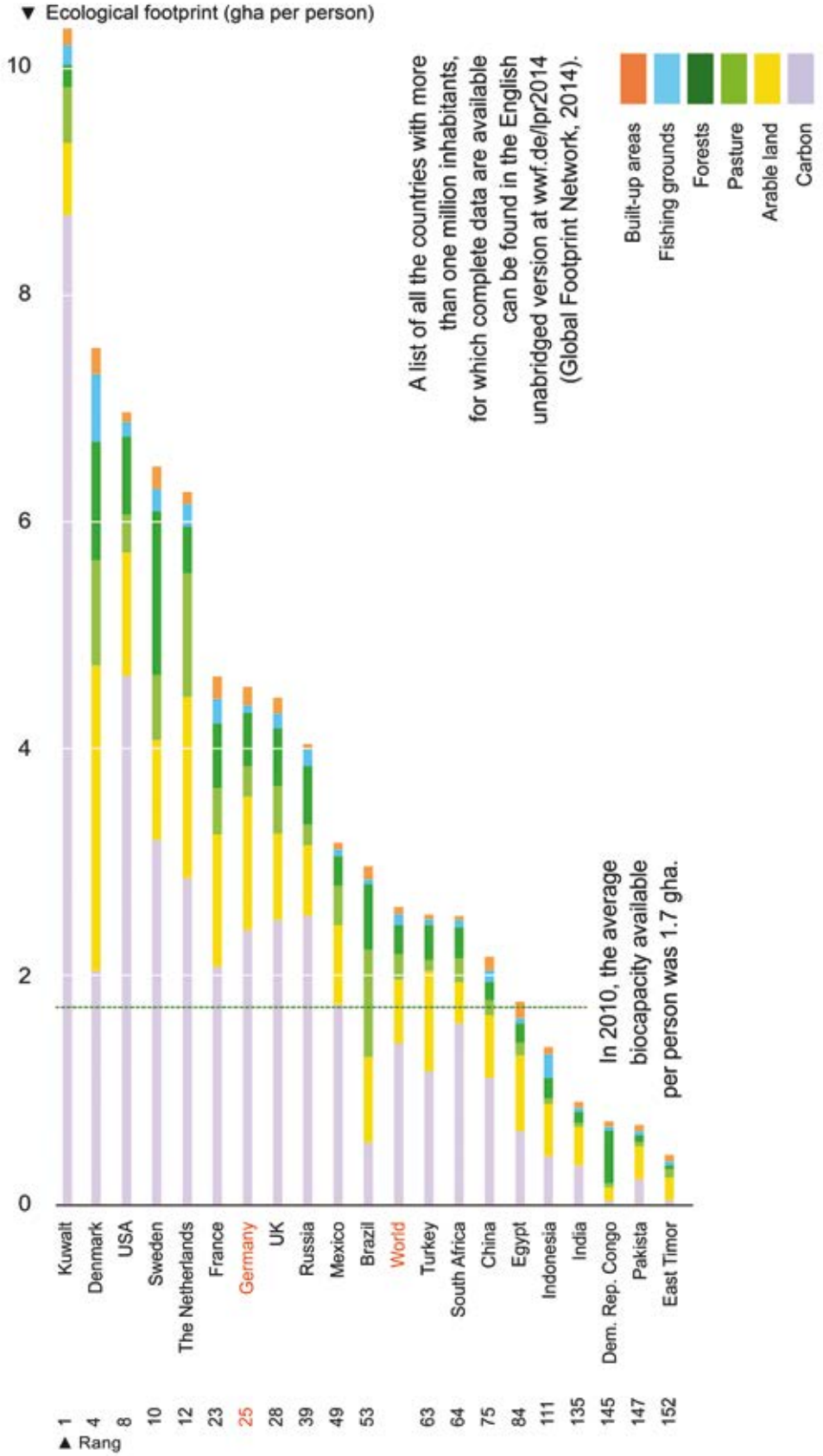
Paech provides too little in the way of answers and help for young people who are struggling with problems in their daily lives, rather than worrying about which country they are going to visit next. Panaceas such as those proposed by Paech have only a limited effect in light of the complex social challenges that Germany is facing, such as child poverty, educationally disadvantaged young people from a wide range of backgrounds, and lack of inclusion.







Ecological footprint of selected countries 2010



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1. You can find more information about the term "ecological footprint" on page 45 ff. of this book.
Visit www.footprint-deutschland.de/inhalt/berechne-deinen-fussabdruck to find out more about ecological footprints.

2. The author's lifestyle has changed in many ways.
Discuss these changes in your group. Which of these do you think you could adopt? What other changes do you think are urgently needed?

3. "We will never make any real progress unless we start asking fundamental questions about how we are governed."
What are the reasons behind the author's statement?
Discuss in your group.

4. Why does Hübner believe many of Paech's ideas are unrealistic?

5. The concept of socio-ecological transformation:

a) What responses does the author make to the key questions?
b) What does he mean when he talks about transforming society as a whole? What do you think about it?
c) Give a short talk about what you think transforming society as a whole means.

6. Less is more. The post-growth atlas
The new Globalisation Atlas is about the most important issue for our global theatre: post-growth. Everyone knows what growth is – without growth we are told there is no prosperity, no freedom, and no success. But how can we have infinite growth on our finite planet? We have long suspected that we can't go on like this. But what is to be done?
The post-growth atlas provides some answers.



© Le Monde diplomatique und Kolleg I Postwachstumsgesellschaften (Hg.), Atlas der Globalisierung, Weniger wird mehr, Berlin (taz Verlag) 2015

7. Hübner believes panaceas are not particularly helpful, he thinks we need to develop and expand other skills.

a) Discuss this and do some research.
b) Work together to come up with action plans to develop the skills mentioned by the author in your school or local community.



MY SHRINKING ECOLOGICAL FOOT A PERSONAL EXPERIMENT

By Alisa Reimer

I have declared war on my own ecological footprint. Because I want to know how it is possible to enjoy life without damaging the world around us. So I decided to follow a strict CO_2 diet for a whole week. During this time I monitored which of my daily habits caused most damage to the climate and environment, and tried out different ways of living and new ways of consuming. Was it torture? Well it certainly wasn't simple, but it was easier than I expected.

An evening in Baja California Sur, Mexico. The full moon bathes the bizarre, dry landscape in bright white light. I am camping on a peninsula next to the Pacific, together with 40 other people who have come here to train as yoga teachers. None of us knew each other before we arrived. We are an extremely diverse group, with very different backgrounds, ages, occupations and experiences. But despite these differences, or perhaps because of them, we quickly grow into a tight community. Because none of us identify ourselves solely based on our choice of studies, our profession or our nationality, but on "shared" values such as awareness, solidarity and connectedness.

But we will not be spending tonight together in camp. We will each be facing our own particular challenge: being alone with very few possessions. I head off without any real plan but I'm excited about what lies ahead. I am armed only with a sleeping bag, a sunshade, and three litres of water. I set off to look for somewhere to sleep in this strange and beautiful desert landscape. After



© Klaus D. Fahlbusch

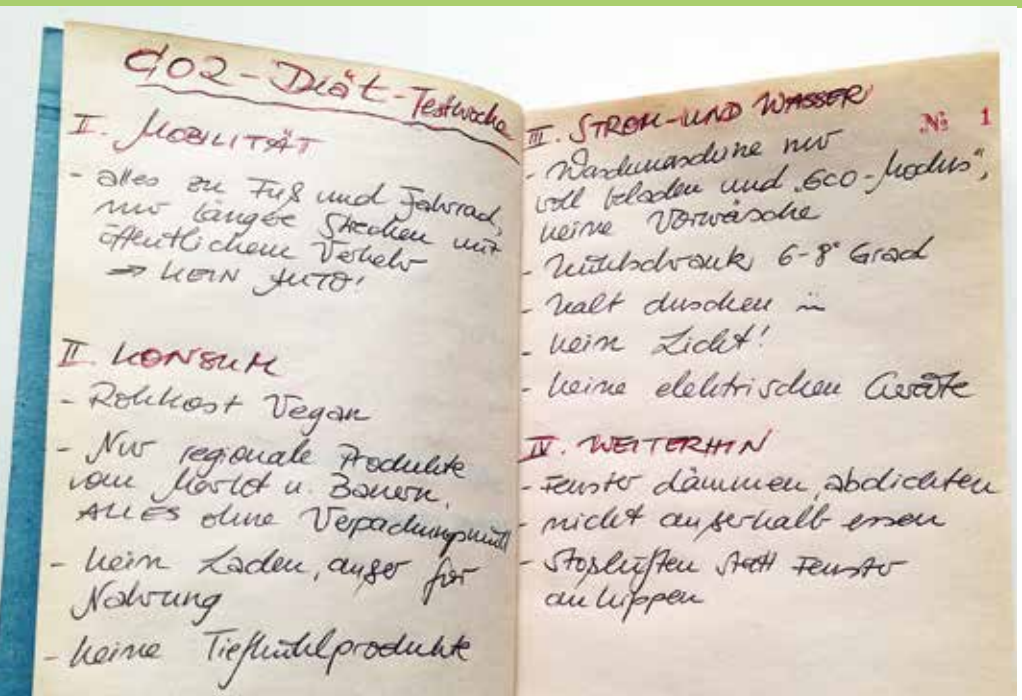
walking for an hour I find a spot on the beach. I set up my spartan camp at the base of a huge cliff, a steep barrier between the desert and the ocean. I focus all my attention on the sea. Gradually my breathing synchronises with the movement of the waves and I fall asleep.

Our common goal is to learn how to get back in touch with the "Pachamama" through solitary concentration and peace. Pachamama is a female goddess who is revered by native tribes in South America. She is the source of all life, the embodiment of Mother Earth. After spending 24 hours alone in the wilderness I return to camp safe and sound. During that time I did not eat, speak, read or even think – but I feel enriched. Many people have already followed this antithetic principle and the ancient practice of finding inner peace by renouncing everything that prevents them from being in the moment. We are coming to the end of our stay. We have spent a month living in tents here on the beach. We have eaten local vegan food, felt no need for technology and have travelled everywhere on foot. Solar panels have provided the small amount of electricity that we need to light the darkness.

But when I return to normal city life in Germany, everything that seemed so easy and normal while I was travelling in Mexico and Guatemala – feeling a real connection with nature and living in tune with the environment – now feels like a huge effort. But I'm going to try to live like this for a week. I want to keep my carbon footprint as small as possible during these seven days – but without being totally spartan and living like a hermit. The ultimate goal of my experiment is to integrate everything I have learned and practised on my travels into my everyday life at home.

Lots of people want to go back to nature but they don't want to do it on foot

For my experiment, I wrote down a list of the rules that I had to follow for a week. The first rule was: only travel on foot or by bike. For longer distances: use public transport.



never eaten anything cooked or baked. This way of eating is much more natural, healthy and better for the environment". These were the words of a young Canadian woman who I met in Guatemala.

I'm not really sure what to make of this, so I decide to try it out and eat a raw food vegan diet – for this week at least. I found that I felt excluded, but as a vegetarian, I was already used to this. When sitting down to eat with family and friends or at events I almost slipped up and had to stop myself reaching for the hot cream of pumpkin soup. But I stuck at it and felt good on it. But it left me with a bad taste in my mouth. It makes me realise that when you try to be green in our society you soon become an outsider, part of a small minority, and sometimes people even laugh at you.

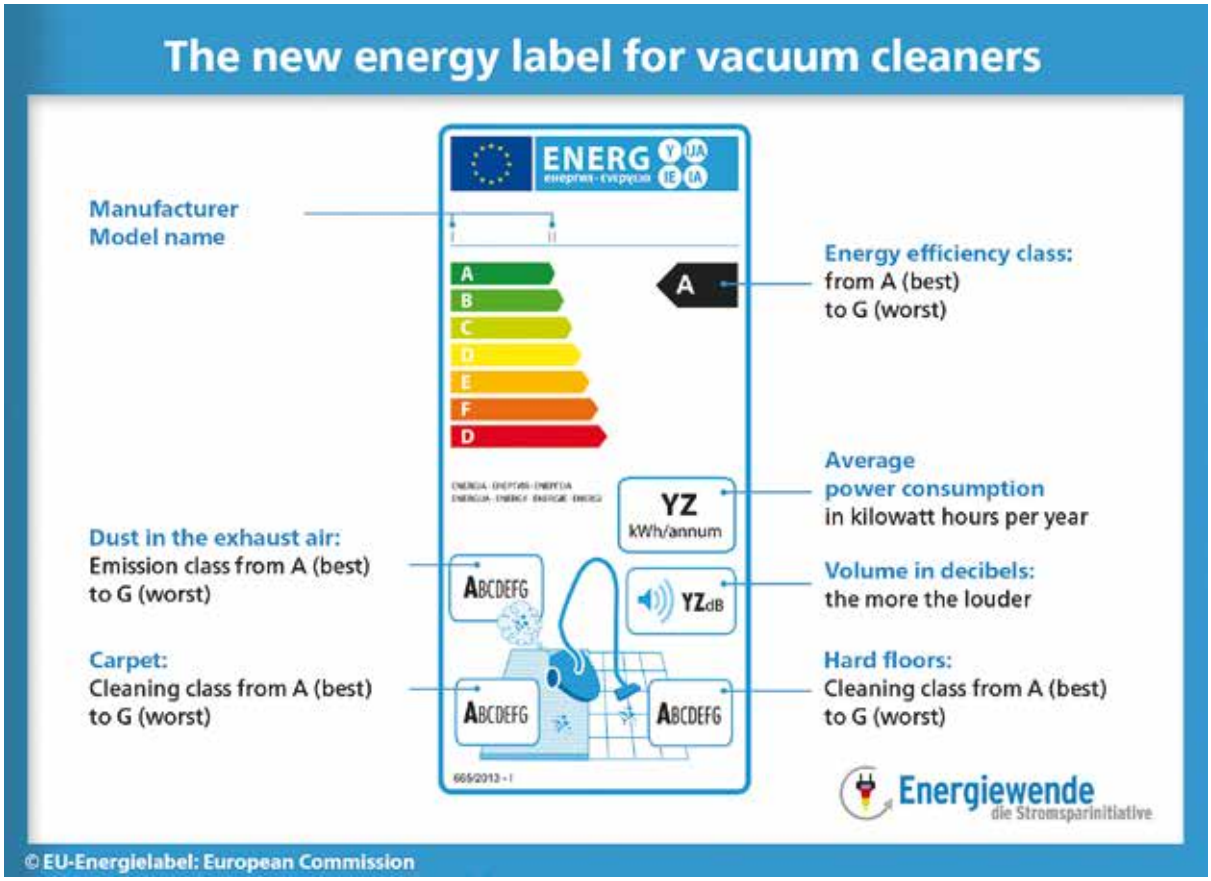
I remember how happy I felt in Guatemala, in the tiny village that I lived in for a while, in a world without shops and discount supermarkets. During my CO_2 diet I decided not to set foot in any shops apart from to buy food. Like in Latin America I bought the food for my raw meals from the market. Of course I couldn't eat frozen products because of the large amounts of energy required to freeze them.

Disillusionment and wanderlust

I'm having doubts about my experiment. Should I really carry on with my drastic plan to do without, follow my CO_2 diet and all the restriction and exclusion that it involves? Even close friends often say things like: "You don't have to be so green." Because I care about the environment

On the first day, a Wednesday morning, the sun was shining brightly but it was still cold. I got on my bike to accompany my sister to an important meeting at Potsdam University. But I had to ride alone, through the green lungs of the city centre, past the Schloss Sanssouci and by the side of a small river, because my sister wanted to drive there. I spent ages trying to persuade her to cycle, but she got annoyed and said she would rather take public transport. I don't understand why people aren't prepared to do something that's good for them. She arrived later than me, stressed out after trying to find a parking space. Over the next few days I often travelled around on my own because my friends and family preferred to take the bus or the car, even for short distances. When it comes to mobility I don't have a guilty conscience or any withdrawal symptoms because fortunately I have never owned a car.

The second point on my CO_2 diet list relates to my consumer behaviour. I began with food. According to PETA, the animal rights organisation, factory farming creates more CO_2 emissions than traffic, particularly because of the destruction of the Brazilian rainforest to grow animal feed and graze cattle. I have been a vegetarian for a long time so this was also not a problem for me. But what more can I do? "In my 26 years I have



and my lifestyle I often feel that people simply label me as a “tree-hugger”. This might be trendy in other countries but in Germany it still has a negative connotation. I wish I was back in Latin America, surrounded by people who think like me, and where we all helped each other to lead reductionist lifestyles. I think back to Guatemala, when I lived in an old school bus in the forest. No electricity, no technology, and no heating. The people who had settled here had made a conscious decision to live a simple life. They wanted to protect themselves and nature from the encroachment of today's fast-paced life. It wasn't difficult to do without things there, though admittedly it never really got cold so it was possible to live without heating.

When I came back to Germany, back to my old life, my new intentions and attitudes clashed with the dictates of daily life and the habits of the people around me So now I am patiently trying to show my family and friends how they could easily change some of their habits that are so harmful to the environment. This ranges from small actions like switching off lights to refusing to take domestic flights, even when employers are paying for them. If it comes to an argument I just stay calm and tell myself: "Don't forget that they haven't experienced the things that you experienced every day for a whole year."

Working by candlelight

Now I have reached the third point on my list: my electricity and water consumption. I keep getting flashbacks from Guatemala. How I used to do my laundry in small buckets of water, sitting on the ground with my friends. It took forever and I doubt that anything was ever really clean. My washing machine has an eco-programme which uses less water and electricity. During the week of my experiment and afterwards I will only use this setting.

THE AUTHOR

Alisa Reimer (b.1991) is studying cultural studies in Berlin and works as a freelance journalist. She trained to be a yoga teacher in Mexico. She is involved in initiatives to counter social problems and protect the environment and is the founder of the Yoga for Others project.



I gradually become obsessed with doing without because I notice I am finding it easier and easier to stick to my principles. I finally convince myself to go back to taking my morning shower in cold water. I used to do this in Guatemala, and it was quite cold in the outdoor shower in February. I don't have to worry about switching off the TV for a week because I don't have one. But I do have lights. Now in my house it gets dark when the sun goes down apart from a few candles.

My yoga students have to accept my attempt to do without electric lights because I don't want to make an exception for my work. And in fact they rather like it. All sorts of memories pass through my head during the week. I see myself in the Mexican jungle, where I spent time in a small self-sufficient community in a national park in Chiapas. They used charcoal to cook their home-grown produce. People came from all over the world to learn more about permaculture. Discussions revolved around topics like awareness, mindfulness, connectedness and sustainability. In Germany I often miss talking to people about these kinds of issues. When I start talking about them, people often put up barriers because they feel I am preaching to them and questioning their habits and lifestyles. But sometimes I come across people who think the same way as me. That's really wonderful.



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A new attitude to life

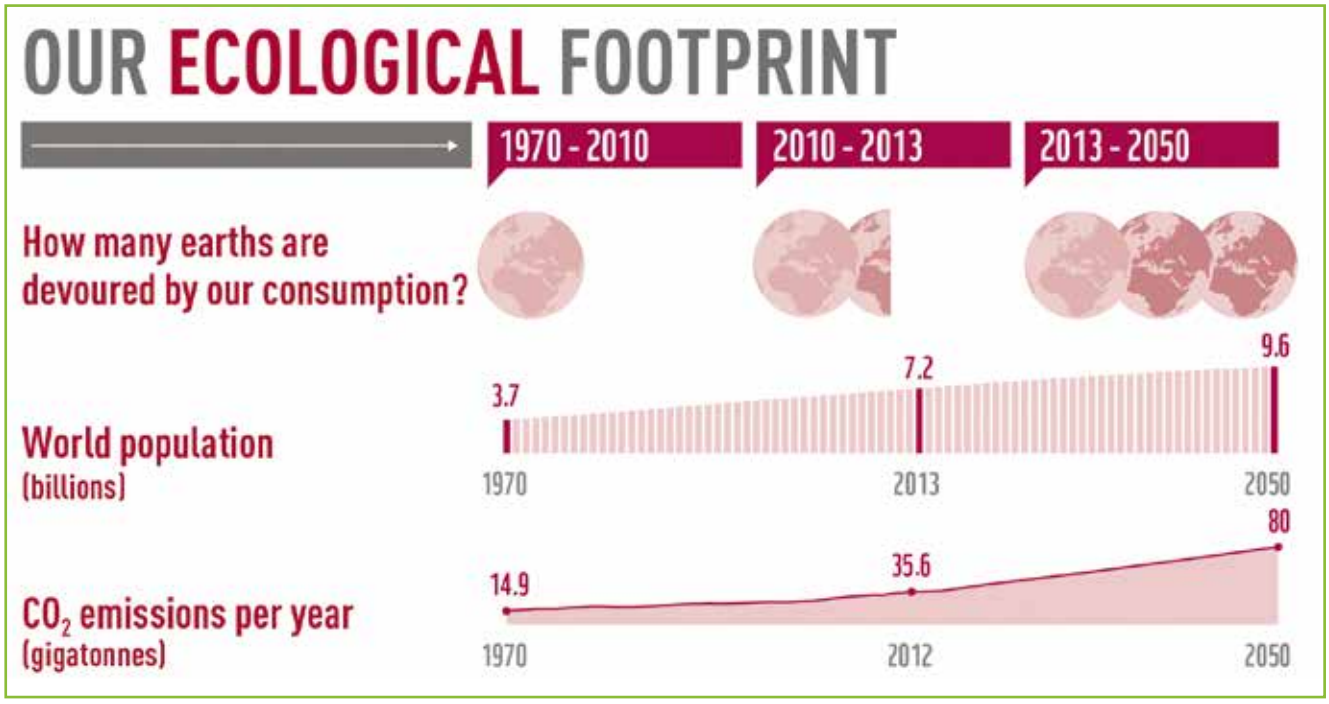
The small experiment that I'm doing in Germany is something that I lived every day when I was on my travels. Free from the need to consume, from products that nobody needs but everybody wants, from the structures of unchanging, pressurised, profit-oriented daily lives and from technology that is supposed to make our lives easier but which actually take us further away from our essence, our natural experience of being. It makes me sad that I had to travel halfway around the world to realise this, and of course my long-haul flight to Mexico was disastrous for the environment. So the least I can do is to integrate what I learned abroad into my daily life and try to convince others to do the same.

The seven days are now over. It's time to look at the results. A week on the CO_2 diet meant I had to give up many of my habits and some of my comforts. But at the end it feels as though a burden has been lifted. I feel that I have been freed from the everyday pressures of consumption.

By following my rules and giving up things, I feel I have regained a structure in a society that is characterised by sensory overload and unlimited possibilities. The little "oases" of awareness and low-emission living that can be found in communities and camps in Central America and elsewhere feel like a parallel world that is beyond our reach, both geographically and intellectually. But my experiment has taught me that it doesn't take much to change our habits and adapt them to our everyday lives.

In future I don't plan to limit myself to eating only raw food. And I won't be totally giving up electricity. But most of the other ways of living that I tried during this week are easy to continue, so it has been a partial success. I'm thinking about gradually becoming a vegan. I will continue to critically monitor my consumer behaviour and keep my consumption as low as possible. My motto is only buy what you need, purchase local products and create as little packaging waste as possible. I am delighted to see that the first packaging-free supermarket in Berlin has just opened. My conclusion is that we only need two things to minimise our personal footprint in our daily lives: awareness and determination. And there is a perfect time to start – now!

While I'm writing this in the university library a tune is going around in my head. I keep humming it but I don't know where it's from – perhaps my childhood? It's time to go home. Outside it is dark, cold and wet. I leap onto my bike and sing: "Lots of little people in lots of little places who do lots of little things can change the face of the world."



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1. Alisa asks a fundamental question: how can I enjoy life without damaging the world around me? She takes a look at her own life.

a) Describe Alisa's experiences abroad and what she learned from them.
b) Describe how she fought against the dictates of everyday life and other people's habits in her experiment.
c) Examine and describe her new attitude to life.

2. Worth emulating or unrealistic?

a) What do you think about Alisa's attempts to control and reduce her carbon footprint to a minimum on her return to normal city life after living such a simple life on her travels? What benefits did she gain from her efforts?
b) Which parts of her experiment to you think set a good example and should be emulated? And which would you find difficult to do?
c) Why did Alisa have to fly halfway around the world in order to gain these insights? Are there any other ways of making these kinds of drastic changes? Can you give examples?

3. Discuss whether you think most people would make these kinds of changes. What do you think is the biggest obstacle to persuading other people to change their lives in the same way as Alisa?

4. Your timetable includes a one week CO_2 diet.

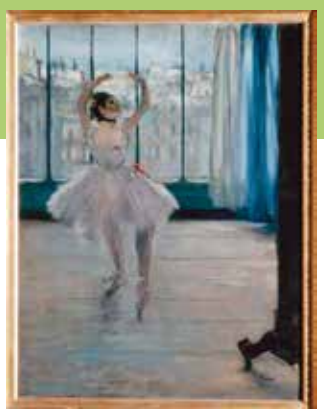
a) For one week, make a conscious effort to examine your everyday habits and change some of them in order to reduce your carbon footprint. Keep a short record or journal about your experiment.
b) Talk to each other about it. What is easy and what is difficult? What will you continue to do after the week is over?

5. Alisa is the founder of the Yoga for Others project. The money she earns as a yoga teacher and donations from her students are used to support projects against abuse and to promote social justice. Under the slogan "Do Without • Help • Win" get involved with a sponsorship programme, for example with children in Africa.

a) Think about how you can link doing without to a specific aid programme. For example, stimulate curiosity and interest, set goals and provide advice to potential supporters.
b) By doing without you can help people worse off than you. Everyone's a winner. Discuss this (your) message.

THE COURAGE TO CHANGE – THANKS TO THE "SCHOOL OF LIFE"

By Johanna Krüger



Edgar Degas:
Ballet dancer at the photographer's studio
© bpk / Roman Beniaminson

How it all began...

At the end of the eighth grade (2006) my class had a terrible reputation. We had no sense of community, were unwilling to learn, unmotivated – just not interested in school. None of the teachers wanted to take over our class. Then Helmut Spiering came along and everything changed. Most weekends (in his free time and without pay) he gave us an opportunity to join "Spiering School". This involved a scriptwriting workshop, opportunities for personal development and getting involved in projects in Berlin.



I was involved in tournaments with my vaulting group so I missed the first scriptwriting workshop with director Thomas Frick. At first I had a few problems settling into the group. I felt like an outsider, partly because I'm not the kind of person who can just speak up and say what I think, and I don't like being the focus of attention. I was always on the edge of things watching what was going on. I formed my own opinions but I didn't share them with others. At that time I was going through some personal difficulties and had really shut myself off from my classmates. I just wanted to get through my time at school. I was terrified of rejection, so I found it incredibly difficult to take part in the scriptwriting workshop. I was also afraid that my teacher, Helmut Spiering, would give me a telling off or even send me home. But in fact the opposite was the case – he welcomed me with open arms, helped me to lose my fears and made me feel important. I gradually began to gain confidence. Slowly but surely I discovered a real passion for environmental and climate issues. I did a lot of research because I was keen to learn more about them.

Then I travelled to Berlin to attend the "Paths to the Future – A Different Kind of Free Time" seminars, which had a major impact on me. Every weekend we met up with our teacher,

did a lot of research and put together questions for our discussions with the eminent people we were going to meet: politicians (German President Richard von Weizsäcker, Israeli Ambassador Shimon Stein, etc), actors and musicians (such as Vladimir Malakhov, Simon Rattle and Guy Braunstein) and journalists (Peter Hahne, Thomas Schmid). At first I was so nervous during these discussions that my stomach felt like it was full of butterflies. I was sure I wouldn't be able to say a single word. But with every question, my confidence grew. At first we only asked the questions we had prepared, but we soon learned to develop our own opinions. We began examining what they said and asking follow-up questions. We learned to really stand up for our opinions.



In the ZDF studio: Johanna and Andrea interviewing Prof Dieter Stolte (former chairman of ZDF)

Our programme was extremely full. One highlight followed the next: museum visits, discussions and evening trips to the theatre and cultural events. We had long days and short nights in Berlin because we had to get ready for the next day, give interviews to various magazines and write a journal. During the project we never gave a thought to partying or going out.

Now that we had tasted blood, our discussions became better and freer. We drew strength from the cultural programme during this busy time. In the Old National Gallery I discovered my love of the French Impressionists and Caspar David Friedrich. Today a big screen print of his painting "The Monk by the Sea" hangs above my bed. Above my desk I have blue and red dancers by Degas, there's a Renoir above my couch and a Gustav Klimt print hangs in the laboratory where I work. I learned to love these artists' works during my time in Berlin. I draw great strength from their paintings. I can look at them for hours, really lose myself in them. I could never have learned something like this at school. I see this in my friends from home, who stand in front of the pictures but don't have a clue about them, not even the period when they were painted. The same friends from the 10th grade also came on the school trip to Berlin, but they just went shopping and visited or two of the sights.

After my study trip I started to enjoy school again. What had happened? Mr Spiering transplanted me and my classmates from the thin soils that were often all we had at school into the rich soils that he had specially prepared for each of us. He gave every one of us what we needed, perhaps a sturdy frame to grow up or some fertiliser. Some of us had to be supported in order to blossom, while others just needed watering.

As far as I am concerned, the project really helped me to grow and today I am flourishing like never before. I still have my thorns, but not so many, and they don't hurt people like they used to. Without the project I would have just continued to wither away, and in the end I would have been so dry and dusty that I would have been almost unrecognisable. School alone would never have made me the person

I have become today, a person that I like a thousand times better.

I stuck to my opinions, shared them with others and reintegrated myself in the class. I also began getting involved in issues that affected us as students. A couple of months after my first trip to Berlin I was elected class representative and shortly afterwards I also joined the team of school representatives. I soon became the go-to person when students had problems with how the school was run. I was sent to take part in discussions with our headmaster because I was good at presenting arguments.

In January 2009 I and my classmates attended the first European Youth Climate Summit in Berlin, which was organised by youthinkgreen. In our free time we worked with our teacher for nine months to get ready for the conference. By then we knew what was in store because we had already been to Berlin twice with Helmut Spiering. Our trips to Berlin didn't leave much time for sleeping, but that didn't matter.

I was responsible for planning our food and for looking after the Icelandic participants. We brought almost all the food for more than 100 people – most of it supplied by sponsors – in the bus with us to Berlin. Before then we had had little contact with the other European participants, and this was a bit of a problem at first in Berlin. We unexpectedly discovered that the Icelandic participants could not speak or understand a word of German. We had to improvise, so while we were in Berlin I also had to interpret for several hours a day. I managed it, despite the fact that I only got a C in English in my last report.

That really boosted my self-confidence, and I ended up making some friends for life – we are still in touch today. It was a unique experience to share thoughts and opinions with so many young people from five different countries and to work towards a common goal – more climate justice for a future that is worth living for us and the generations to come. These moments of common motivation, when you think that together you can change the world, come along rarely in life and we have to make the most of them.



New ways of thinking and acting – changes for greater climate justice

Since the 2009 European Youth Climate Summit in Berlin I now feel I am a citizen of the world. Now borders only exist on maps for geographical orientation, they no longer exist in my head. We are all citizens of this world, so we all have to look after our planet, regardless of our different nationalities. Global problems such as climate change require global action. The strong have to help the weak. This means that the developed countries have to help other countries and give them opportunities to improve the long-term quality of life of their citizens without burdening the environment, the climate, and future generations.

We have to slow down climate change and demand socio-economic justice for the whole worldinstead of simply condoning the suffering of others (such as the countries of the Global South) for the sake of our own wealth. I am convinced that with our knowledge, the right attitude and the corresponding commitment we can achieve much more than with money.

My lifestyle has changed dramatically in the years that I have been directly involved in the youthinkgreen project. I have sold my car and got back on my bike. This is hard work when



YTG: after discussions with Prof Klaus Töpfer (former Executive Director of UNEP)

you live 5 km from the nearest town (with no public transport). I have drastically reduced the amount of meat I eat to less than 4 kilos a month. I only buy seasonal fruit and vegetables from local growers. When I need spirits for parties I buy it in small distilleries when I'm visiting my family in the Osnabruck area. I have also cut down on my dairy consumption – now I just have 5 litres of buttermilk a month, about 2 kilos of yoghurt and a little cream. I repair things and buy second-hand items. I hardly use any paper and borrow all the books I need for university from the library. I normally only drink tap water, and I only use plastics when it is absolutely unavoidable in our shared house.

This winter I will also be working to make it compulsory for trainee biology teachers at my university to take a weekend trip to our "climate garden". Then when they become teachers they can pass on the practical knowledge that they have learned to children and young people, perhaps plant a school garden or grow their own vegetables on the balcony. Whenever possible I tell other people about my thoughts and actions and suggest new ways of doing things. After staying with a host family in the United States they began separating their waste, recycling plastic bottles, drinking tap water and in winter they stopped warming up their car for half an hour before setting off. I have also persuaded my housemates to stop buying water in plastic bottles and to think about where their products come from when they are out shopping.

During our first *youthinkgreen* workshops I never really thought that we would change anything. How could we? We were just a small group of students and our maths teacher. But today I'm proud to say that I have changed my own life and the lives of others in a lasting way. Today more than ever I still see myself as a climate ambassador.

What have I achieved and what do I still want to do?

The project trips to Berlin gave us an opportunity to learn to fly. Mr Spiering helped us to grow and spread our wings. But we had to learn to fly on our own. Today I also try to help people fly by sharing my experiences, encouraging them to put out their own feelers and grow into new challenges.

The change in my life has particularly been reflected in my choice of studies. When I was child I always wanted to be a vet. But instead I decided to study biology in Tübingen, one of Germany's greenest towns. My university is a member of

the German government's Excellence Initiative and this year it was listed as one of the best 120 universities in the world in the Times Higher Education World University Rankings.

I am specialising in animal genetics, human genetics and neurobiology and will shortly be graduating with a Bachelor's in Conservation Biology. I have been researching genetic variation in toads in Romania and Bulgaria. I "caught" some of my own test subjects during the summer. My results will allow me to map potential conservation areas and examine the extent to which this



YTG interviews the pianist Lang Lang

species reflects processes in the overall ecosystem. My main goal is to compare existing conservation areas with the ones that I have calculated as being optimal. They do not always overlap, which leads to some areas being useless because they are home to too little genetic variation, particularly from the point of view of climate change.

I will need another semester, but I have staying power and youthinkgreen has taught me to finish projects when I start them. The scope of my work has become much wider than that of most Master's students.

I have also set out a specific plan for the next 10 years. The key questions of our projects in youthinkgreen, such as Where am I? Where do I want to go? And how do I get there? have helped me to make decisions and shape my life. Four years ago I was diagnosed with epilepsy. Five to eight percent of the world's population suffers from this disease but there is still a massive need for more research. In some countries people are still being tortured or even killed because they are thought to be possessed. I feel I have to be involved in changing this. In my Master's I would like to specialise in the biomedicine of neurological diseases and then do a doctorate in epileptology at King's College in London.

I still don't like to push myself forward or be the centre of attention, but I've discovered this is the only way to get things done. The goal was never to change our personalities, make us all develop the same way or compare us with each other, as is often the case in school. Instead it was a case of revealing hidden talents, helping them to develop and making use of them. Normal schooling would never have turned me into the person I am today. "Open-minded, open-hearted, free, friendly, polite, fun, outgoing" – this is how I am described by my friends in Germany and around the world. But I know there are areas I need to work on.

At the moment I am involved in my subject, biology, and I am a student representative on the student board and on a number of appointment boards. Whenever there are any complaints about

King's College in London © Mark Williamson





Johanna as ambassador of YTG

the teaching in my subject area I am often asked to talk to the professors about it. I demand our rights and ensure my counterparts meet their obligations, as I learned to do during our projects. I'm no longer afraid of giving talks to lots of people, even in English. This has earned me the respect of my fellow students and recognition from my professors. A few months ago I organised a successful bone marrow typing campaign at the university in conjunction with the German Bone Marrow Donor Centre. I would never have developed this strong sense of social responsibility without the work that I did on the *youthinkgreen* projects, despite the fact that I had a good upbringing from my parents and was a member of a sports club for many years.

The attitude that I learned from my involvement with *youthinkgreen* was: "If you can help, then you should help." And: "If you have a talent you should share it, otherwise it is wasted." One of the main aims of the project was and remains overcoming our prejudices and developing our own beliefs. We have to be prepared to tackle the great challenges of our time, look for answers and solutions, fight for them and in this way make the world a better place.

**"The most difficult in the world must be easy in its beginning.
The biggest in the world is small in its beginning.
So, the sage never strives for greatness
and can therefore accomplish greatness."**
Lao Tse; Tao Te King, chapter 63



LEARN • UNDERSTAND • ACT

1. a) Gather materials to reflect Johanna's main points.
b) Describe the different phases and stages of her development to date. What do you think of these?

2. a) In which areas do you empathise with Johanna and identify with her?
b) What are your thoughts after reading this report?

3. Are there any particular paragraphs that inspire and convince you to do more for the environment?

4. Johanna has found goals and basic values that provide her with a direction for her life. She has turned certain issues into her life's work.
a) What kind of help did she receive during this process?
b) How has she changed? What have these changes led to?

5. To what extent could this article inspire you in your own life?

6. It is a worthwhile goal to allow schoolchildren to develop strong personalities, even from a young age.
a) What do you think makes up a strong personality?
b) What help would you like in your own personal development? What helps you and what slows you down?
c) Discuss this based on Johanna's example.

7. Johanna was able to develop a strong sense of social responsibility through her projects. She rediscovered her love of learning, overcame her fears and set herself big goals.
a) How and in what areas do things need to change in your school environment? Draw up a table to show your proposed changes.
b) Take your proposals to the relevant committees, for example your student representatives. Become changemakers! Create the changes you want.

8. A student wrote to us about Johanna's article as follows:
"Her life is a great example of how to find your place in the world and make your wishes come true."
a) Discuss.
b) Why has Johanna adopted the words of Lao Tse as her motto to live by? Think about how it relates to Johanna's life and to a specific situation in your daily life.



MY PATH

From shy outsider to the world stage of climate politics

By Alexander Brock (Namibia)

My life in Windhoek – Before I got involved in *youthinkgreen*

When I look back at myself four years ago, I hardly recognise myself. At that time (2011) I was in the 10th grade of a private German school in Windhoek, Namibia. I was shy, unmotivated and – to be honest – a little lazy. If I wasn't at swimming training then I was generally sitting in front of my computer playing the latest games. At school I felt like an outsider. I was too shy to really talk to my classmates so I hardly had any friends. Like many of the other young people I knew, I thought green issues were irrelevant and boring. I thought to myself: "Why should I bother about the environment when I can just sit comfortably at home?" I never really thought much about it. I was a big meat eater. My parents ferried me to school and training in the car. I had a bike but I only used it two or three times a year to visit a friend or go to the shop round the corner.

Then one day in August 2011 our biology teacher told us that our school would be taking

part in an international project called *youthinkgreen*. We didn't take it seriously at first, in fact some of the kids in class were laughing. "What has the environment got to do with us?" – this was the first thing that came into our minds. But something inspired me to start thinking about it. Because at that time my everyday life seemed pretty monotonous. Trying something new and getting involved in some projects suddenly seemed like a chance to change something in my life.

How my life and attitudes changed

So I went along to the first meeting of the new *youthinkgreen* group at school, which was led by our teacher Carsten Antoni. He explained the project and seemed really keen and enthusiastic about it. I particularly liked the short videos that had been made by the previous *youthinkgreen* generation. They inspired me so much that I decided to get involved in the *youthinkgreen* programme in Namibia.

At first we took a more theoretical approach, looking at all aspects of sustainability in our everyday lives, and experts came along to give us talks. Topics included food, energy supply, mobility, dealing with electrical waste, and the risks and opportunities of genetic technology in cotton growing. This allowed us to build up some basic knowledge. Then we deepened our understanding of existing challenges and solutions with regard to green issues. The more I learned, the more I wanted to know. I wanted to be part of shaping our local environment in Namibia. Our first idea was to install solar panels on the roof of our school to make more use of renewable energy. I'll tell you more about that later.

We conducted interviews and gave talks to share our new knowledge. For example we discussed the effects that Ramatex had in the 1990s on Windhoek's appearance and freshwater supply.

At first I found it very difficult to speak in public and it was hard to cope with all the research, writing and presentations alongside my normal school work. But I soon got used to it and in general my marks began to improve. I found I was now spending very little time at my computer except for doing research. Mr Antoni kept us really motivated by promising that our efforts would be rewarded with an opportunity to take part in the International Youth Climate Week in Germany.

In 2012 this dream became reality. We had a very busy but fascinating week. We got to know young people from all over the world, attended some very informative presentations and held lively discussions about potential solutions, such as the use of renewable energies. The mood was very optimistic, filled with the hopes and energy of so many committed young people. We gained new insights and ideas for projects, for example we looked at existing transport in Windhoek and sought greener options and more active forms of mobility, such as cycling, which is currently very unpopular in Namibia. But for me the best thing





was the friendships we made and the confidence we gained.

On our return to Namibia we were brimming with new ideas and motivation, and we presented our ideas to the whole school. This time nobody laughed. We had gained the respect of our fellow students. They listened to us attentively and got involved when we asked questions. The school management were also keen on the project and promised to help. Our work was even reported in the daily newspapers and by broadcasters.

We launched projects with three different aims: 1. Raising awareness of green issues, 2. Using solar energy and 3. Green mobility. In order to achieve the first aim, we organised a green bazaar for the whole school with information stands, competitions and games. This raised the money that we wanted to spend on the solar panels forour school's solar energy project. But unfortunately our school managers felt there were too many bureaucratic hurdles involved. We were all very disappointed, because we never got a straight answer about why our plan couldn't go ahead.

I decided to pour my energies into the third project on green mobility. I wanted to know why cycling is so unpopular in Windhoek, why it is thought to be dangerous and, above all, why it is associated with poverty. Most people, even including the country's poorest, prefer to spend half their income on travelling in shared taxis or buses rather than being seen on a bike. But I felt sure we could do something about this. I thought we could change attitudes and behaviours – this time without coming up against bureaucratic barriers. And as it turned out, I was right.

It was possible to cycle in Windhoek, and I gradually attracted many supporters, such as the NGO Bicycle Empowerment Network Namibia (BENN) and the Move Windhoek group. The latter runs projects in conjunction with the German Society for International Cooperation (GIZ). We worked together to organise discussion groups and set up a bike campaign, known as the Bike Bus, in Windhoek. *(Find out what happened next and how Alexander and the Namibia Group got on with their bike project in their report in Section 2.)*

Apart from that, I changed my patterns of consumption at home, began to eat less meat and reduced my use of plastic bags. People often looked at me strangely when I went shopping with my canvas bags, but I was proud to do so. I made sure that my family used electricity and water more sparingly.



Alexander at the climate conference, Doha 2012

From Namibia to the international stage

In December 2012 my efforts paid off still further when I was invited to attend the Conference of Youth 8 (COY 8) and the Conference of Parties 18 (COP 18) in Doha, Qatar, in my capacity as a youthinkgreen climate ambassador. COP 18 stands for the 18th Conference of the Parties to the United Nations Framework Convention on Climate Change and also for the eighth meeting as part of the Kyoto Protocol

(CMP 8). The aim of the conference was to produce the successor to the Kyoto Protocol, with the industrialised nations committing to concrete targets on reducing greenhouse gas emissions.

At COY 8, we young people had an opportunity to hold small group discussions in the run-up to COP 18, initially with a focus on our own regions and then with reference to specific topics. I joined a group where we discussed climate change and its effects on developing nations. We wanted to have a united front when we presented our demands to the conference delegates.

I took an active part in the discussions and spoke in front of hundreds of young people about a range of issues, such as aridification in Africa, the increasing acidification of the oceans and the potential of thinking globally and acting locally. I had to conquer my fears in order to speak in front of so many committed young people. A year earlier, I would never have dreamt it was possible. But I dared to step out of my comfort zone and I have never regretted it.

Unfortunately our hopes were dashed by the politicians at COP 18. We were only given seven minutes to present the demands that we had formulated in groups at COY 8. And we noticed that many delegates ignored us or simply didn't listen to what we had to say. The result of the conference was described in the media as a "mini-compromise", and we also felt that it did not produce a satisfactory outcome.

The mood outside the conference halls was more open and pleasant. We were able to have personal conversations with some delegates and drew attention to ourselves with little demonstrations and campaigns, including a Tree of Hope installation (see also Section 2) and the "1st Climate Demonstration in Qatar". This was some compensation for our disappointment and gave us all renewed courage to continue the fight.

In 2013 also attended the 1st World Youth Sustainability Summit in Berlin and realised how much I had grown as a result of my work



In the main climate conference room, Doha 2012

with and for my *youthinkgreen* family. I felt I was part of a community, led discussions and lost my fear of giving my opinion, even in front of 160 delegates from all over the world. I think many young people who have been involved for a while have been through a similar process.

I was even invited onto the ZDF Morgenmagazin show on German TV and interviewed about our *youthinkgreen* project. This was a huge challenge for me because it was the first time I had ever been alone in front of the camera, so I was really nervous. But at the end the presenter said it had been a great interview. After the summit we set up a *youthinkgreen* youth council to represent our aims for future national and international programmes, activities and joint projects, and I am also a member.

My next highlight was in October 2013. I took part in the One Young World conference in Johannesburg, South Africa. I had the privilege of talking to Nobel Peace Prize winner Prof Muhammad Yunus and the astronaut Ron Garan. This was a great honour, particularly because we talked about my projects and they gave me some ideas and suggestions for developing them further.

They suggested that I raise public awareness of the Bike Bus project by introducing the con-

cept to other schools and getting coverage in the broadcast and print media and in the social networks (Facebook, Twitter etc.). I took these suggestions very seriously and shared my ideas with the *youthinkgreen* group in Namibia. But I had just left school and was moving to South Africa to study, so I handed over responsibility for the Bike Bus project to some of the younger students in the hope that that they would carry it on and develop it further.

What have I achieved and what do I still want to do?

In November 2013 I sat my school-leaving exams and was proud to come in the top ten in my school. I was asked to give the graduation speech. My laziness and introversion from the 10th grade were now things of the past that I had completely outgrown and forgotten. In 2014 I began studying chemical engineering with a focus on sustainability in Cape Town and I have just come to the end of my first year.



Alexander meets Prof Yunus

Along with my studies and membership of youthinkgreen, I am also a volunteer forest firefighter, a member of the mountaineering association committee and an active member of my university's environment group in Cape Town. With the help of youthinkgreen I'm hoping to develop and carry out new environmental projects in this group. Perhaps youthinkgreen projects from other countries, such as the shopping guide created by the Osnabrück group in Germany, can be transferred to suit regional circumstances in Cape Town and adapted to suit local needs.

It is now quite normal for me to adopt greener habits in terms of consumption, mobility and my use of natural resources. I always try to buy local products, for example milk from farms in the area around Cape Town, and I keep up to date with the latest developments and innovations relating to preventing climate change. Over the next few years I plan to finish my studies and then get a job with the water reprocessing company that is sponsoring my studies. The arid climate in Namibia means that water is perhaps the most valuable resource in the country. In future I would like to play my part in helping to resolve the problems of water supply.

Who knows whether I would ever have followed this path without my youthinkgreen family and the commitment of my teacher Carsten Antoni ... But one thing is clear: it is vital that we as young people take more interest in protecting the environment and preventing climate change. We have to raise our voices and set ourselves goals, whether it is through local school projects, in our choice of careers, or through political engagement. We are running out of time to deal with the social and ecological problems that are part and parcel of globalisation. And if we don't come together to do something about this now, when will we?

Note from *youthinkgreen* editors: In order to work on the issues raised in Alexander Brock's article, we suggest using the questions in the Learn • Understand • Act section relating to the previous article by Johanna Krüger.



Alexander working as a firefighter in Cape Town (South Africa)
© Volunteer Wildfire Service

GREEN STORYTELLIN

A journalism workshop from ***youthinkgreen***

By Ariane Missuweit and Christian Vock

"Wiechmann never imagined it would be so bad. Of course he knew the stories of his men, and of course he knew he would swallow a fair amount of water. One colleague didn't even come along because he wasn't a good swimmer. But Wiechmann went anyway, he was excited about being offshore, excited about wind energy far out in the ocean. But he never expected this apocalypse."



© Sebastian Kempkens / KAS

This is the start of the story "Wiechmann muss springen" [Wiechmann has to jump] about construction manager Jens Wiechmann and his colleagues on an offshore wind farm far out in the North Sea. It earned its author, Sebastian Kempkens, third prize in the reporting section of the 2013 Young Journalists' Awards. Did this beginning make you want to read on?

When telling a story, it is vital to come up with an exciting beginning that immediately grabs your readers' attention and arouses their interest in the life and emotions of your main character. Good reporters observe happenings very closely and empathise with the people they meet:

"He stands there in his red safety suit, three-and-a-half metres up in the air. His life jacket is cutting off his breathing, the storm is hammering raindrops into his face, it's dark, he can barely see anything. A siren wails, the thunder booms around and the rotors of the rescue helicopter are clattering incessantly in the darkness. But there is still no help in sight. There's nothing for it, Wiechmann has to get through this alone. When everything is lit up by the next flash of lightning, he leaps into the depths."

Go online to find out what happens next, what Jens Wiechman went through and the social and environmental relevance of the story (see list of links in appendix). Only a certain amount is revealed: with the protagonist Weichmann, the prize jury said that the author created "an accessible, human way of approaching the difficult and somewhat unattractive topic of the energy transition".

Sebastian researched and wrote this story for the magazine Plan E as part of his journalism training at the Konrad-Adenauer-Stiftung. There are many routes into journalism, but most of them are long and rocky. Many writers complete specialist degrees and numerous internships then train as journalists in the framework of voluntary activities or additional studies.

At *youthinkreen* our many conversations with committed young people have revealed that there is still a great deal of interest in media work and a desire to learn the tools of the journalistic trade (even if only to write a blog, a student magazine

NG

or a press release about an environmental project). With this workshop we would like to show how you can easily deal with perceived barriers to writing and how to research your topic and initial idea to create an interesting report for publication in your student, university or local paper.

We recommend that you attend this writing workshop as part of a seminar, project week or school group, so that you have enough time for the research and exercises involved. Once you have worked through the seven steps with your group – with the support of journalists and youthinkgreen project staff – you will have a better understanding of what makes a good, truthful story and how you too can become a storyteller. Storytelling is not only for gifted, outstanding writers, but is based on capacities such as empathy, curiosity, persistence and knowledge of the methods and tools you need.

Step 1 – Read, read, read or: "What is storytelling?"

When you start to learn something – and this applies to woodworking and writing alike – then the first thing you do is observe, analyse and ask questions. Many young journalists and writers are often told that if they want to learn to write well they should read a great deal, particularly newspapers. So let's begin by seeking out and studying media reports about the environment and green issues.

"Today environmental journalism is divided into reports on climate change and CO_2 emissions, nuclear energy and renewable energies, green agriculture and genetic engineering, green fuels, electromobility etc. Nowadays every issue is linked to the environment and sustainability." These are the words of Prof Beatrice Dernbach of Bremen University.

The demands on "green journalism" and the complex issue of sustainability are so high, and the time available for research is so short, that even experienced journalists can fail (see article by Eva Mahnke in Section 3.1). So young people have an advantage, because we can research and write stories without time pressures, profit pressures, having to deal with the internal workings of large media corporations and the opinions of commissioning editors.

When a story mainly takes place in one location and an event or experience relates to one person, we call this a classic reportage. When the





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author focuses on the life, destiny and emotions of one person – and the social context is treated as a side issue – then we call this a

Profile

When the author describes several places, sometimes far away from each other, and combines the words of many people and different events in the story, we call this a classic report. This is a more complex, multilayered, long story of the type that you often see in the major news magazines, which turns the spotlight on the background to events (find out more on this in the following sections). A

Feature

is when a significant social issue is specifically linked to a personal destiny.

"Reportage" is sometimes also used as an umbrella term for all these different ways of presenting facts, which in fact have a lot in common: while news editors keep a certain distance from events, reporters and storytellers move in close. They record in great detail their personal observations and experiences (what they see, smell, hear, taste and feel), and the emotions of the people involved.

Paula Scheidt's story "Der Zapfenstreit" [The Cone War] begins with the origins of our Christmas trees: *"After a long climb up through ferns, brambles and knee-high grass, Karl Moser planted his clumsy shoes in the forest floor and put his arms around the most beautiful fir tree that he had ever seen. A dream of a tree. Pyramid-shaped, with bushy branches and thick needles."*

When telling a story, the first essential is to grab the reader's attention and hold on to it. Wolf Schneider once said about reporting: *"The first sentence should be like an earthquake."*

According to media expert and journalist Prof Michael Haller, reportage includes "*everything that is outside our heads and can be experienced through our sensory organs: the stories told to us by other people; the facts contained in documents; the happenings that we have observed, heard, smelt, tasted and touched, in short: the objects of our work"* (2008 in "Die Reportage", p. 167). According to Haller, the rule of thumb is: *"If you have never experienced anything then you can't tell a story, unless you lie."*

Good journalistic storytelling is about recounting true experiences and linking them to researched facts and background information. Despite what the word suggests, it does not mean creative, literary writing. Reportage is often a combination of text and photos. Similar to a good novel, a good reportage is like a movie in your head. On radio and television, similar reports are normally referred to as documentaries or features. Even a traditional interview may include elements of storytelling. On the other hand, reportage clearly contains information and quotes from research materials and interviews.

EXERCISES ON STEP 1:

Reading and analysis

Look at traditional and online media to find interesting reportage about environmental issues.

Recommended reading (in German):

- Sebastian Kempkens: Herr Wiechmann muss springen (Plan E – Magazin der Konrad-Adenauer-Stiftung, 2013): http://de.plan-e-magazin.de/wiechmann-muss-springen/
- Paula Scheidt: Der Zapfenstreit (Die ZEIT N° 52/2013): www.zeit.de/2013/52/weihnachten-nordmanntanne-zapfenpfluecker-georgien
- Mathias Rittgerott: Der Kampf der Bauern in Peru: Hier war mein Wald: www.regenwald.org/regenwaldreport/2014/406/kampf-der-bauern-fuer-den-wald-hier-war-mein-wald
- Alexander Osang: Die Deutsche Queen (Spiegel, 11.05.2009): www.spiegel.de/spiegel/print/d-65330394.html

Read the texts with your group and discuss the following:

a) What people, events or social developments do the authors write about? What is the theme that runs through all of them?
b) Which genre has the author chosen: classic reportage, report, profile or feature? Often texts are a combination of these different genres.
c) Which approach do you prefer and why?
d) Which passages can be categorised as descriptions and sensory impressions, and which provide facts and background to the story?

Advanced exercises:

a) Who do you think the author might have interviewed as part of researching the story? See if it is possible to contact the authors and ask them how they went about writing their stories and the difficulties they encountered during their research.
b) Based on your reading, work together to come up with a definition of "journalistic storytelling".

Step 2 – Getting started is the hard part. How do I decide on an interesting theme and find a story

Here too, the fundamental principle applies: read, read, read (online or in print), listen to the radio and watch TV. What is important to people at the moment in your city, your region, your country? What are your friends, acquaintances and neighbours concerned about? What are the hot topics on social media? There is a journalistic saying: "Stories are all around you." It may sound like a cliché but it has a kernel of truth. Journalists are generally well informed and have a lot of contacts, so ideally topics and stories come to them rather than the other way round.

You can always expect to find good topics and stories where there is conflict, widespread ignorance about an event or development and/or where there is a need for discussion and explanation.

For example: Der Kampf der Bauern in Peru: "Hier war mein Wald" [The battle of farmers in Peru: "My forest was here"] (Mathias Rittgerott)

"In Peru a conflict has broken out over land. Large corporations are cutting down the Amazon rainforest to make way for oil palm and cocoa plantations. Small farmers and environmentalists are putting up a fight.

When farmer Ahu Gremish Yumbato steps out of the thick rainforest, the three guards are dozing. They are watching over a scene of destruction. Massive tree trunks are piled on top of each other as if they have been blown over by a hurricane. They have been split, toppled over, chopped down and pushed together with bulldozers. The ground has been torn up by heavy machinery. Apparently the work has been carried out by 600 loggers. It's hard to imagine that just a few weeks ago this was a lush, green rainforest."

Media experts often accuse journalists of reporting too much about crisis, war, disease and disaster. But drama and emotions such as desperation, grief, anger and frustration lie at the heart of interesting reportage. Of course it is true that journalists should report more often on success stories, positive developments and new, promising research. But making out that everything is peace, love and joy does not reflect reality and is as boring to read as a drama without hope or an apocalyptic story that is not based in reality and optimism. The key is to find the right balance.

Another way of finding subjects to write about is to use events such as anniversaries, international days, weeks, years and decades, press releases from institutions and local events. However, these tend to be more suitable for news reports or factual reports than as a way into an interesting reportage (the exception proves the rule).

The environment, climate change and sustainability are some of the key issues of the future. These are areas where young writers can make a name for themselves if they carry out persistent research and come to well-thought-out conclusions. But before you all start diving into your stories on climate change, just hold on a moment. Of course climate change is an important issue that is worth writing about. But for subjective, journalistic forms of narrative such as reportage, reports



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and profiles, a single topic is not enough. As journalists we need to discover the underlying story. Because climate change is a very complex, abstract phenomenon that is difficult for most journalists and their readers.



© Klaus D. Fahlbusch

So it is important to remember the basic principle: every story must have main characters, known as protagonists. When we read we all instinctively seek out names, faces, interests and lives; we are looking for people who we can empathise and identify with – or not. This is why storytellers explain abstract phenomena such as climate change by turning them into a real story or case study. This method is known as "breaking down an issue". Media experts talk about "simplifying through personalising".

What makes good protagonists and how do you find them?

Good protagonists are people who can open up to others (the reporter) in an atmosphere of mutual trust and who have something to say to the reader. This generally takes a great deal of sensitivity and patience on the part of the reporter. Emotions make a story particularly fascinating, because all over the world people experience the same feelings of fear, grief, joy and anger. When you describe feelings, they put themselves in the character's shoes, see themselves mirrored in them or separated from them, providing an opportunity for self-reflection.

Interesting protagonists are going through an inner conflict that they have to resolve. This is not necessarily a dramatic event, but could be a challenge, such as auditioning at the National Ballet Academy or sitting school-leaving exams. The interesting thing about protagonists is their ambivalence, the contradiction between their thoughts, emotions and actions: they do things that they didn't intend. They do things or make decisions that they regret. They experience things that inspire them and help them move forward in their lives. They learn from all of these. Perhaps they are still unsure about what motivates them. They are seekers, like the rest of us. For more information see the Scriptwriters' Workshop in Section 2.

One thing is clear: good reportage works best with a main character (protagonist) and a life story involving ups and downs that can be used to illustrate an abstract phenomenon such as climate change or the battle for sustainability. It may be a farmer in a drought-afflicted African country, a small family in a large city that is trying to live without plastics, or a social entrepreneur who is trying to fight the rigid hierarchies of business but coming up against a brick wall.

As a reporter it takes a great deal of patience to find protagonists. In his interview "Researching for Reporters", Stefan Willeke describes how he made contact with 20 farmers until he found one who became the subject of his story "An der Salatfront" [On The Salad Front]. His story is about the complex processes of globalisation and their impact on agriculture in Germany. Willeke also describes how it is important for journalists to be persistent and gain access to interesting places. You can find out more about research strategies in Step 4 of this workshop.

EXERCISES ON STEP 2:

Reading and analysis

Re-read the texts selected in Step 1, identify the theme and describe the protagonists:

a) What do they look like? What do they do, say, feel and think? What is their job or social function?
b) What inner conflicts do they have or what challenges are they facing?
c) From what perspective does the journalist observe them? Is the journalist's attitude judgemental or more neutral?

For young reporters:

a) The editors of your school or university magazine have decided to include an article on biodiversity. First of all, take a look at current media reports on the issue and think about why it is so important for all of us.
b) Think about how you could write your own story about biodiversity that reflects what is happening in your region. Who would make good protagonists for your story (they don't only have to be humans – for this special topic perhaps they could also be animals)? If you wish you can choose another topic for this exercise, such as climate change or the energy transition.

3. Goals, assumptions, initial research and selection of genre

Before you get down to the actual research, write down what you already know and your questions on your chosen theme, and think about some initial responses. This will allow you to construct a theory – your thoughts about the issue, for example about the reasons for extreme loss of biodiversity in a nearby area of marshland, which you want to examine using research methodology.



Get all you thoughts down on paper



These preliminary considerations will help you to take a structured, targeted approach to your research and select an appropriate journalistic format. At the same time, as a reporter you have to remain open and unbiased during your research work. You have to be prepared to change or reject your initial theory based on new evidence.

Then think about what you want to tell your readers and how you are going to do this. If you mainly want to report on new facts and complex related issues, then you will probably want to write a report or feature. If you want to raise awareness of an unknown topic or entertain your readers, then it is better to choose a reportage or profile. Choose your journalistic genre based on your objectives. Don't forget that as a journalist you can only describe snapshots of reality. You can never cover every aspect and every fact, because you only have limited time for research and limited space for publishing your report. Good stories depend on selecting a good topic, defining it, turning the spotlight on it, and above all bringing in new perspectives.

EXERCISES ON STEP 3:

For young reporters:

a) Get into small groups of 3 to 5. Look online for current news articles or press releases on issues relating to biodiversity, climate change or the energy transition (or another related subject of your choice).

b) Try to make the subject more focused and create a structure including main topic, subsidiary topics and side issues. You could do this using a mind map.

c) Then draw up a research thesis and a rough schedule and research plan.

Think about the following questions:

- What is the key question and what is the aim of our research?
- What sources can we use and how can we access them easily?
- Who are potential actors and interviewees for our story?
- How should we order the information that we gain from the various sources?
- What do we assume? How do we think the actors might answer our key question?
- What is the best journalistic format for our chosen topic – a report, a classic reportage or a profile?



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4. The actual research and interviews: methods, techniques and strategies

The overall aim of journalistic research is to produce a balanced report. This involves analysing a range of primary and secondary texts, and interviewing people and structuring what they say against the backdrop of their social roles, interests and functions. No-one, not even the most conscientious researcher, can be 100% neutral in everything they say and think. But some people and institutions can generally be considered neutral in the way they provide information. These include research institutes, educational institutions, ministries and authorities, quality media and consumer associations. The positions and statements of business people, politicians, union representatives, non-governmental organisations and citizens have to be considered to be more or less biased and "incomplete", but of course they are equally interesting to reporters.

When dealing with a topic like sustainability, which is very bound up with different interests and strong emotions, it is particularly important to ensure your arguments are based on well-researched facts and that you present them in a balanced way. Even if it seems like a lot of work, it is part of your journalistic due diligence to speak to a range of people involved and illustrate all aspects of the issue.

So in brief, research is hard work and time consuming, because it involves the careful collection and evaluation of information. "Research is a process of constant selection: What is important? What isn't important? [..] Is what I am researching relevant to the story and the topic? Is the story relevant to the public? Why?" (from Thomas Schuler's guide to good research, "Traininghandbuch Recherche", p. 70).

In this workshop we can only give a brief outline of how such detailed research should be carried out. To find out more on this topic we recommend Michael Haller's book "Recherchieren", and the "Traininghandbuch Recherche" from the Netzwerk Recherche association, which is available online free of charge (see list of links at the end).



Trainingshandbuch Recherche,© Gerhard Mester / netzwerk recherche e.V.

Unfortunately many publications do not have enough time and staff to really thoroughly research major stories. Most journalists only have a few days or even hours before their deadline, which inevitably is reflected in the quality of their reportages and profiles. Journalist colleges and internships also often do not give enough time to the issue of research. But there is no shortage of training opportunities (e.g. the above-mentioned "Traininghandbuch Rercherche").

Once you have drawn up a list of the key actors in a story you can quickly see the sources that you need to contact. A key research method is known as "puzzling". An important element of puzzling is constantly checking and examining the work you have already done – the information you have gained – and searching for gaps, other possible connections and unanswered questions about the issue. The second key technique is known as "shuttling". This is suitable for producing objective reports about controversial happenings or conflicts between two actors, in which both parties are convinced they are right and accuse the other of lying. In the shuttling method you shuttle between two or more actors with opposing interests and present them with the latest insights and facts from your interview with their "competitor" or "opponent". This is the easiest way to encourage them to make new statements, justify themselves and reveal relevant information. In reality most research involves a mixture of puzzling and shuttling.

It is a good idea to draw up a research protocol, particularly for longer and more extensive research.

People involved in research into ship scrapping

Main actors

Ship owners
Ship brokers
Scrapping companies in India

Subsidiary actors

Ship insurers
Experts in ship technology
Shipbuilders/European shipyards
Trade journalists

Critics

NGOs in India
Unions
European scrapping companies
Doctors in Alang

Authorities

Harbour authorities in Alang/customs
Environmental programme
Safety inspections/marine associations
Environment and economic ministries
International Maritime Organisation

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The number one rule of research is: "From the outside in". The first priority is to review all the key facts (who, what, where, when). Only then can you work your way through the background, details and causalities (why, in what ways). When writing major stories you should draw up a list of actors in line with the key questions: Who is involved in this event? Who is pursuing what interests? What conflicts are there? Generally we can divide the actors into different groups: 1. Protagonists, 2. People affected, 3. Eyewitnesses, 4. Jurisdiction (often authorities) and experts (often scientists), 5. Critics and competitors (NGOs, citizens' initiatives, companies, associations etc).

This may include the following:
- Interviewee, description of function and contact details (in alphabetical order)
- Date, place and time of interviews
- Individual comments (on the interviewee's personality and willingness to provide information)
- Key statements on content.

If telephone conversations reveal politically or personally explosive statements that affect someone's position, money, job or reputation, you should ensure you get written confirmation. Important information from online sources can be captured as a screenshot or PDF file.

Hazards and pitfalls

The Reporter Forum asked journalist Stefan Willeke about typical mistakes that should be avoided when doing research. He replied: *"You shouldn't try to research everything. You are not doing a doctorate, where you need to research every detail on every topic. [...]You always need to tie it in to your initial question: What do I want? Who do I need and who not? I have to be disciplined, otherwise I find myself drowning in useless stuff."*

In his talk, Willeke stressed how important it is for reporters to counter their own spontaneous impressions with facts, background knowledge and interviews in order to integrate them into the context and objective of the story. The research should always be carried out in line with a research objective that has been set beforehand. Some humorists and media critics even say: *"Good researchers keep researching until they no longer have a story."* It may be that you have to ditch your own theories because they don't stand up to closer examination. But this is not a failure; instead it should be viewed as a journalistic success.

Willeke recommends starting to write once you have understood the fundamental issues and found a basic message. He believes this is much more important than detailed knowledge.

The interview as a research method

An essential component of research methodology is the interview. It requires a good degree of empathy, knowledge of human nature and creativity. People are more likely open up if they feel understood, says journalist Matthias Brendel. Good reporters are good listeners and give the other party space to reflect on themselves, their feelings and behaviours.

You also need to make your interviewees feel that what they say will not cause them problems. In certain cases a little encouragement can lead to some really valuable information. It is said that



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YTG interviews Christiana Figueres (UNFCCC)

there is no such thing as a stupid or embarrassing question. Every reporter knows and hates being in a position where they have to research topics that they know very little about.

There are also open and closed questions. Reporters can use open questions to give the interviewee scope for their reply. This can lead to expansive responses, whereas closed yes or no questions involve them taking a fixed position or making a decision.

According to Brendel, in every interview it is vital that journalists understand the interviewee's situation, perspective and position and their understanding of the questions.

When asked by the reporters' forum how she persuaded people to talk, Beate Lakotto replied: *"Beforehand I ask myself: what is the other person's interest in the interview? If they ask me: 'Why should I tell you that?' and I can't think of reply, then I've lost. Generally everyone wants to denounce injustices, seek understanding and present themselves. If I understand this motivation, I can use it in my argument. Then it's often easy to allay any concerns."*

Checking sources and their statements is an important element of research, and doubt is a valuable and constant part of the reporter's life. The reporter has to critically examine the responses of all interviewees. So during interviews it is equally unhelpful to take a submissive attitude and place the interviewee on a pedestal or to act in an arrogant, egotistical manner. Brendel believes that for younger journalists it is particularly important to develop an instinct and trust their own voice in order to increase their credibility.

During interviews it is taboo for journalists to make judgemental or moralising remarks. However, it is allowed to interrupt the interviewee with a *"Sorry, I'd like to jump in and ask you something about that".* The main thing is that reporters never reproach, accuse or be otherwise negative in their statements and reactions. A neutral or objective attitude is best, which can be expressed with words such as: *"I've heard that…"* or *"I can imagine that the tabloids might accuse you of… What would you say to them?"* The more powerful your interviewee, the tougher journalists can be in the way they question their behaviour and how they carry out their responsibilities.

Moritz von Uslar gave the following advice during his talk *"One thousand timeless tips on the art of the interview"* at the Reporter Forum:

"Of course every question is a simplification.

Every question is a narrowing of the truth. [...]

So a good question automatically appears banal. [...]

A good question automatically has an agenda.

It should appear effortless. [...]

Every question should be so pointed, so absolutely on the nose that a response of 'I don't know' or 'No idea' represents a sensational answer. [...]

Basically, short questions require long answers and long questions short answers.

You can only conduct a good interview if you accept the possibility of failure."

So good interviews are not spontaneous chats, but generally based on sound research, which means that a lot of work has to be done both before and after the interview. But of course there are

some exceptions (accidents, crimes, disasters, unforeseeable events or encounters), which leave reporters with no time to do adequate preparation. This is when they have to be able to improvise.

Some interviewees expect to be able to check and approve their quotes before the interview is published; this is called 'authorising' and may be agreed between the two parties.

It is advisable to apply for a young person's press pass so that you have easier and faster access to people and places for your research. These can be obtained from your country's youth press association.

Continued on page 77



WHAT TO BEAR IN MIND WHEN CARRYING OUT RESEARCH INTERVIEWS

1. Always try to find primary sources – people who have experienced something themselves and/or have first-hand knowledge of something.
2. Don't write a story with only one source, but speak to several people involved and try to find at least two independent sources with access to the same information.
3. Always check the credibility of any sources used – including individuals who might generally be considered to be well-informed, such as academics (are the experts in question held in high esteem by fellow professionals within their field? Is the issue that you wish to discuss really within their field of expertise? What have they published and where? Do their views constitute an opinion that is unique to them?).
4. Always check and carefully scrutinise any new and unusual facts and statements as people sometimes lie, remember things incorrectly, misquote others, etc. if people quote to you from a document or text, always ask for a copy or extract of the document in question.
5. Treat online sources with particular care. Having said that, it is possible that you may find individuals on social networks who have not yet contributed via classic media channels, despite the fact that they have a wealth of insider knowledge that they would be happy to share with you.
6. It is important to have done your research and to be well-prepared both before and during the interview, especially with regard to the interviewees themselves and their particular interests.
7. If an interviewee wishes to remain anonymous, this does not by definition mean they are not a reliable source. However, unnamed sources should only be quoted in your text under exceptional circumstances. You could take advantage of the information provided to focus your research elsewhere or use it as the start point for digging deeper into the issue being discussed. Exceptions to this rule include any particularly personal details (e. g. information relating to sexual orientation or personal misfortune) or controversial statements (threat of losing job, etc.). In this event, you can change the name of the individual concerned but must let the reader know that this has been done.
8. Exchange relevant contact details with interviewees and ask them if you can contact them if you have some additional questions.
9. Dictation equipment can be used as a technical aid when carrying out interview research. However, you must get permission from the interviewee before making any recordings. The alternative is to write down any key points made during the interview by hand. When dealing with academics, well-informed individuals and experts (i.e. whenever you are talking about facts), it is important to get them to confirm the accuracy of what you have written down.

EXERCISES ON STEP 4:

Advance exercise

If you want to find out more about good research methods, potential pitfalls and mistakes and possible strategies and opportunities, you could try interviewing some well-known journalists and reporters (by phone). Prepare some key questions in advance and find out as much as possible about the person you are going to interview. For example, the focus of the interview could be on the best ways of dealing with different sources.

For young reporters:

a) Get together in small groups (3–5 people). Discuss which research methods you consider to be the most appropriate for the topic you have chosen from Step 3: shuttling or puzzling?

b) Draw up a list of potential interviewees and categorise them according to their level of potential bias.
Choose one of the people you consider to be more "neutral" and ask them for an interview. Prepare some key questions as a team and do some detailed research to ensure that you are fully prepared. Try to imagine some of the answers you may get from the interviewee and think about how you should react to these answers and any potential follow-up questions you may wish to pose. Think about and plan how you would like to start and finish the interview. At the end of the interview, don't forget to thank the interviewee for their time and willingness to answer your questions.

d) Carry out the interview. During the interview, only one or two of you should ask the questions. The other members of the team can write down what is being said and/or observe the interview in order to provide detailed feedback to the interviewers afterwards. Another possibility is to video the interview so that you can do a detailed analysis afterwards. The following questions may be useful when carrying out your analysis: What went well and what was not so successful? At what points in the interview could you have reacted in a more critical way and done more digging? Was there sufficient justification for interrupting the interviewee? Were the interviewers too "soft" or did they ask potentially uncomfortable questions as well?

e) Write up the interview and ask the interviewee to authorise it if this has been agreed beforehand.

f) Think about which of the people included in your list from exercise b) above might have different or even opposing views to those of your research theory. Ask these people for an interview too. Ask them similar questions and put to them some of the statements you heard in the first interview.

g) Analyse all the interviews and draw some initial conclusions. Write up these conclusions in your research log. What else can you do to further advance your research? Who else could evaluate your ideas from a totally different perspective, put forward alternative arguments or even completely disagree with you?

INFO:

Basic laws for reporters

- Freedom of expression, freedom of the press and freedom of reporting by broadcasts in accordance with Article 5 of the Basic Law (Grundgesetz) of the Federal Republic of Germany as limited by the provisions of general laws, the provisions for the protection of young persons and the right to personal honour (Article 2.1 in conjunction with Article 1.1 of the Basic Law) as well as the rights of personality
- The protection of sources in accordance with journalists' rights to refuse to give evidence (§53 of the stop [German Code of Criminal Procedure], §383 of the ZPO [German Code of Civil Procedure]
- Copyright laws
- State media laws of the German Federal States
- The German Freedom of Information Act and the German Environmental Information Act

Ethical and moral principles for reporters

- The Press Code issued by the German Press Council, including truth and truthfulness, balance and objectivity, accurate quoting of interviewees and disclosure of sources
- The Media Code issued by the Netzwerk Recherche association
- Consumer protection principles
- Differentiation between reporting and advertising and PR work
- Methods of obtaining information and material (discussion on the use of covert investigation and extortion by the tabloid press)
- Selection processes and news criteria (criticism of curtailing and escalating debates and events and the "commercialisation" of the media)

Difficult situations and issues for reporters (for ethical, legal or personal reasons)

- Reporting about alleged criminal offences or criminal proceedings (reporting on crime suspects)
- Reporting about children and young people and/or about intimate, private matters such as sexual orientation, family relationships, domestic situations, religious affiliations, medical conditions, etc. (see General Right of Personality)
- Reporting about catastrophes and accidents (protection of the victim comes first)
- Investigative enquiries and stories which make (well-founded) allegations against well-known individuals or institutions in politics or business (self-endangerment of reporters)
- Investigative enquiries carried out in an anti-democratic, potentially violent environment
- Reports that pose a risk to the security of the state and public peace or which could potentially damage understanding between peoples and tolerance

INFO: WHAT IS GOOD JOURNALISM?

The role of the media in society:

- To provide information, shape opinions and influence political decision-making: contribute to people's understanding of the relationship between economic, political and social issues and events and provide the reader with orientation
- To act responsibly and contribute to the integration of minorities and intercultural understanding
- To entertain the reader
- To provide constructive criticism of political, economic and social developments and institutions

Selected quality criteria:

- The social relevance and topicality of the story and its significance in today's world
- The accuracy and completeness of the existing social facts presented to the best of the writer's knowledge and belief as well as in terms of relevance (journalists must and can be selective)
- The independence and impartiality of the story and the range of interpretations and opinions reflected
- Transparency (open disclosure of methods and approach) and fairness in dealing with those interviewed
- The clarity of the reporting
- The originality of the narrative
- The interaction with and openness towards as many people, individuals concerned and readers as possible
- Selection processes and news criteria (criticism of curtailing and escalating debates and events and the "commercialisation" of the media).



Continued from page 72

5. Journalistic principles, quality criteria and media law

Most of the rules and principles that apply to factual media reporting also apply to reportage. It is in part a question of ethics and journalistic due diligence: what should a journalist or reporter do or not do in order to satisfy their responsibility towards society and their role in a pluralistic democracy? How should they behave towards the people they meet in the course of their research and about whom they may write? It is also a question of the law: what are the legal issues that apply to this line of research and the publication of any information that might be obtained?

One of the most important principles for reporters and journalists is to ensure that they demonstrate authenticity and truthfulness in the way they act and write. Journalists (as well as press and PR representatives in organisations) must not deceive their readers or lie to them, but should exercise due diligence in gathering information that they believe is accurate to the best of their knowledge and then present it in a clear and structured way. Anyone can make a mistake or say something that turns out to be wrong, but these errors should be corrected as quickly as possible. There are certain ethical and moral issues that often come up at journalists' networking events and in reports about the media in general.

Subjectivity and personal bias

We have to consider the following question: to what extent can and should journalists realistically be independent observers and reporters, or does personal bias generally exist as a result of personal interests, attitudes, membership of clubs or organisations, sympathies, etc?. In the past it was generally accepted that journalists did not use the word "I" in their reports. This is no longer the case today. In certain cases, it can make sense to be transparent about your own attitudes and feelings and to reflect these in what you say.

If, as a journalist, you want to write about something that affects you directly and personally, you should under no circumstances keep this fact to yourself. To quote an example from Austria, a woman had to pay a fine because she set off from traffic lights on her bike two seconds too soon, when the lights were still at red. A newspaper ran a report on the incident, giving only the first name of the cyclist involved, and describing her anger at how much it had cost her for what was, in her opinion, a "harmless traffic infringement". Later it emerged that the woman involved just happened to be the online editor-in-chief of the newspaper. From an ethical perspective, keeping this fact from the readers was wrong.

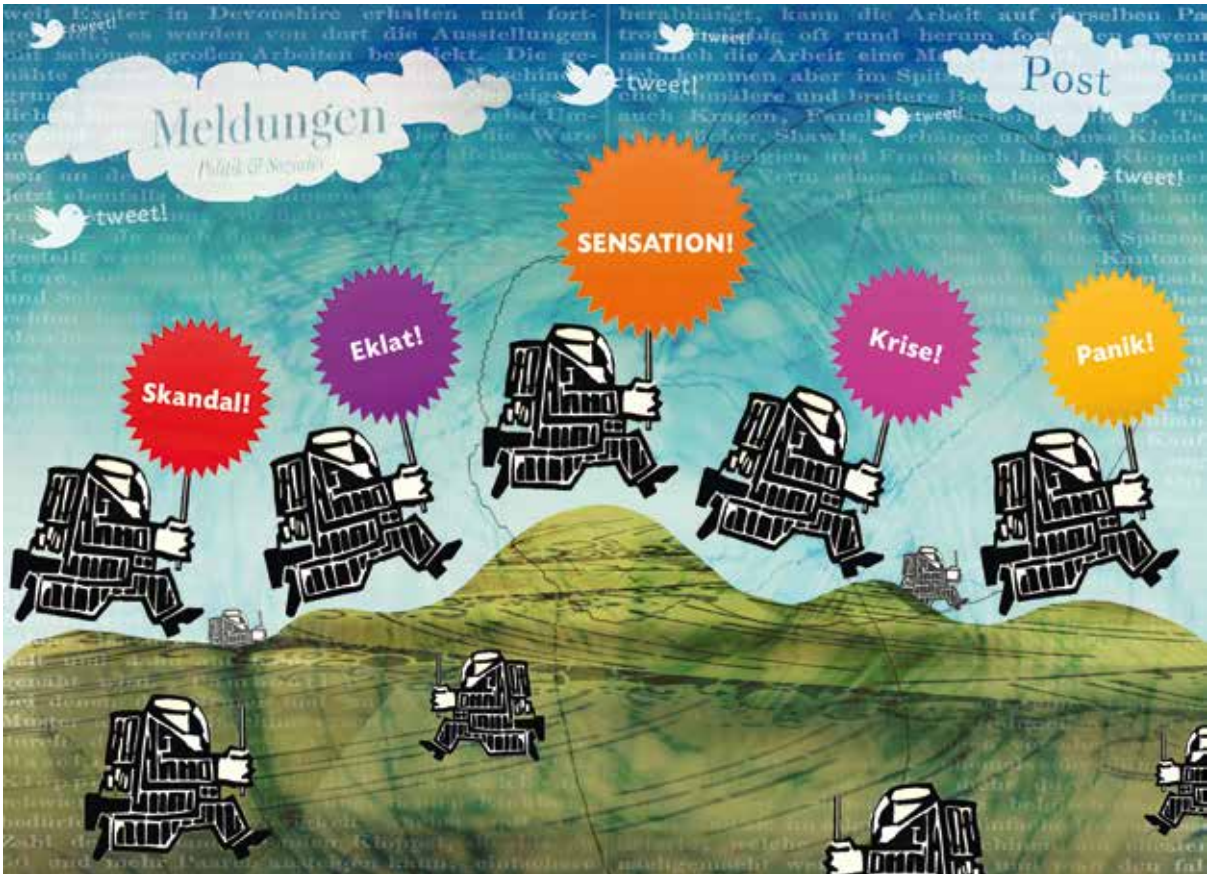
Another important question is what exactly reporters should have actually experienced themselves in order to accurately report on a scene. This issue became the subject of heated debate after the prestigious Henri Nannen Prize was awarded to Spiegel journalist René Pfister, who, in his profile of the power-hungry CSU politician Horst Seehofer ("Am Stellpult" Spiegel 33/2010), described the model railway in Seehofer's cellar. It turned out that Pfister had never actually been in the cellar but had only heard of it from colleagues and Seehofer himself. When Pfister admitted this fact openly in answer to a question from the moderator at the award ceremony, it caused a media outcry. His prize was subsequently rescinded. Most people were of the opinion that Pfister should have informed the reader through the use of reported or indirect speech, for example, that the description of the cellar was an example of "colportage" – basically, peddling other people's words.

6. Writing (and illustrating) reports

It would be fair to say that there are very few hard and fast rules when it comes to compiling a successful report or biographical profile. One of the few rules that does exist is that descriptive and emotive passages (so-called "scenes") should alternate with more objective passages containing factual information (data, facts, background). While scenes should be used to describe events in an accurate and interesting way, the information sections should provide the reader with the more abstract, theoretical and socio-political background and structure to the story. Good reporters are able to interweave scenic and informative sections seamlessly together in order to successfully make the transition from the specific to the general. Good storytelling, therefore, is all about successfully juggling details and interrelationships, emotions and information.

A second hard and fast rule is that the main protagonist should be introduced in the first paragraph with a description of their appearance and characteristics and/or a quote from them. At the beginning of the story, you should make reference to the central conflict surrounding the main protagonist (naturally without giving away the ending) in order to grab the reader's attention from the very beginning.

Many journalists begin and end a reportage with a particularly powerful scene and by describing a particularly significant or meaningful act on the part of their main protagonist. Others, such as Sabine Rückert, the crime reporter at DIE ZEIT, prefer a more philosophical or thought-provoking beginning.



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EXERCISES ON STEP 5:

Reading and analysis

a) Read through the reports from Step 1 again. Look for examples of where the reporters have potentially or openly used this practice of "colportage".
b) As the reader, is it clear to you what different sources have been used to put the story together?
c) Assess the quality of the reports you have selected using the quality criteria outlined above (see info box "What is good journalism?").
d) Research the responsibilities of the Press Council in Germany. What reprimands has it issued to journalists in recent months? Discuss one of the cases involved in detail in your group.

Advanced exercise:

The most often quoted sentence by a German journalist is probably that of Hanns Joachim Friedrich: *"Good journalists never identify with a cause, not even a good one. They are everywhere but belong nowhere."*
What he meant by this is that journalists should play the role of objective observers. What about the issues of climate protection and sustainability?
When do you think it is acceptable for journalists to take sides in order to fulfil their responsibilities to society and bring about improvements?
Where are the boundaries of misguided "dogoodism" on the part of reporters?
Discuss this question in small groups.
Also read the article by Yvonne Zwick in Section 4.1.



ARD, Tagesthemen

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For young reporters:

Read the Press Code issued by the German Press Council and the Media Code issued by the Netzwerk Recherche association and discuss them in small groups. Go through the research material that you gathered during Steps 3 and 4 and evaluate your methods. Was your approach ethically and morally correct? Strengthen and expand your own individual research plan by adding ways that you can guarantee and improve the quality of your reporting.



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In an interview with the Reporter Forum, Rückert said: *"I almost never start reportage with a description or the presentation of a particular scene. I don't believe it is particularly important whether somebody is fat or thin or has blue hair. I almost always start with fundamental principles. Reportage has to be more than simply a report. It should transcend reality. It needs to have a metaphysical dimension, a moral dimension [...]. In short: reportage is the music of the mind. Variations on the theme of life."*

Media expert and journalist Michael Haller believes there is another important aspect, namely the author's own thoughts and conclusions: *"Another sign of quality is the intellectual and analytical work done by reporters, who need to get to the very essence of an issue through their enquiries"*(2011). With factual reports this essence would normally be summed up in the headline. However, with reportage it is more about adopting an individual stance. Sabine Rückert believes that the key difference between a camera and a journalist is that the latter has to try to empathise with people in order to be able to interpret their actions, which is a vital part of their work.

After the introduction and the presentation of key initial facts, many reportage pieces have what is known as a "nut graph", usually somewhere in the second or third paragraph. This is short for "nutshell paragraph" and is sometimes also known as a "billboard paragraph". It's a kind of "you-might-be-wondering-why-we've-invited-you-to-this-party" section of the store, as Christian Thiele described it at the Reporter Forum.

According to Thiele, the nut graph has the following functions:

- It justifies the story and explains to the reader why it is important and significant.
- It creates a bridge between the introduction and the main body of the story.
- It helps writers to avoid getting bogged down in too much detail.

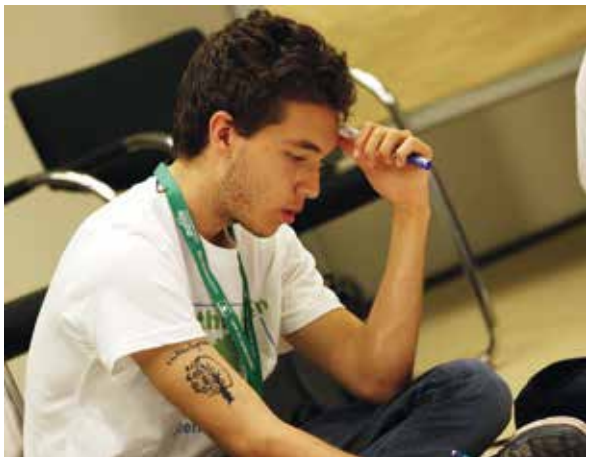
According to Thiele, *"A good nut graph allows us to reveal the universal, even the existential, element of our story. If we think in terms of a movie: the introduction is the close-up, the detail, filmed with a telephoto lens, while the portal is the greater whole, the wide-angle."*

Stefan Willeke describes the function of the nut graph in the following way: *"The part of the topic that the reportage is based on is not as powerful as the reporter would have liked. So right from the start it is necessary to load the story with significance, write a paragraph that sets out the dimensions of the topic. There you are, dear reader, you think you are reading a little story about a dull car factory in*

Detroit, and then on the next page you suddenly discover that it's really all about America in the 21st century. Just a few more lines and then things will really start cooking. So stick with me, it's going to be worth it, I promise you."

This, according to Willeke, is one potential solution if the reporter feels that they can't get across the whole complexity of an issue by using only what they have seen and experienced personally (their own basic material). Here the nut graph can act as a useful "appetiser".

One potential way of creating an exciting dramaturgical narrative in reportage is to work with powerful opposites, such as writing a double profile or including a protagonist and their counterpart (antagonist). The obvious differences (in terms of opinions or behaviour) are what help to create the necessary tension in the text. *"Heroes need adversaries in order to shine"*, says Ariel Hauptmeier of the Reporter Forum. He calls this approach "antagonistic storytelling"



and described it as a strategy that journalists can copy from screenwriters and novelists.

Good stories normally have some sort of climax or examine a surprising change in the life of the protagonist. If the story plays out over a long period of time or is seemingly complex, authors will often make use of flashbacks. Stories often end with a solution to the conflict or with another surprise of some sort. The main theme should be brought to a successful conclusion by the end of the story, though there is nothing wrong with leaving the door ajar and/or providing a glimpse into the near future. The most important thing is that the ending makes the reader think...

Some reporters like to think the whole story through in their heads, from beginning to end, before they start writing it down. It's not easy for many journalists to "find their own voice", according to Wolfgang Büschner. Agreeing with the poet Peter Rühmkorf, he differentiates between *"lines that are simply written and those which, as he says, fall from heaven. Which come to you in a strange way, in a way that you simply cannot explain. Sentences that have something of the anarchic about them and which do not necessarily flow logically from the material, the story or the notebook. Sentences that have a life of their own. Zen Buddhists might say: You don't find the sentences, they find you."* What Büschner means by this is that there is no patent formula for good writing.

Some useful tips on language and style: the more dramatic and tragic your story is, the simpler and more restrained the language needs to be. However, if there is not much real action and events are dry and long-drawn-out, or even comical and absurd, then there are no limits to a reporter's creativity, to how much they can play with the wording of the piece. Powerful verbs and sentences of varying lengths can help to carry a story and its protagonists right through to the end. However using too many nouns and foreign words can slow down and interfere with the flow of the narrative. Adjectives used should be of a descriptive rather than evaluative nature. And metaphors should be original enough to really make an impression on the reader.

And nothing helps to make a story more powerful than visual content. For this reason, it is important to seek out (perhaps with the help of a professional photographer) the kind of photographic material that will not only successfully illustrate the story, but will also provide additional insights into the lives and emotions of the protagonists and the conflicts they are experiencing. Ideally, photos should reflect the atmosphere of the places they are illustrating.

7. Revise – reject – rewrite – revise

Proofreading your work (or having it proofread) is one thing, but first comes the seemingly endless work on the actual content and structure of your text. The bad news is that reportage can never really be considered complete, because a good story can never really been told in its entirety. The good news is that when the revision phase is complete and the desired quality has been achieved, it's finally time to present your work to the public. However, it can often take a long time to get from the initial draft to the final polished version. Around one quarter of the total time you have allocated to producing your story should be invested in this final phase.

Once the initial draft has been written, it is worth putting it to one side and letting it "rest" for a while, like a freshly baked cake that has just come out of the oven and is still too hot to eat. If, as the author, you start to reflect on the text during this "resting phase", you will probably recognise that there are some parts that are still not quite right. In which case, it's time to get back to the writing desk and start revising that draft. When you do, it's important to keep the old draft and save the new one as "Version 2" in order to ensure that you don't lose anything.

One useful strategy during the revision phase is to ask colleagues, friends or acquaintances to read through your work and give you their feedback. Don't be shy about doing this, as every piece of advice and constructive criticism will help to improve your story and make you a better writer. Don't forget that it's much easier to tear a text apart, criticise it and point out perceived weaknesses to the author than it is to write the text itself!

Keep it simple! Avoid long convoluted sentences and attractive but unnecessary adjectives and flowery speech. Check whether metaphors, descriptions or digressions from the main message of your story are of any real value or simply



serve to bulk out the text or gloss over any gaps in your research. It may be painful, but if this is the case, there is no getting away from the fact that you need to invest more time in doing additional research.

You know it's a good story when it is not only an emotional rollercoaster for your readers but also for you during your research and writing. It should allow you and your readers to gain new insights and experiences.

EXERCISES ON STEP 6:

Reading and analysis

Take one or two of the reportage pieces from Step 1 (or some other articles of your choice) and read through them carefully. Mark those sections that describe a scene and those that present important facts and background information about the subject matter of the article. Discuss the following questions in the group:

a) Is there a powerful introduction? Does the first paragraph really make you want to read the rest of the text? Does the article begin with a strong scene or with philosophical, universal questions and the thoughts on the part of the author?
b) Is the "hero" (protagonist) of the piece the first person to be introduced?
c) Is there an "aha" paragraph, a so-called "nut graph" at the beginning of the piece that provides a bridge between the specific scene and the larger issues being discussed?
d) How are the transitions between scene-setting and informative sections handled? Is there a natural flow or is it too abrupt? Does the article successfully make the transition from the specific to the general?
e) Which of the quotes used are particularly original and come across as authentic? And which are a little boring?
f) Which dramaturgical elements (climaxes, turning points) and narrative strategies can you identify in the text?
g) What did you notice about the style of language used in the text? Which strong and unusual verbs stand out?

Advanced exercises:

For young reporters:

You now know what is required if you want to write (or learn to write) good reportages. And now you want to put this extensive knowledge to good use and work as a reporter. Start again at Step 2 or continue with the exercises and basic research from Steps 3 and 4 and work through to Step 6! Don't worry, you don't have to get everything right at the first attempt! Starting anything new can often be a challenge...



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8. Getting started in journalism – recommended reading and links

As you have probably realised after reading and working your way through this workshop, becoming involved in the world of journalism cam be a long-drawn-out and complex affair. Only those who have real staying power, boundless enthusiasm – and perhaps a little bit of luck – are likely to get their foot in the door and find a job (that pays enough to live on). But then again, nothing ventured, nothing gained, and being a journalist is great fun! After all, the obstacles to gaining at least some experience are not that great and the skills that you learn can be useful in other areas too. There is no shortage of training courses, including for school and college students. If you have any questions, you can contact the *youthinkgreen* office in Berlin at any time.

Training and networking opportunities:

- Training programmes at the Konrad-Adenauer-Stiftung for school students (media workshops) and college students (cross-media journalism training – JONA programme): www.kas.de/wf/de/42.35
- Training with an ecclesiastical bent at the Institut zur Förderung publizistischen Nachwuchses [Institute for the Development of Young Journalists] in Munich (IFP): www.journalistenschule-ifp.de/
- Support for students with a migrant background from the Heinrich Böll Foundation: the "Medienvielfalt, anders" programme [Putting the Multi into Media]: www.boell.de/de/2014/01/13/was-wir-bieten
- Programmes run by the Friedrich Ebert Foundation (FES): www.fes.de/medien/
- Postgraduate Certificate in Sustainability and Journalism at the Leuphana University of Lüneburg: www.leuphana.de/zertifikat-nachhaltigkeit-journalismus-berufsbegleitend.html
- Research tools and contacts are available from the Grüner Journalismus Portal: www.gruener-journalismus.de
- For an overview of the training offered by schools of journalism go to: www.journalist.de/ratgeber/handwerk-beruf/tipps-fuer-den-berufsalltag/checkliste-journalistenschulen.html
- For an overview of the various different types of journalism courses available go to: www.studis-online.de/Studienfuehrer/medien-studieren.php
- Young journalist associations: www.jugendpresse.de and www.jungejournalisten.de

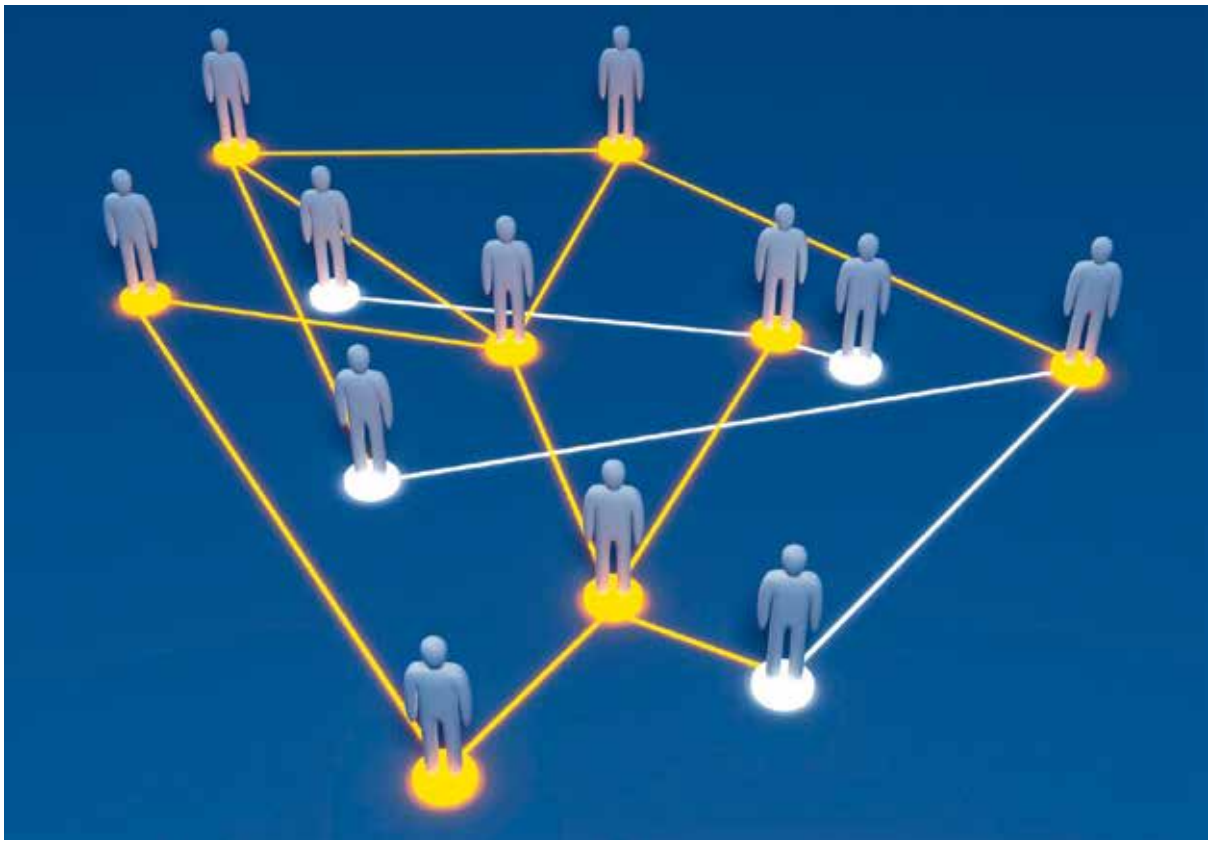
- Getting started in journalism: www.djv.de and https://dju.verdi.de//junge-dju/aus-und-weiterbildung
- An association for the promotion of investigative journalism: https://netzwerkrecherche.org/
- An action group dedicated to training and networking with and from well-known reportage journalists: www.reporter-forum.de (texts, tips and interviews on the subject of journalistic narrative forms)

Awards and grants:

Journalism prizes in Germany:
www.drehscheibe.org/journalistenpreise.html
Research grants:
www.bpb.de/gesellschaft/medien/lokaljournalistenprogramm/55460/stipendien
International organisations and programmes:
www.sej.org/library/education-environmental-journalism-programs-and-courses
UNESCO International Programme for the Development of Communication (IPDC):
www.unesco.org
Deutsche Welle Akademie

Further reading:

- Online-Traininghandbuch Recherche (training handbook on carrying out research)
- nr-Werkstatt: Presserecht in der Praxis (netzwerk recherche workshop: Press law in practice)
- Überblick Interviews führen (How to carry out interviews): www.fachjournalist.de
- Marie Lampert/Rolf Wespe (2013): "Storytelling für Journalisten"[Storytelling for journalists]. UVK – Constance, Munich.
- Multimedia magazines from JONA/KAS on the subjects of energy transition: "Plan E" and nutrition: "Delikat": http://de.plan-e-magazin.de and www.kas.de



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WE ARE THE CHANGE! – FROM THE WORK OF THE YOUTHINKGRE INITIATIVE

Konrad
Adenauer
Stiftung

2.1. *youthinkgreen* compact

Our *youthinkgreen* Philosophy:
Strengthening the Engagement and Voices of Young People
By Nadine Böttcher and Ariane Missuweit
Page 90
Globally Unifying Symbols:
"Green Thread" and "Tree of Hope"
By Nadine Böttcher, Ariane Missuweit and Helmut Spiering
Page 97
youthinkgreeners at UN Conferences:
Slip into the Role of a Delegate –
Experience Politics Up Close and Help Shape It
By Dr. Tobias Romberg
Page 106
An Historical View of Intercultural Encounters:
Laying the Right Foundations
By Gerd Westphal, Dr. Tobias Romberg, Judith Gebbe and Nicolás Marin
Page 113
Open Competition – How We Expand Our Network:
With an Application Piece by *Khoi Anh Dang*
Page 128
A Look Behind the Scenes of a "World Youth Parliament":
How Was the youthinkgreen Manifesto Developed?
By Kiara Worth
Page 133
The *youthinkgreen* Manifesto: For Sustainable Living
Page 138
The "Tree of Hope" Documentary –
Sample Field Work Projects in Moving Pictures
By Rasmus Sievers
Page 141

EN



2.2. Field work projects leave a sustainable legacy

Plastic Bag Free Osnabrück – Germany
By Vanessa Kalisch
Page 152
School-Bike-Bus in Windhoek – Namibia
By Alexander Brock
Page 157
Consolidating Environmental Ideas in Collaboration with GRIPS Theatre – Bulgaria
By Anne Herrmann
Page 162
The Fog Catcher – Using Water Sustainably in Peru
By Pablo Portal
Page 167
A Successful Green Start with Solar Energy in Egypt – Inspiring Activities by Committed Young Students
youthinkgreen-Blog, Egypt
Page 172



World Youth Climate Summit in Wolfsburg

The "Green Corner" of *youthinkgreen* –
A Challenge for Your Group
By Felix Beyers
Page 177
Project Workshop:
Ideas Are Turned into Action
By Nadine Böttcher
Page 181
Welcome to the Island of Meybie: Experience
and Try out Alternative Modes of Consumption
By Ariane Missuweit and Nadine Böttcher
Page 190
Television lies – We explain:
From the script workshop of *youthinkgreen*
By Thomas Frick
Page 201

OUR YOUTHINKGREEN PHILOSOPHY: STRENGTHENING THE ENGAGEMENT AND VOICES OF YOUNG PEOPLE

By Nadine Böttcher and Ariane Missuweit

youthinkgreen – jugend denkt um.welt e. V. sees itself as an organisation whose purpose is to provide impulses and support for the engagement of young people in the area of sustainable development. We offer young people who want to realise local sustainability projects seminars, projects and coaching to enhance their knowledge and skills. We put them in touch with other committed young people from around the world and with strong partners from politics, business and civil society. What does that mean in practice, in everyday life?

youthinkgreen is as diverse and colourful as life, as the world and as the young people who are becoming engaged. Together, all of us – all youthinkgreeners, the Youth Advisory Committee, the Berlin *youthinkgreen* office and the management committee of the association – have set ourselves the goal of furthering project and personal development as well as knowledge acquisition in the area of sustainable development around the world. To this end, we initiate local projects, organise international encounters and enable young people to take part in UN summits and conferences in various parts of the world.

Our strength lies in our diversity – a frequently neglected aspect in sustainability debates. We do not believe that there can be one fixed sustainability concept that is suitable for all contexts, quite the opposite. But every person can make a contribution to sustainable development and improvements in climate protection by becoming involved in their own social environment, using their own initiative and creativity.

Topics, ideas and motivation

Unlike many civil society organisations, we have not limited ourselves to a particular topic, such as reforestation or sustainable mobility. Together, we work under the motto: "Address – Inspire – Spur on". There are many questions for the young people – as well as those supporting them: What do we want to do? What should we do? What can we do? Do we need external partners? And: how can we fund our activities and draw attention to them?

Each of our *youthinkgreen* groups has initiated and implemented at least one local sustainability project (see "Field work" in this section): for the use of regenerative energies in Egypt, for sustainable mobility in Namibia, for plastic-free living in Germany, for swap meets in Brazil, for rain harvesting in Peru as well as for recycling and waste prevention in India. *youthinkgreen* Climate Ambassadors from secondary school

Ursulaschule Osnabrück, for example, produce a monthly radio programme about the topics they are involved in and about their activities. And in New Delhi, the "Green Carnival" was created. The young people give others a wake-up call, bring people together and encourage them to act responsibly.



INFO 1: HOW YOUTHINKGREEN – JUGEND DENKT UM.WELT CAME ABOUT



The starting shot for *jugend denkt um.welt* was fired back in 2008 by Helmut Spiering (see photograph), then a secondary school teacher from Bad Iburg. He knows from 30 years' experience how much hidden potential there is in young people, while the world is facing enormous challenges. In collaboration with a few committed pupils, he founded jugend denkt um.welt with the aim of fighting for the protection of the environment in a creative and peaceful way, involving young people from different countries. By 2009, they were already able to look back on a successful 1st European Youth Climate Summit in Berlin.

At the beginning of 2013, the non-profit association was founded, not only to be able to plan and act more independently, faster and more purposefully, but also to support the projects with greater rigour, effectiveness and far-sightedness.

We design our programmes and projects according to the principle "Think globally – act locally". Consequently, the coaching and seminar concepts we apply in the project implementation are always open to change and we work with flat hierarchies. We started various workshop and training programmes, such as "Klimabotschafter" meaning "Climate Ambassadors", "Gestalte dein Vermächtnis" meaning "Shape your Legacy" and "konsumwandeln" meaning "changeconsumption". Working in small teams, the young people determine the objectives, the format and the contents of their projects themselves. For the project development, planning and analysis, we support them with various methods, tools and creative techniques, always to suit the particular context

and group: Open Space, Dragon Dreaming, Design Thinking, Brain Writing, Story Sharing, Medicine Wheel, Business Model Canvas, etc.

Motivation and personal development

In our *youthinkgreen* screenplay workshops (see text by Thomas Frick in this section), we give young people an opportunity to critically question the media and advertising and to realise their own ideas or appeals creatively in environmental commercials. Working with drama teachers gives them confidence for public appearances and campaigns. Experts and scientists encourage them during national and international seminars. The workshop leaders aim to equip and empower the young people so that they can act independently and use networking to help shape their future.

But what motivates the young people? Which youngsters would like to become involved in our programmes and fill them with ideas, activities and life? The young people who join the projects tend to have a latent interest in issues to do with the environment and climate protection. They want to bring about change. In the project, they seek and find like-minded people. They grow. They make an impact on their environment. They question, they sensitise, they help shape their surroundings. What motivates them is the fact that they are being taken seriously and that they can discover their own capabilities and those of their peers. In our organisation, young people find a community in which they can pursue their "search for a purpose" and where they receive support in finding the way that is "right" for them. While working in the project, the young people mature into critical consumers, openminded global citizens and determined actors.

In our project work, we always bear in mind the lived reality and the local context in which the young people operate. Our work is also based on the "Education for Sustainable Development" concept with the aim of furthering the young people's competence to take effective action. We strengthen their ability to acquire knowledge about sustainable development and to apply solution models. In early 2013, the initiative *youthinkgreen – jugend denkt*



OUR AUTHORS

Nadine Böttcher (b. 1986) is the Senior Project Manager at youthinkgreen. She conducts workshops, organises and moderates international youth encounters, designs concepts for new sustainable development projects and provides support to youth groups around the world with developing and realising their ideas. She is also a volunteer contributor to project "Experiencing Diversity".


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Ariane Missuweit (b. 1985) has a degree in Social Sciences and has worked as an independent journalist. She has been on the *youthinkgreen* staff since 2014, has been involved in the production of the "Tree of Hope" book on the concept design and editorial side and has been managing the "konsumwandeln" project since 2015.



EMPOWERING YOUNG PEOPLE

Judith, formerly at *youthinkgreen* Osnabrück/Germany, currently active in the Youth Advisory Committee:
"My learning processes and the experiences gained through *youthinkgreen* far exceed those provided by the 'conventional school'. Being able to work with other young people in tackling the challenges of our time, to fight, to grow through the experience and to bring about changes together – thinking differently and in new ways, I have *youthinkgreen* to thank for all that!"

Drin, formerly at *youthinkgreen* Pristina/Kosovo, currently active in Greece:
"*youthinkgreen* has shown me that we must value the gifts that the planet and nature have given us on our way to becoming global citizens. We must work hard to maintain these valuable gifts. It doesn't cost us anything apart from two hands full of responsibility and maturity!"



Kavleen, *youthinkgreen* New Delhi/India:
"*youthinkgreen* has been the best learning experience of my life."

Ahmed, *youthinkgreen* Cairo/Egypt:
"I relish the international character of the project, have learnt and experienced a lot about other cultures, about the differences and similarities with respect to environmental problems that exist between my country and those of the other Climate Ambassadors."

um.welt received an award as an official project of the "UN decade of Education for Sustainable Development".

To summarise: we believe that the transformation involving developments that are ecologically and economically equitable must take place in parallel at three levels – at the micro level of individual people's way of life, at the meso level of the communities and at the macro level of the political decision-makers.

youthinkgreen – jugend denkt um.welt e. V. therefore serves as a



EXCURSUS: WHAT DOES "SUSTAINABILITY" MEAN TO US?

On the one hand, there is the individual level. For the individual, sustainability first of all has to do with health and contentment. Living sustainably means to be deeply rooted in your own socio-cultural environment, while remaining flexible and curious, looking around you and beyond the immediate horizon. We would like to share our lives with cheerful, well-balanced people who have remained young at heart and look to the future full of optimism, acknowledging and accepting the challenges that life brings with it. These are our aspirations: not living beyond our means; using resources carefully; not acting from a feeling of guilt or on impulse, but based on considered thought and a feeling of being deeply connected to others and the rest of the world, full of trust and appreciation of ourselves and others.

This brings us to the middle level of social communities. Sustainably acting people seek out like-minded groups and people to master the challenges, including the everyday ones. They treat others as equals, can take on leadership roles, but also follow the lead of others and make compromises. Maintaining good contacts, predominantly in the local and regional environment but also spread out across the globe, overcoming cultural and social boundaries without giving up their own identity, those are important goals of sustainable communities. As members of the youthinkgreen team, we also see ourselves as one big family. We do not only want to convey sustainability topics, but above all inform and interact in a sustainable manner, these two things going hand in hand. That means that we try to shape our social relations in such a way that they are resilient and enriching for everybody involved. We are always ready to listen to each other, even on matters not directly related to any project work. We celebrate birthdays and other festivities together or deliver our congratulations over the telephone. Developing and maintaining small rituals and gestures of appreciation and a broad understanding of each other within communities, that's what it's all about! If we don't manage that, there's no purpose in talking grandly about social role models and criteria catalogues for greater sustainability.



The third level is that of political communities, states and the international community of states. The political communities have the task of controlling sustainable developments. They must encourage the helpful approaches and strategies emerging from society and

curb negative strategies and impacts. In addition, they have a duty to resolve disputes and act in a mediating role when there are conflicts of interests. Having said that, we are convinced that innovations and solutions must increasingly come from the social communities and that the politicians should then pick up on them appropriately. While sustainable ways of life can be encouraged by political means, they cannot be dictated from above, nor can they be imposed from outside in ignorance of the circumstances of the affected communities. The latest report by the WBGU, the German Advisory Council on Climate Change, therefore correctly speaks about "Climate Protection as a World Citizen Movement".

multi-functional project factory and international exchange platform for interested and committed young people and as a bridge-builder with the overall goal of tackling the challenges of sustainability around the world.

1st World Youth Sustainability Summit in Berlin in May 2013

In May 2013, we held our 1st World Youth Sustainability Summit under the motto "Youth and Sustainability in Everyday Life – Challenge,

INFO 2: OVERVIEW OF OUR GOALS

We want to:

- explore different, individual and communal scopes for action in the area of sustainability,
- encourage holistic and networked thinking against the backdrop of the diverse global challenges,
- examine the interplay between knowledge, understanding, feeling and behavioural changes,
- develop project ideas, concepts and workshops to take joint action,
- question and reform existing social, political and economic structures,
- initiate solutions and innovations at a local, regional or society-wide level,
- have the courage to engage in a socio-economic transformation involving the largest possible number of actors,
- further intergenerational dialogue and discussions about fairness,
- waken enthusiasm for and hope in sustainable development and strong social engagement.



Rethink and Revive Global Ways of Living". We had invited over 160 young people from over 30 countries to Berlin for ten days. Many had qualified by entering an open competition (see the piece by Khoi Anh Dang in this section). They all had similar interests and were attracted by the energy of the international movement. One important outcome of their intensive discussions in Berlin was a manifesto: an action-focused position paper by young people for politics (brief presentation in German: https://vimeo.com/75848065).

In this section, we are presenting you with some ideas, outcomes and reflections of staff members, workshop leaders and young people from our various projects. We hope that they will motivate, inspire and spur you on, because they show what can be achieved when we manage to work together to realise our visions and aims for sustainable development and a sustainable way of life and when we are prepared to tread new and extraordinary paths!





GLOBALLY UNIFYING SYMBOLS: THE "GREEN THREAD" AND THE "TREE OF HOPE"

By Nadine Böttcher, Ariane Missuweit and Helmut Spiering

We young people are of the opinion that more sustainable lifestyles should be attractive and spread joy and enthusiasm. Many of those committed to sustainable living have initially felt like outsiders when they decide they want to change their lifestyles to reflect greater sustainability. Strong symbols that connect us, our thoughts and actions along with those of other young people around the world go some way to helping to emotionally combat this sense of "exclusion". There are symbols that are cool and give us young people the feeling that we are part of a "good thing".

But in memorably and effectively presenting the specific aims of our work, our network and the wide range of local projects to the public we have chosen strong symbols designed to express and deepen this sense of solidarity. For example, there is the "Green Thread", a bracelet made of green wool given out for free which we are distributing worldwide. We first started doing this at the United Nations Conference on Sustainable Development in Rio de Janeiro, Brazil in June 2012 (Rio+20).

Rio+20 – The "Green Thread" is born

When the Rio+20 UN Sustainable Development Conference ended, the German Environment Minister Peter Altmaier mentioned youthinkgreen and the "Green Thread" in his closing speech to delegates from around the world:

"When the Conference began I met with students from different countries working together on the youthinkgreen initiative. They tied this green bracelet around my wrist. This bracelet is meant to remind us all that, as active politicians, we bear responsibility for the fate of future generations.



Delegate from Swaziland



Christiana Figueres, UNFCCC



BM Peter Altmaier

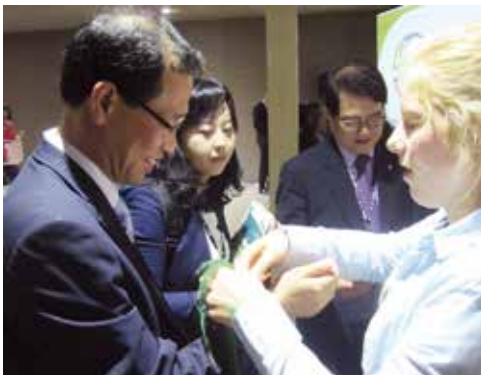
I am therefore very pleased that the Secretary-General has announced plans to appoint a special envoy for future generations."

Through this global recognition, *youthinkgreen* succeeded in creating a unifying element that the politicians "leading" the negotiations supported emphatically. The brilliant idea of the Green Thread was born at one of our scriptwriting workshops: a simple object with a great message. Green is not only the colour of hope – hope for a better future and for people to do some fundamental rethinking – but also represents nature that remains intact. Indigenous peoples of the world's rainforests know many different shades of green, and each has a different name. So the exact shade of green used in each threat is not important. The many different greens symbolise the world's diversity – something we absolutely must protect.















Prof. Hans - Joachim Schellnhuber, PIK

THE "GREEN THREAD"...

- reminds us that climate change and environmental protection must be a priority for society, politics and the economy every day.

- calls for us to turn the traffic lights green. Thinking green has been sitting stopped at a red light for too long.

- guides us and directs us to act responsibly today for our own sake as well as for the sake of future generations.

- urges us to recognise the fragile state of the 'thread' on which the Earth hangs.

- calls on us to work together to confront global challenges. The thread's knot in particular is a symbol of intense cohesion and exchange.

- empowers us to jointly fulfil our role as climate ambassadors and actors for sustainable development.

- connects us and invites you to be a part of our movement and to take action!

... throughout the world!



The "Tree of Hope"

"This is an exciting campaign. My hope for you and for all of us is that the tree will grow and ultimately become a global forest!" These are the words used by climate impact researcher Prof. Dr. Hans Schnellhuber (see Topic 3.2) to describe *youthinkgreen's* "Tree of Hope" on a handout for the UN Climate Change Conference in Doha (December 2012). It was there that we, young people from around the world, launched the "Tree of Hope".

Together with support from artists, we designed a giant tree trunk made from waste, demolition material and items found on the beach. Seemingly useless objects that had been carelessly discarded found a new purpose in the tree, becoming so-called recyclables. The idea behind it was this: We made the foliage with paper sheets on which we wrote messages, wishes, ideas and demands. The tree – erected in public places – is intended to be a place where fruitful dialogues will take place many different cultures can be intensively encountered, inviting you to enter into an intensive, intergenerational exchange.

But where in Doha could we put this plan into action? This was a crucial question that needed to be clarified. The *youthinkgreen* project managers had even initially tried to get a permit to be able to place the tree on where the climate summit was to be held. Because this plan had only a small chance of success, we made sure to come up with a "Plan B" as well. We wanted to set up the "Tree of Hope" at the Suq Waqif, the traditional market

in Doha, thereby engaging passers-by and drawing attention to our civic engagement.

In a report, Climate Ambassador Ahmed Hamza of Egypt wrote of his experiences, *"My group was to go to the old market to get the rights to set up our Tree of Hope in the middle of the traditional marketplace in Qatar and film there. There, far from the showy halls of the COP18 Conference, we wanted to reach the remaining 99 per cent of the local population in Qatar. Although it all turned out to be very difficult, after three hard days of negotiations, we finally had official permission from the city administration to set up our tree in the middle of the marketplace."*



A living "Tree of Hope" at the climate conference in Doha

On the Thursday of the Summit, the tree stood a good 15-minute drive from the conference centre on a narrow and lively patch of the pedestrian area. Across from it and next to it were restaurants and cafés. And the climate ambassadors got to work. Judith Gebbe from Osnabrück recorded this in her journal: *"It's four o'clock in the afternoon and right now I'm hanging another green leaf on a large tree made of rubbish; the leaves have hopes, wishes and demands written on them. I stopped counting how many leaves there are a while ago. Now I'm just so pleased about the enormous participation we're seeing from passers-by. (...) I'm impressed by how well received our tree has been here and by the fact that so many people are taking the opportunity to be a part of a tree that offers perspectives on the future. It's a sign that people are rethinking things, a sign of growth and productive progress towards a more sustainable lifestyle for all. It also serves to further dialogue and exchange. I could tell some fantastic stories of encounters and leaves covered in writing. For example, one involves a young Syrian; I spoke with him about the war in his country. We are leaving a lasting impression with nearly everyone here in this busy marketplace. They ask questions and want to know what's happening with the leaves, whether their voices will be heard and what we want to achieve."*



People from different cultures, religions and nationalities come together at the "Tree of Hope"





and cover the tree's leaves with their writing. A street sweeper from India spontaneously joins in, as does a negotiator from Kuwait, a tourist from Australia and a Summit observer from Pakistan. Our appeal to society is, *"Let us finally come together and take joint responsibility for all of mankind!"*

What can further illustrate the "Tree of Hope"? In it, we see a tree that can mediate this interaction and the issues between learning, understanding and action. Because we know what the global problems we face are and have already learned a lot about sustainable development. And yet we do not put this knowledge into action even though this tree clearly shows us the foundations needed for a life lived sustainably. We have brought the "Tree of Hope" back to life in many cities, including Berlin (Germany), Doha (Qatar), Izhevsk/Udmurtiya (Russia), Cairo (Egypt), Lima (Peru), New Delhi (India), Osnabrück (Germany), Pristina (Kosovo), Trento (Italy), Wellington (New Zealand) and Wuhan (China).





Official authorization signed: The "Tree of Hope" may be set up at the bazaar in Doha

An excerpt

… from the journal of the then 18-year-old Judith Gebbe at the 1st World Youth Sustainability Summit in 2013.

"We started with the basics. These are symbolic of knowledge, consciousness, thinking, compassion and awareness, embedded within a solid ground of culture, tradition and ethics. But in order to grow, it must also be supplied primarily with water and light. We see this process as embodied in education, the humanity in the sun's rays. The tree is protected by a fence composed of human rights. If all of these factors come together, the fruits of sustainability can be harvested. I love this image, and it often runs through my mind when thinking about new projects and courses of action. This is because it takes into account all the different factors involved without being localised to a specific place or country – this image has a model-like character, so to speak, which should fill every one of us with life.

This issue is so complex, so global, so elusive – and yet the days I've spent in Berlin have opened my eyes, revealed to me such a big piece of this wonderful world and showed me how future can look. Specifically as part of personal dialogues and intensive exchanges with my neighbours – be they three or three thousand kilometres away – and as part of a real democracy, which also includes confrontation and compromise. I was able to experience all of this through the 'Tree of Hope'.

The 'Tree of Hope', which had already done such a great job in Doha, shone bright at Pariser Platz in

Hannes Jänicke, actor







front of the Brandenburg Gate in May 2013. It was a mighty construct – perceptible even from a distance – and was astonishing to me and everyone else. Especially as it grew livelier and more magnificent with each additional hour that passed. Because, you see, the tree was not simply an object of protest. It was a special meeting place, a place of community and dialogue. Seeing people taking something from our thoughts and ideas away with them, plus the environmental rucksack and 'Green Thread' campaigns, filled me with joy and pride. For me, the conclusion was clear: IT'S WORTH IT!"



Call to action

The "Tree of Hope" signals both traction and optimism, determination, creativity and a sense of responsibility for future generations. It is a symbol of rethinking, of environmental and social change and global social justice towards sustainable lifestyles for all people worldwide.

Join us and help bring our tree to life and make it even more international and well-known! With your statement, be a part of the "Tree of Hope" and, together with your friends and acquaintances, set an example for a shared, more responsible future.

Strive to be a tree of hope yourself.

INFO

At a joint press conference with Federal Minister Peter Altmaier at the UN Climate Conference in Doha, young people from youthinkgreen submitted four demands (Green Leaves) to the minister.



We demand,

- that young people from around the world will be increasingly involved in the world climate conferences and given a voice, since it is about us and our future. This would also counteract the growing disenchantment with politics.

- that the EU should engage more strongly with its pioneering role in undertaking specific climate protection measures and aggressively represent its position. In addition, the EU should adjust its objectives upwards with regard to active climate policy.

- that the structure of the world climate summit be rethought and possibly radically changed in order to counteract extremely low efficacy (and the negative effects associated with it). So, for example, it might be worth considering whether it would be better to invite representatives from regions instead of every country. This would mean that even the pre-conferences would increase in importance and participation in the various regions.

- that all German schools abroad be converted and redesigned both externally (structurally) and internally (in terms of teaching content) into environmental schools in the near future because our country is a global pioneer in renewable energy and the energy transition.

YOUTHINKGREENERS AT UN CONFERENCES: SLIP INTO THE ROLE OF A DELEGATE – EXPERIENCE POLITICS UP CLOSE AND HELP SHAPE IT

By Dr Tobias Romberg,
journalist and teacher at Ursulaschule in Osnabrück

Doha, December 2012: Eight minutes to go until the joint press conference that *youthinkgreen*, an international youth organisation, and Germanwatch, a non-governmental organisation, have organised together at the UN Climate Change Conference in Doha, Qatar. And German Environment Minister Peter Altmaier has even been invited, although he does not arrive on time from the negotiations as agreed. Deep disappointment is apparent on the faces of the young people representing *youthinkgreen* in Doha. But instead of hanging their heads, they start their press conference together with Christoph Bals, political head of Germanwatch. And then, after about 15 minutes, the door to the conference hall flies open and Peter Altmaier enters. He has his staff and a media entourage in tow.

Altmaier listens to the words of warning and demands of two young climate ambassadors: Ahmed Hamza, 16 years old, from Cairo and Judith Gebbe, 18 years old, from Osnabrück. The two sit beside him on the podium and speak energetically and confidently. They then present the German Minister green tree leaves, which they have cut out of paper. Hundreds of them hang on the tree. The leaves feature the main demands the group has collected here in Qatar and in other countries from citizens and politicians. These leaves are part of the "Tree of Hope", a meaningful work of art created by the young people of *youthinkgreen* in Doha (see text "Globally Unifying Symbols" on page 97 ff.).

During their press conference, the young people of *youthinkgreen* demand that:

- young people be increasingly involved in world climate conferences, since it is about them and their future;
- all German schools abroad be converted into environmental schools in the near future;
- the structure of the climate summit be radically changed to counteract inefficacy and the failure to achieve results;
- the EU take up its pioneering role in undertaking specific mitigation measures and more strongly represents its position to the public (see full version of these demands in the text "Globally Unifying Symbols").



Pressekonferenz – BM Peter Altmaier und YTG

Side by Side with Top Politicians

German Environment Minister Peter Altmaier has been aware of youthinkgreen at the very least since the Rio+20 UN Summit on Sustainable Development in June 2012. There, he met with the organisation's climate ambassadors, engaged in discussions with them and had the "Green Thread" tied around his wrist. In addition to the "Tree of Hope", the thread is one of the global symbols of the youthinkgreen youth movement. After the joint press conference in Doha, **Peter Altmaier** gave an interview with German television station ARD. In a news report aired on 7 December 2012, the minister expressed his support for youthinkgreen as well as the importance of the project:

"Far too little attention has been paid to climate change over the past three years – including amongst the general population. And I am so pleased that this international initiative has been in place for a year now and that young people from different countries are discussing these issues and getting other young people





"The barcode scanners are beeping. Many people from all nations flow past, and I'm still left sitting outside. Like most other minors, I did not receive accreditation and now have to wait for my climate ambassador friends beyond the security gate. This is because they are currently working on the 'Tree of Hope', a campaign we came up with and initiated. (...) I was absolutely amazed that our campaign attracted so much attention. A number of delegates arrived at our tree to write their demands on its leaves, full of enthusiasm. And then an African delegate noticed us and our publicity work. Thanks to his personal intervention, I was finally (and luckily) able to gain accreditation."

interested online. This is a good development and one I support."

How did it come to this? The young people of youthinkgreen are in Doha – just as they were in Rio – at the UN Climate Change Conference as young delegates from their home countries. Danielle, from Brazil, is part of her country's delegation. Ahmed and Mourad from Cairo are members of the Egyptian delegation. The situation is a bit more difficult for youthinkgreen's German climate ambassadors since the spots for the German delegation have already been filled in advance. Because she was no longer a minor, 18-year-old Judith was able to receive accreditation from another non-governmental organisation. For Solveig, who is 15 years old, the initial prospects do not seem good, and her frustration at not being able to participate in the Summit directly is great. But then a surprising U-turn occurred, which she describes as follows in a guest contribution for the Neue Osnabrücker Zeitung:

The young people of youthinkgreen attend meetings of various organisations and interest groups, as well as press conferences in Doha. They also engage in discussions with delegates from the European Parliament. Their demands make their way indirectly into the political process, for example, through discussions with policy makers. Their voices are heard. On the day of the



YTG in an interview with ARD

press conference with German Environment Minister Peter Altmaier, climate ambassadors Ahmed Hamza and Mourad Taher Farahat have another important meeting. **Mourad recalls:**

"For me as an Egyptian, the presence of the German Environment Minister was not the main highlight of the day since a member of the Arab Youth Climate Movement (AYCM) called me and said that we (Ahmed and I) should come see him as quickly as possible because another meeting would soon be held with an important person from the Egyptian delegation. When we arrived on the third floor of COP18 building, we finally found out who this important person was: the Egyptian Minister of Environment. This was extremely exciting for me because I have never met him before in person. He engaged in an open and lively discussion with us about the wishes and demands of Egyptian youth on the issues of environmental and climate protection."



YTG live at the climate conference in Doha

OUR AUTHOR

Dr. Tobias Romberg (b. 1978) is a teacher and a graduate journalist. He attended the German School of Journalism in Munich, completed his doctorate in political science and has seen the consequences of climate change in his experiences as a reporter travelling to many different countries of the world. He has been teaching at Ursulaschule in Osnabrück since 2011, where he supervises climate ambassadors and works as a journalist in his spare time.



The Young People in the Thick of It Will Become Citizens of the World

Numerous meetings with ministers, delegates and journalists prove that the climate ambassadors representing youthinkgreen in Doha are truly in the thick of it. They are more than simply onlookers; they are putting on their own campaigns and interviewing experts. They are reporting for their own blog, producing short videos and writing for newspapers and websites from the Summit. They are experiencing moments of euphoria. Yet they are also coming to terms with occasional rejection and disinterest, and must weather setbacks and frustration. They are looking for new ways, are pushing on and persevering. They rush from one appointment to another, experiencing stress and the hectic pace of their progress, long days and short nights – an enormous challenge for young people and those looking after them, both mentally and physically. Nevertheless, the obstacles and difficulties faced are mastered with spontaneity, creativity and perseverance. The young people get straight to the point in expressing their specific views and asking for support. Young people from Brazil, Germany, India and Namibia are having very similar experiences during COP18.

Alexander Brock from Windhoek, Namibia (see also his text contribution in Topic 1) summed up his experiences in "Between Frus-



tration and Enthusiasm – My Experience as a Delegate in Doha":

"As young people, we were not taken seriously at first, even though we are the ones who are fighting for a better future for all – not only for ours but for future generations as well. And today's delegates will no longer have a role to play in this future. However, their prevailing mindset seems to be, 'Live in the moment, forget tomorrow.' As young people, this is something we cannot accept. We want to fight back against this mindset and finally bring about a rethinking of the issues.

In our view, a key outcome of COP18 was for all nations to sign an extension of the Kyoto Protocol. Ultimately, this involves eliminating marginal differences and placing pure national interests on the back burner. However, it seems as if the delegates had very little willingness to compromise. Our sessions often ran very slowly and were rather long-winded; delegates talked continuously but did so without contributing anything constructive to the discussion. Their monologues could be summarised in one or two sentences. I wonder: It this due to lack of preparation? Or is this all tactics?

The workshops and campaigns that youthinkgreen initiated and organised brought us all much closer together and allowed us to grow together. For me, each of these events was always a big challenge because everyone was invited to participate fully in order to spark the curiosity of others and inspire people towards our goals. My knowledge and self-confidence have grown enormously as a result. I also found working in the COY [Conference of Youth] topical groups very rewarding. This international experience of working together towards climate protection goals and highlighting and justifying the issues from different perspectives will have lasting value for me. (...)

Getting to experience the Climate Summit first hand, to follow and share in the thrill of the negotiations, to be able to meet with delegates, to ask them questions and engage in discussions with them... these are all moments and circumstances that allowed us young people to mature and grow politically. Today I can say that all these memories and real experiences have thoroughly made me a political person. We grew beyond ourselves and had the strength to work on our projects early in the morning until late in the evening."

Nandi Merdes
from Windhoek, Namibia:

"It was only when I saw the lifestyle and attitude towards life in Qatar that I was able to conceptualise at all just how differently we in different countries – or even different areas of the same city – deal with resources. [...] Even though climate change is often taught in the classroom, it took this personal global

networking to truly engage in community thinking that is more altruistic. This cohesion gives us courage, and the will and the strength to do something for our planet. [...]

However, I have been overwhelmed and saddened to see how short-sighted and selfishly these issues are negotiated. Some politicians treat climate change policy as a giant chess set; they are greedy and only look at how they can personally gain. We need to open their eyes so that they realise that our future is not a game."



YTG talking to the Environment Committee of the EU Parliament

Louisa Peters, Osnabrück, Germany:

"I think that our most important impetus in Doha was the collaboration with various organisations such as Germanwatch. I think it is particularly important for there to be a certain understanding and respect that exists between different cultures and countries, making cooperation towards a common goal easier. Of course, I've also learned a lot. It makes no sense to go to this kind of conference without proper preparation and the necessary knowledge. Once there, it became much clearer to me how these negotiations are run, who has the influence and how they use it. [...] I want to influence politicians so they make the right choices for our future. It is also very important to me that our interests be communicated creatively, youthfully and convincingly."

Sophia Kreuzkamp, Osnabrück, Germany:

"It was an incredible feeling to fight for a common goal together with young people from all over the world. We supported and helped one another. We were there for each other. We made up such a colourful community with young people of different ages, different cultures, religions, skin colours, languages – we were so different and yet we understood each other right away. [...] I have spoken with important politicians, and have been in contact with people I would never have met otherwise. I have engaged in discussions with these people, conveyed my own knowledge and have learned just how important cooperation is. I gave interviews for newspapers, television and radio stations, but I also conducted my own interviews with myself. For me, these experiences are simply irreplaceable and are totally unique. They are experiences I never would have had during my regular time at school!"

Danielle Nunes Amorim Corado Rodrigues, Rio de Janeiro, Brazil:

"There was not one single day where we had learned nothing or were unable to get in touch with interesting people. Every person and every NGO in Doha has enriched my life. It's such a great accomplishment to not only learn but then to also pass on the knowledge I've acquired to others."



YTG: Brochures and receivables are distributed to the delegates

Ahmed Hamza, Cairo, Egypt:

"I am now so well-equipped with knowledge that people take me seriously. That shows just how much work and time have been put into it. At school you only learn how you should respond to questions. You rarely learn how to get people to answer your questions. But it's different at youthinkgreen. [...] The initiative challenges us in new and interesting ways, better than any classical education could. This project gives people vision and inspires people in a way that opens their eyes. This is how you become a citizen of the world."

Mourad Taher Farahat, Cairo, Egypt:

"I have grown enormously as a person during these seven days. Even though my passport says I'm Egyptian, I don't see myself that way any more. I'm the American who wants to protect other people's human rights. I'm the German who demands that the EU reduce its CO_2 emissions by 30 or even 40 per cent. I am the Syrian who fights for his freedom. I'm no longer one single solitary person. I'm no longer isolated. I know now that the world is experiencing an international globalisation movement, and I would like to actively participate in it."

The developments experienced by the young people as part of this project are amazing. Façades and inhibitions are broken down. The climate ambassadors appear determined and well prepared. This is yet another reason why youthinkgreen presented German Environment Minister Peter Altmaier with specific demands during the press conference. Young people should be more involved at UN climate conferences and other meetings affecting their futures. The dusty atmosphere of these summits must radically change to better support the momentum of civil society. Committed young people who are interested in politics do exist, and we should take them seriously and include them.



Mourad (links) in Aktion



INTERCULTURAL ENCOUNTERS IN RETROSPECT: LAYING THE RIGHT FOUNDATIONS

The 1st World Youth Climate Summit in Wolfsburg: A project by and for citizens of the world

By Gerd Westphal, former teacher at Gymnasium Bad Iburg and social studies consultant for the district government of Weser-Ems

In 2012, many young people gathered in Wolfsburg with the common goal of preparing for the 1st World Youth Sustainability Summit in Berlin. These were committed young people who initially formulated what moves them on a national and then an international level:

"We are **worried** *about our environment and our climate.*

We are firmly convinced that only decisive and timely **action** *can counteract disastrous developments in our habitat.*

We are certain that this action should be supported by **courage** *and a careful* **analysis** *of what is reasonable and what to do in response to unreasonable solutions."*

Based on core beliefs, what young people are articulating here covers all key aspects of our co-existence now and in future:

We do not live alone (social aspect).

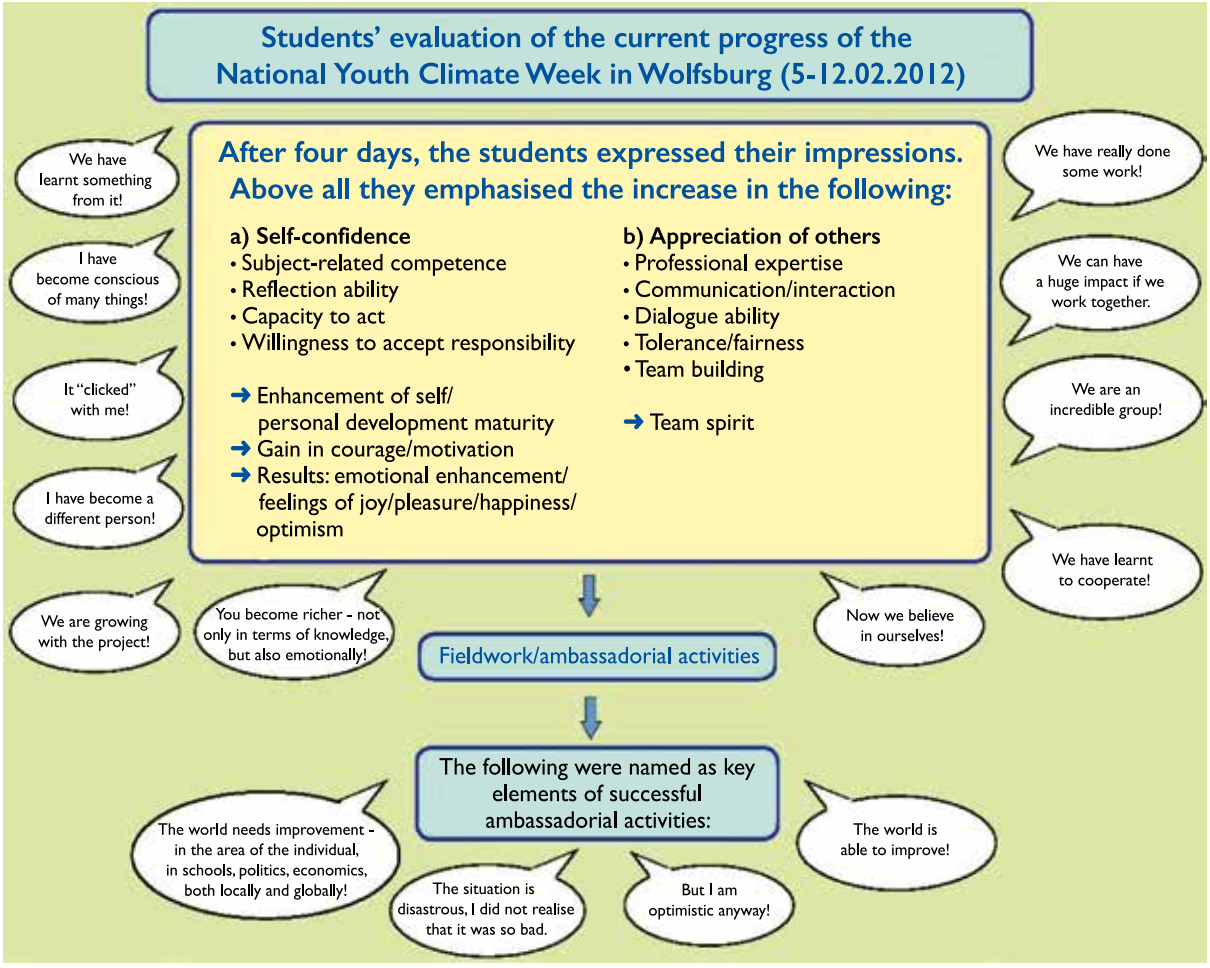
We feel responsible towards nature and all things, to people living in the present and future (environmentally ethical aspect).

And those who follow us will also want to live according to their needs. Our lives should bear fruit accordingly (future perspective – temporal aspect).

The extent of this responsibility lies not only in our immediate environment, but has global dimensions as well (globalisation – spatial aspect).

Demands must be made accordingly: to politics, the economy, civil society and every single citizen. Furthermore, it is important to develop our own initiatives. What I as a participatory observer immediately noticed at the international youth meeting was the sincerity and the intensity with which students from around the world followed the presentations and lectures given by experts, and how they used their hearts and minds to grapple with the ideas presented, asking questions and thinking critically. The events in Wolfsburg then bore fruit at the 1st World Youth Sustainability Summit in Berlin the following year. Particularly successful was what Helmut Spiering, long-time guiding spirit of this project, has said.

Under his aegis with respect to national and international arrangements, his concern for the



matter (concern, as historian Herrmann Heimpel once said, is synonymous with spirit) has led to a situation in which all participants were able to approach these highly complex issues with great openness and courage and internalise them.

What came of these meetings is described by some of the experiences written by young people in the following overview.

What can we draw from these writings?

Much of what has been achieved during these *youthinkgreen* project weeks can also be achieved in traditional classroom settings. This is especially true when motivated and committed teachers manage to offer their students more than the usual repertoire of skills to be acquired and test the ways in which education can be experienced and designed interactively. But – as experience shows – the normal, standard classes rarely offer such a proving ground. Too often we fail to achieve that great goal: to initiate open learning processes, develop something sustainable and achieve, and indeed to do so on regional and global levels.



If work on this project is to succeed with these goals outside of schools as well, we need professional training that far surpasses the normal school day.

This kind of training is ideally based on a shared vision – and it is not enough to simply meet young people where they already are. We must also lead them to where they can develop into a community and our goals for sustainability can become a reality.

The 1st World Youth Sustainability Summit in Berlin

Review by Dr Tobias Romberg, journalist and teacher at Ursulaschule in Osnabrück

"We are more than a movement. We are now a family." With these words, youthinkgreen – jugend denkt um.welt project initiator Helmut Spiering opened the 1st World Youth Sustainability Summit on 10 May 2013 at Stiftung Mercator's Project Centre in Berlin.

The more than 160 young people who travelled to Berlin from more than 30 countries energetically applauded the retired teacher from Bad Iburg. Spiering requires the young people to have an open heart and – at least for the next ten days of the summit – thinking heads. Around the world, young people have submitted their projects and ideas through the open competition (see article in this Topic) in the run-up to the summit.



Helmut Spiering welcomed the summit participants

And so it is that on this particular Friday in Berlin, it is not only climate ambassadors from "regular" groups, such as school classes or environmental groups that have been working on the project for almost two years, but also 40 "lone wolves" who are getting together. The regular groups include young people from Çorum (Turkey), Cairo (Egypt), Lima (Peru), New Delhi (India), Osnabrück (Germany), Pazardzhik (Bulgaria), Rio de Janeiro (Brazil), Trento (Italy), Windhoek (Namibia) and Wuhan (China). For them the summit represents an opportunity for a big reunion after working on the project for two years. They have already familiarised themselves with and expanded upon youthinkgreen's philosophy at the international climate week in Wolfsburg in May 2012, they have networked well with one another and have created a strong sense of community.

Now there are new young personalities, new perspectives and other experiences from other countries joining the mix in Berlin. Drin Krasniqi from Kosovo qualified through the open competition. Keovichet Ly has travelled from Cambodia, Nicolás Marín from Colombia and Temyrlan Kakimov from Kazakhstan. They all want to challenge global lifestyles, reconsider their own habits and revive discussions on sustainability in Berlin; among others, issues like social justice and the rights of nature are on the agenda. Some young people come from countries that are already suffering from clearly noticeable consequences of climate change – such as Rex from the Philippines. And others come from countries that are among the largest CO_2 emitters – China, India and the US. Nevertheless, the young people here do not consider national boundaries and other religious and cultural outlooks a barrier, but rather a challenge. They want to accomplish an environmental, climate, social and economic policy rethink, both on the international stage as well as at the national and regional levels. They want it to be more than rethinking – they are also calling for decisive action from the political, business and societal spheres.

Climate protection as peacekeeping

They are also calling for the participation of their generation – the youth – in social life, in structuring curricula and in political processes. Some of them have already experienced (or have





had to) how hard it is to be taken seriously as a young person at international summits. Others have already founded their own non-governmental organisations in order to make their voices and the voices of their fellow activists better heard. Nevertheless, the participants all have one thing in common: They know that global peace is rooted in climate protection. Climate change will inevitably lead to social unrest, to rural exodus, will create climate refugees and conflicts over arable land. They are demanding intact, closed economic cycles and intelligent, transparent supply chains, the respectful use of natural resources and a peaceful, responsible and respectful coexistence.

Many participants already felt a strong boost from *youthinkgreen* in the run-up to the summit. Khoi Ahn Dang *"gained a whole new outlook on the environmental affairs of this world since [...] working with youthinkgreen over the past few months"*.

Dominique Köller from Costa Rica has thoroughly pondered the connection between environmental protection and education. She writes, *"In my country, it is necessary to establish a proper disposal system that makes it easier to dispose of waste. But we cannot simply convince people of this automatically. Some grow up in very environmentally conscious families and can be role models for young people who have so far not had the chance to live with more environmental awareness. We should therefore pay much more attention to children being taught about this in nursery school and at school."*

Nicolás Marín from Colombia has already gained ground in replacing plastic cups with recyclable ones at his school. And Art Çunaku from Kosovo takes an active role in a school project on the environment: *"A few classmates and I aim to transform our school into a green and environmentally friendly school."* The ideas and initiatives of these young people come together under the umbrella of youthinkgreen like a colourful patchwork quilt.

Khoi Ahn, Dominique, Nicolás, Art and all the other attendees share similar stories and heard the motivating words of welcome from Bernd Krömer, State Secretary of the Senate Administration for the Interior and Sport in Berlin, at the opening on Friday. And EU Environment Commissioner Janez Potočnik presented a message via a video feed. They all set great store by these young people and the 1st World Youth Sustainability Summit. And, as demonstrated over the next few days, they are not disappointed: By the end of the summit, the 160 young people have developed their own manifesto, learned from other ways of life and – in international exchanges, but always adapted to their local needs – have developed new ideas for sustainability projects.



Openness, diversity, community



Teaching intercultural skills is one of the pillars of the *youthinkgreen* association. Every continent is represented in Berlin, as are many different cultures and religions. Young people dive into the realities of day-to-day life of other climate ambassadors. They sit up at their youth hostel together, Amstel House Hostel in Berlin, until the early hours consulting one another and discussing things: What is life actually like for the person I am speaking with? What does environmental protection look like in Nepal? What are so many coal-fired power plants being built in China? Is waste separated in Kosovo? How can we mobilise our friends and acquaintances? How can we reach decision makers?

These young people in Berlin quickly grow together to become a community, a family, just like Helmut Spiering says at the opening. This is also due in part to the extensive sightseeing programme put on during their first weekend together. The landmarks and attractions of Berlin with its impressive history are not to be missed. And the students also gain an insight into "sustainability in practice". So, for example, they visit an urban gardening project in Berlin (Prinzessinnengarten) and Berlin's municipal refuse collection department (Berliner Stadtreinigungsbetriebe). They also receive "green" city tours, for example, with the "Transition Town" initiative.

The venue for the summit is the Academy of the Konrad-Adenauer-Stiftung in Berlin. The workshops are led by Dr Thomas Fatheuer (Heinrich Böll Foundation), Rosa Groezinger and Georgina Guillen-Hanson (Collaborating Centre on Sustainable Consumption and Production), Kiara Worth (Organising Partner for the Major Group for Children and Youth), Anders Valhalen (Transition Towns) and Christian Löwe (German Environment Agency) and Stefan Rostock (Germanwatch). Time and again these young people put their heads together in small, mixed, international groups in the various halls and rooms at the Konrad-Adenauer-Stiftung. Dr Hans-Gert Pöttering, President of the European Parliament, ret., and chairman of the Konrad-Adenauer-Stiftung, has a great deal of confidence in youthinkgreen Climate Ambassadors. At the official opening at the Konrad-Adenauer-Stiftung on Monday he says, "Your commitment can help to ensure that the UN Climate Change Conference will no longer fail as it did last time." Young people could also contribute to the world becoming and then remaining a more liveable place for everyone. He also said that the young people of youthinkgreen were already role models for their generation.

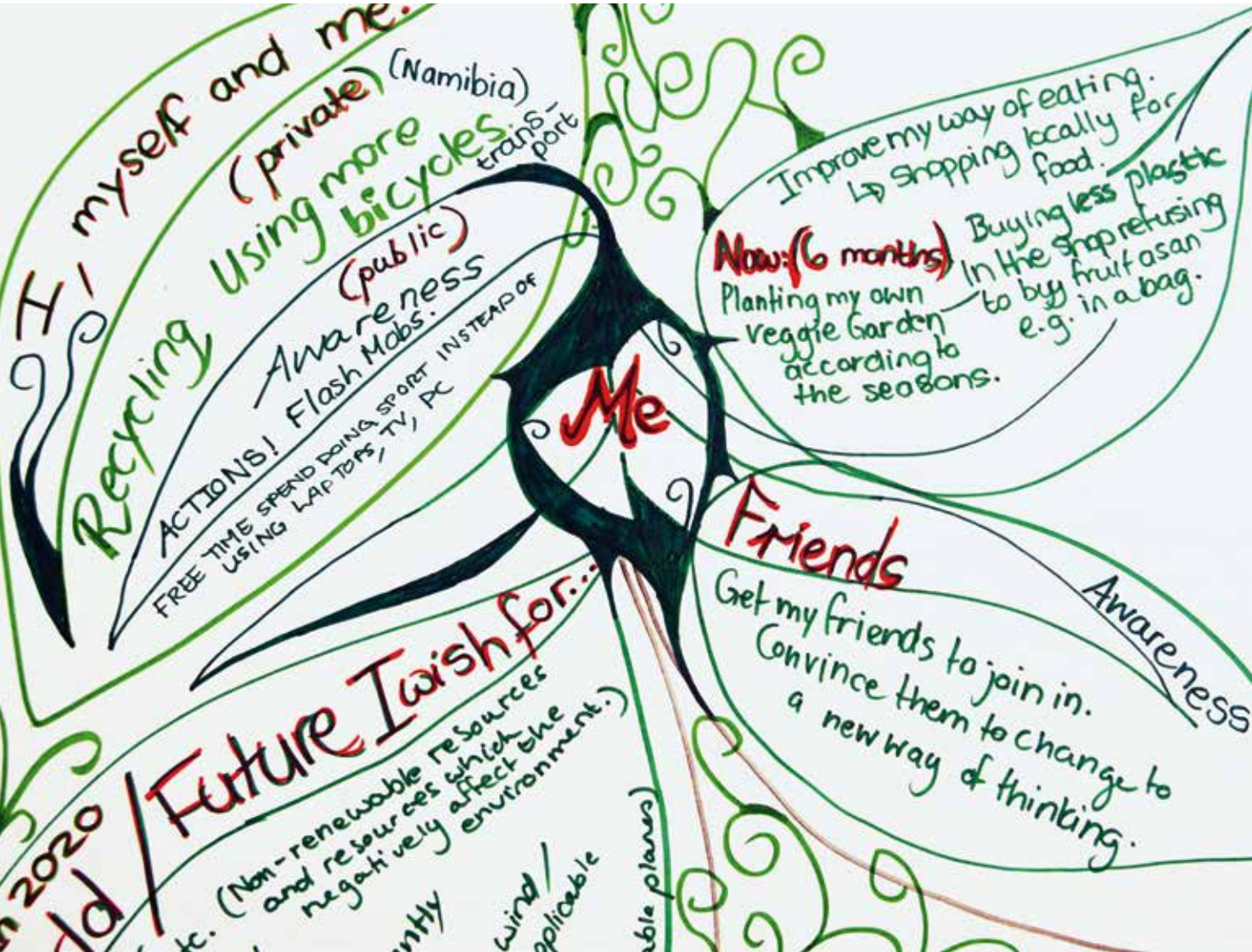
Discuss, scrutinise, tackle

The quality, the strength and determination of young people is felt by those observing the conference, for example, an employee of terre des hommes, as well as media representatives and speakers. Actor and film-maker Hannes Jaenicke is thrilled about working with youthinkgreen. As the Neue Osnabrücker Zeitung writes on 18 May 2013, *"It was clear from watching actor and documentary film-maker Hannes Jaenicke that his*

compliment was sincere: For him, his workshop performance at the 1st World Youth Sustainability Summit in Berlin was like taking a 'happy pill'. He says this is because these young people from all over the world are all 'about doing, not talking' – meaning they hope to tackle something instead of just talking about it all the time."

Jaenicke is just one of many prominent experts speaking to the group of youthinkgreen climate ambassadors and discussing things with them. Professor Ernst Ulrich von Weizsäcker, polar explorer Arved Fuchs and nutrition expert Sarah Wiener also take the microphone. Sarah Wiener calls on young people not to be *"seduced by advertising to buy more than you need"*. Arved Fuchs talks about the international issues of climate change. And von Weizsäcker, clearly moved, agrees to continue to stand with *youthinkgreen* because environmental modernisation can only come about with actions like youthinkgreen's that are "so courageous and effective". Other speakers include Prof. Dr. Claudia Kemfert of the German Institute for Economic Research, Prof. Dr. Rainer Dollase and Jasson Jakovides, member of the German National Committee of the UN Decade of Education for Sustainable Development.

They all are inspired by the standard and the commitment evinced by these young people. They look out at keen and exacting faces, and must even face uncomfortable questions here and there. During the short breaks the young people mix together internationally and discuss the presentations and new ideas that these have





Ecological backpack

prompted. Anke Britta Schmidt from Osnabrück found a kindred spirit in Khoi Ahn Dang from Vietnam. Dejan Filipovic from Serbia and Art Çunaku from Kosovo are in the corridor and are planning a joint transnational project. Frank Lyon from the US exchanges ideas with Nicolás Marín from Colombia. Thoughts, ideas and visions are volleyed back and forth and make the rounds, project ideas are exchanged and plans are forged.

Publicity campaigns

After three days of intensive work at the Konrad-Adenauer-Stiftung, the climate ambassadors trek through the centre of the German capital to Pariser Platz in front of the Brandenburg Gate under blue skies on Thursday, 16 May 2013. **Anke Britta Schmidt, climate ambassador from Ursulaschule Osnabrück** summarised this remarkable day in a blog post for Deutsche Welle:

"We first built the 'Tree of Hope' at the climate summit in Doha and now during the 1st World Youth Sustainability Summit at the Brandenburg Gate. It is an artificial tree whose trunk is made of waste. The canopy now consists of more than 6,000 leaves that reflect the demands, dreams and ideas of many people from around the world. Although the tree has been very nicely designed, it should stand as a reminder that we must rethink our wasteful and destructive lifestyle.

We, the participants of the 1st World Youth Sustainability Summit, gathered demands and wishes from our families and friends in our 31 home countries, which we then brought to the summit to Berlin. Here, against the backdrop of the Brandenburg Gate, the tree, which stands at a height of some four metres, was built by youthinkgreen. And Berliners and tourists alike wrote out even more leaves.

In addition to the 'Tree of Hope', we have drawn attention to our environmental hand- and footprints on a ten-by-ten-square-metre cloth. Everyone has their own personal ecological footprint, which depends on what they consume and how they live. However, your ecological handprint represents what



Ecological hand- and footprint



you yourself are doing for climate and environmental protection. So we asked people to leave their footprint and handprint. [...]

Our current lifestyle means we are not only destroying our livelihood, but also our future. I myself hope that we live in a world where nature counts once again, not only economic factors, i.e., pure profit. How wonderful would it be if there were more green spaces in cities and a lot more space for children and bicycles? My wishes have now arrived at the German Environment Ministry. We gave the 'Tree of Hope' to Environment Minister Peter Altmaier."

As Anke Britta Schmidt mentioned, the tree was presented to the German Environment Minister on Friday morning – the day after the numerous campaigns at the Brandenburg Gate. In addition to the highlights described, dance and musical numbers were performed again and again by several international climate ambassadors on Thursday. Radio station RBB Info broadcast it live. Climate Ambassador Clara Greiwe from Ursulaschule Osnabrück is trailed by a reporter and a photographer from youth magazine BRAVO for several hours. Each climate ambassadors is therefore able to become an advocate, activist and multiplier. They live up to their role as ambassadors and make contact with the tourists and citizens of Berlin. They inform them of their projects, goals and demands.

After many energy-sapping hours spent in the blazing sun, the climate ambassadors arrive together with invited guests at the Allianz Forum at Pariser Platz that evening in order to take a look back on the history of the youthinkgreen project in a 90-minute revue staged by Thomas Frick. **Egyptian climate ambassador Mourad Air Farahat** summarised this remarkable evening in a report:

»Yesterday, the colossal efforts each and every one of us put in the project came to fruition as the pinnacle of our project, the 1st world youth sustainability summit, came to be. The event, many of whose attendees were project managers and leading figures in their respective fields, were pleasantly surprised as the youthinkgreen teams that took part in the gala showed discipline, determination and that they were not to be discouraged by the sheer size and importance of the event at hand. The program, whose highlights were the youthinkgreen rendition of the song ›Mut zum Handeln‹ (courage to act), the various student-produced environmentally oriented spots, and the Indian dance showed the unique inter-cultural connection between the various members of the youthinkgreen. The excitement at the event rubbed off on each and every one of our guests, with many of them on the verge of euphoria. We were standing hand-in-hand with people whose success has come to be known on every continent of the planet and watched in amazement as they relaxed and spoke to us as peers, not as minors, as friends not as climate change fighters. All in all, to simply call our summit a success would be an understatement. The Allianz-Forum will forever in our hearts be remembered as the place where we graduated into adults, supported along our journey by the constant recognition we received throughout the process.«

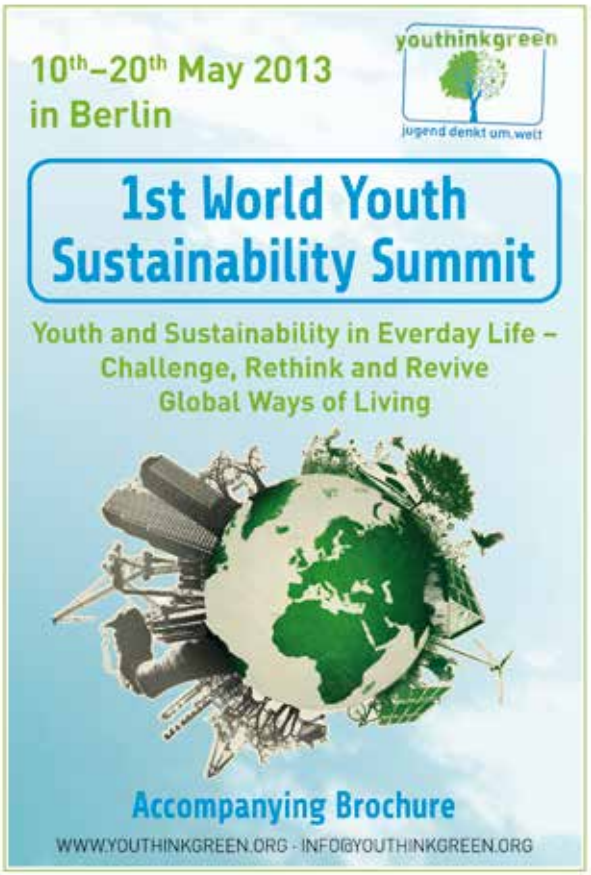
The *youthinkgreen* manifesto

On the final Saturday of the summit, the young people create a final document, a manifesto. They want to bundle and sharpen their demands, to send them to the United Nations and the parliaments of their countries. But how do young people from more than 30 countries reach a consensus? The last few days have inspired them, ideas have grown in them, some becoming specific and substantial demands in the workshops.

At nine o'clock on Whit Saturday, with the climate ambassadors sit in the chamber of the Konrad-Adenauer-Stiftung, project initiator Helmut Spiering took the floor: *"This is your day. It's now all about your results. You are tired after this comprehensive programme. But when it comes down to it, you will always find new strength."*

Environmental activist Kiara Worth takes the stage. She explains how it will be done. Demands have been specified and documented in the smallest units of the previous group work. At the end of the day, all the young people then sit together as a group and form a manifesto from the many individual demands and results of group work.

Over the next few hours, the international participants initially start out in 16 small groups, later gathering into four major groups to gather their demands. Demands are wrested from these discussions. It becomes clear that demands are sometimes not universally applicable. Compromises are found. The method is a lesson in international politics for the young people. They can now begin to understand how complicated it is to negotiate at an international level.



After this intensive phase and a lunch break, the participants meet in plenary. Presenter Kiara Worth sets out clear rules. The right to speak is time-limited, modalities such as encouragement or protest are clarified – and then hours of discussion, negotiation, tugging and haggling begin. The manifesto emerges in the early evening. Thunderous applause. High fives and hugs.

A *youthinkgreen* press release simply stated, "The 1st International World Youth Sustainable Development Summit was concluded on 20/05/2013 with a joint manifesto. Under the guidance of experienced South African environmental activist Kiara Worth, the more



Work phase: develop action plans



The world youth parliament, KAS

than 160 young people issued a joint statement, as is befitting of a World Youth Parliament, in which they expressed with dedication their call for an environmentally-oriented and sustainable world domestic policy."

At the request of summit participants, the manifesto is not a static document. Instead, it is one that can be expanded upon by more progressive demands and approaches.

Summit reflection by Judith Gebbe (18)

Saturday, 18 May 2013, Berlin

"Congratulations – you have just jointly and successfully passed the youthinkgreen manifesto!" These words from Kiara echo throughout the meeting room at the Konrad-Adenauer-Stiftung in Berlin. Thunderous applause is heard, and we are all overcome with a wave of relief and joy. I hear the cheers from the Namibians in the rows behind me and clap with my American neighbour, Timothy. What is happening here is incredible – incredibly powerful. We did it! After hours of discussions and decisions, we have drafted a joint position paper with demands and ideas for our future.

A movement has suddenly sprung from myself, just one single student – a movement made up of more than 160 young people from more than 30 countries who are standing by my side, beaming. Today we have proven that we are not just inexperienced youngsters, but that we have the ability to reshape our future responsibly, imaginatively and collectively! It is with this assuredness and urgency to put this into practice that I return home, and I know that it's the same for the others as well. The words of Mahatma Gandhi come to mind: "You must be the change you wish to see in the world." The race is on, and my time here has shown me: I want change, and for that I must, together with all young people throughout the world, take things into my own hands and take action!





It is the ninth day of an overwhelming summit, and the formative and exciting events of recent days flame before my eyes once again. Even the very first evening, meeting with the old, familiar faces and new allies, experiencing the diversity of cultures, music and dance performances and the passion of each individual, which quickly became clear in our discussions, enthralled me. It did not matter where you came from because everyone was welcome, and everyone was allowed to play a part in their own way. Through these many intercultural encounters I recognised the importance of tolerance and acceptance and learned that mutual understanding is the key to collaboration! These experiences are so invaluable and enriching that I wish every young person could have them.

The subsequent workshop days were stressful, challenging and exhausting, but so instructive and stimulating, something I rarely experience at school. I got the chance to listen to first-class lectures by eminent speakers, receiving expert instruction on a concentrated wealth of current knowledge and experience. It is more than a major boost when, for example, a star chef like Sarah Wiener brings attention with full conviction to how much our eating habits are still dominated by the industry and how few natural foods





there are left nowadays. For many, natural flavours have become completely foreign, and Fanta tastes better to them than a glass of freshly squeezed orange juice! I was taught to question myself, to take a hard look at one's own behaviour and habits to ruefully come to realise just how necessary and imperative it is to change my own lifestyle!

Together we must try to find out how we can live more sustainably. The objectives of sustainability are complex and need to be pursued differently. This is another thing I learned as I delved into and discussed various topics with Indians, Bulgarians, Colombians and Namibians. We often think we must simply seek out a master plan that can solve all our problems at once. But the life of a child in India is very different from that of a child in Germany. Their opportunities to shape and change their living environment are completely different.

All these images, moments, insights and events are too complex to grasp here and now. But I will take all of them home with me: The incredible cohesion with others, the fantastic motivation and great friendships – I will keep all of this in my heart. Just as I will continue to reflect on these approaches and ideas. Because that's what it's all about here at the summit: getting to work and keeping it going!

My thoughts wander to the near future. What will I resolve to do? First off, my studies take priority. Through youthinkgreen, I have gained clear ideas about what I want to do in the future, and of course green business management is my first choice. After all, a course must be set economically as well and we must find solutions. And I want to play an active role! In addition, I plan to set up a working group at my university to deal with the practical implementation of the content of my studies. I want to continue to be a multiplier, to infect others with this drive and raise awareness, implement local sustainability projects and implement the findings of the last few days into everyday life.

I want to lead a more sustainable, more conscious and more responsible life and be a role model – together with my youthinkgreen family I met here, who carries and supports me!



Summit reflection by
Nicolás Marín (17) from Colombia
Sunday, 19 May 2013 at the
"Gardens of the World" in Berlin

It's the last day of the World Youth Summit. My head is full of extraordinary memories and impressions: I look back on ten eventful days I was able to experience together with more than 160 young people from over 30 countries. I'm anxious, but happy and satisfied. What a gift, all of these experiences and moments – enriching lectures, profound workshops and discussions, as well as our self-initiated sustainability campaigns at the Brandenburg Gate. They are no longer just a dream, but a reality! Each day we worked in a cordial atmosphere.

We were inspired by a great programme and our forays into this incredibly unique, vibrant city. Germany and its capital city, Berlin, have much to offer. A country that has learned from its successes and failures, which it has not forgotten. A country that has made progress because it sticks together, especially now that the walls that once separated it are no more. I will take this experience and knowledge with me and I will pass them on: the need to break down walls. Walls that prevent us from changing and improving our current way of life. Walls of ignorance, of incomprehension, selfishness and disinterest – even in a strong international community – and much more.

My idea and my demand: We young people need to take on much more in terms of our duty and responsibility towards sustainable development worldwide!

The cohesion and collective reflection at the summit were fundamental and game-changing for me. Time and again I felt it: community, cohesion based on common interests, goals, wishes and demands – even the obligation and responsibility towards others, towards your neighbour.

What will I take with me? Democracy practised exemplarily, the participation I witnessed from everyone (no weaknesses or outsiders were excluded), an uncanny desire for cohesion, openness, understanding





for one another. Collective action allows us all to cover a lot of ground!

I think of Martin Luther King: "Take the first step in faith! You don't have to see the whole staircase, just take the first step!" It's not important whether you have a leadership position or not; what is important is the will to do something, to have faith, to create a union. It is only in this way that we can achieve our goals. Today I feel and experience the full range of this quote.

More than ever, I now understand that change cannot be achieved overnight, but that it is often a lengthy process. We are not perfect. We make mistakes. But what we have achieved here in Berlin is enormous. We now have much better fundamentals, knowledge and practical skills. This will grow over time and bring with it new knowledge and experience to our fieldwork and our sustainability projects.

What else will I bring back to my native Colombia? The unique and diverse ideas and lessons learned from the presentations, the many workshops and personal discussions (often until late into the night). Foundations and building blocks that I believe will help me to be able to contribute to a better future. I'll start with small actions, but will not neglect the view of the whole. I'll think of the big picture (act locally – think globally). I want to share the enrichments I experienced, the great ideas and this contagious and infectious passion with as many people in Colombia as I can.

OPEN COMPETITION – HOW WE EXPAND OUR NETWORK

With an Application Piece by Khoi Anh Dang

Living and promoting diversity, internationalism and multiculturalism is close to our hearts at *youthinkgreen*. The better the groups at a seminar or conference can be mixed and the more diverse the horizons of experience of the participants are, the more controversial the discussions generally are. Learning experiences are at their most intense and the resulting project ideas are more innovative. This was the reason we announced an open competition prior to the 1st World Youth Sustainability Summit. We wanted to reach highly motivated and committed young people from as many regions as possible, even though they might not necessarily have a team around them. Participation in the summit offered them the chance to interact and to find like-minded people.



Núria (Spain) and Lenaïg (France) organized the Open Competition

In 2013, in preparation for our World Youth Sustainability Summit, we held our first attempt and opened our doors to interested and committed young people worldwide.

From the call for proposals for the summit in 2013

"The 1st World Youth Sustainability Summit will revolve around the evocative theme of 'Youth and Sustainability in Everyday Life – Challenge, Reflect on and Develop New Global Ways of Living', seen as a great, worldwide challenge and collective task. Young people who would like to enrich the 1st World Youth Sustainability Summit with their personal experiences, get involved in dialogues with one another and design common solutions have the opportunity to receive an invitation to the summit as part of an 'open competition'. [...]

Take the position of a world citizen and try to develop ways of living that would fairly address the big challenges of our time related to the topics 'climate change and sustainable development'. Draw on the postulates sustainable mobility, sustainable consumption and sustainable use of energies and resources. To do so, you can base your reflection on the basic existential functions: live, work, support oneself (food, clothing, etc.), educate oneself, get well, procreate, live collectively, recycle, contribute to commerce and get involved in communication."

We distributed our call for proposals through national and international networks, distributors, institutions and social media: our call to young people to share their thoughts, projects and visions with us. A surprising number of young people found out about us and the summit through the Goethe Institute since the event took place in Germany and they brought with them a great interest in the German language.



The reaction was breathtaking and the quality of the submissions from young people was very impressive. In addition to long-standing *youthinkgreeners*, we were able to welcome young people from more than 30 remote regions of the world to Berlin. The energy they felt ahead of the summit, their perspectives and experiences they introduced to the workshops and discussions and the seriousness with which they initiated and implemented their local projects following the summit shows us that an open competition pays off in many ways. Nevertheless, the obstacles to participation should be kept low and the different requirements of the candidates should be considered.

And what do these kinds of competitions for international meetings offer young people?

Being part of this summit and part of youthinkgreen really taught me a lot. It enlightened me, enriching my mind with many ideas and lots of information. Working together with this great international team, with a lot of diversity in it, is an experience that is going to follow and help me through my whole life."
Drin, Kosovo

"At first I was doubtful what would be accomplished in one week in Berlin with youthinkgreen. I expected lots of talk but not much action. I couldn't have been more wrong. If there was ever a testament to what the youth can do, youthinkgreen Berlin was that testament. I have come to understand that action is of eminent importance."
Frank, USA

"I came to the 1st World Youth Sustainability Summit with one question: 'Can I be the change?' Meeting all the great ambassadors of youthinkgreen again, was brilliant, meeting all the new delegates of the open competition even more. Discussing the problems, projects and ethics of all was the highlight. I have learnt so much from all the wonderful and intelligent ytg delegates, and I have thus probably learnt more from them than I would have learnt within one week of school."
Alexander, Namibia

The following text, "Sustainable mobility", is an excerpt from a submission by Khoi Anh Dang on the prompt mentioned above. He not only addressed sustainable mobility in his submission, but several basic functions of existence as well.



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Sustainable mobility
By Khoi Anh Dang

It is a warm morning in August. I am enjoying a staycation in Hanoi, the birthplace of my parents. Vietnam is one of the so-called "Next Eleven": the eleven developing and emerging countries with the greatest potential for economic growth. Since the former socialist planned economy was opened up to foreign investment, Vietnam's annual economic growth has risen to eight per cent.



On my way from the airport into the city, I considered the curious changes and advances in transport infrastructure that have taken place in the six years since I was last here. The air-conditioned minibus taxi conveys me into the city along to a new four-lane motorway. Yet the suburbs of Hanoi are still dominated by agriculture: Oxen pull ploughs across the fields, and people usually travel from one place to another by bike or on foot.

The next day, my cousin would like to take a trip with me to the city centre. In this case, given the lack of suitable alternatives, the moped is our transport of choice. Scooters represent a status symbol for the, on average, very young population of Vietnam. They dominate the cityscape, and several million two-wheeled vehicles toil along the much too narrow streets and alleys. Steady concentration on the handlebar, swerving and honking are imperative if you hope to reach your destination intact. A few cars jostle their way through the scooters, most of which are taxis, as do a few (mostly elderly) people on bicycles. Bicycles have recently been overtaken in the economic progress of the capital of Vietnam.

The future development of society, not only in Vietnam but also in other developing and emerging countries, is marked by rural depopulation and high birth rates, leading to soaring population figures in the metropolitan regions. In addition, more and more people are able to afford a better standard of living and can therefore afford not just a scooter, but a car as well. The result is an overload of the existing, poorly developed transport infrastructure. Another negative consequence is the heavy air pollution that has emerged with

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this progressive motorisation. From the large, aspiring cities of emerging economies like Beijing in China and New Delhi in India, well-known images of large smog clouds are also emerging, making leaving the indoors virtually impossible without respirators. Does a similar situation await the inhabitants of Hanoi?

Although the few buses that drive through the streets of Hanoi are affordable (a ticket costs the equivalent of 10 to 20 cents), their schedule is irregular and they are therefore not a preferred method of transport for residents. Relief could come in 2016 from a new subway line, which is expected to attract many passengers mainly through its low prices and promises of convenience. But even the public transport in Hanoi is considered the "poor man's transportation", used by those who cannot afford a scooter, car or taxi.

This way of thinking dominated transport policy in industrialised nations for decades as well. After the Second World War, the ideal of "car-friendly" city was propagated in Europe. The idea was that, in future, traffic would be almost entirely dominated by private transport. This required "transport barriers", such as cutting back on trams. Instead, motorways and traffic corridors were laid, sometime through historically developed structures. By the 1980s, people realised that such a unilateral transport policy was not sustainable and would lead to environmental collapse.

If this was to be prevented and the 20-per-cent share of global greenhouse gas emissions contributed by the transport sector was to be reduced, there was scarcely any choice but to expand public transport. In addition, these new, redesigned



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OUR AUTHOR



With his submission, Khoi Anh Dang (b. 1994) qualified for participation in the 1st World Youth Sustainability Summit in Berlin through the open competition. He is a member of the *youthinkgreen* Youth Advisory Board and is currently studying architecture at Munich's Technische Universität.



© Khoi Anh Dang

traffic areas in favour of public transport meant an opportunity to sustainably upgrade the cityscape. If roads are reduced for vehicular traffic, the vacant land can then be planted with trees and greenery. Excellent examples of this can be found in France: The construction of the tram in Strasbourg was accompanied by the conversion of the entire city into a pedestrian zone: Strips of grass replaced the black asphalt ribbons of cars in the outer areas.

Cities in emerging and developing countries, such as Curitiba (Brazil) and Bogota (Colombia), have found a model to emulate in TransMilenio. Fast buses travel along lanes separated from private transport here and navigate modern bus stops where passengers quickly board and disembark. A high cruising speed and a good level of comfort at a low cost are what make this transport so attractive to city dwellers.

In addition to expanding public transport in most cities, new concepts for cyclists are being designed and implemented. The main objective is to make cycling in urban traffic safer and therefore to increase the number of cyclists. You can also travel greater distances by bicycle, for example, from home to the nearest train station or to work. On shorter distances in the city centre, cyclists can provide relief for both the overpopulated roads and the busy public transport networks. With affordable offers for renting (e.g., Deutsche Bahn's Call a Bike), bicycles can be used as a flexible means of transport that is always available.

It's a cold, rainy morning in November. I find myself back at home in Munich and on my way to university. I just miss the tram at my stop. I have to wait another five minutes for the next one. Should I walk to the U-Bahn? Or should I take my bicycle instead? After all, a little bit of exercise never hurt anyone. While I'm not exactly happy, having just left the house not one minute ago, I truly realise the benefits presented by a densely developed network of cycle paths and public transport. And with that I hop onto my bike knowing that millions of people the entire world over are sitting in traffic in their car right now.



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A LOOK BEHIND THE SCENES OF A "WORLD YOUTH PARLIAMENT":

How was the *youthinkgreen* manifesto developed?

By Kiara Worth

In 2013, *youthinkgreen* organised the 1st World Youth Sustainability Summit, where over 160 young, committed people from more than 30 different countries came together to further develop their projects and discuss sustainability strategies. Even before all the workshops and small group debates, it was clear to us that we had to think of something out of the ordinary to affect visible changes. We had the idea of drawing up a collective statement and specific demands – a document in which all the young people would find the perspectives and aspirations they discussed and expanded upon before and during the summit reflected. The result should be a comprehensive youth manifesto.

We understood this manifesto not only to be an internal document and an expression of our small youthinkgreen community, but also as a substantial contribution to the sustainability debates taking place within the framework of the United Nations, within international institutions and national governments. The manifesto should bear witness to the commitment required and the assumption of responsibility in order to finally and actively tackle the regional and global challenges we face.



Nerve-racking, euphoric

And we did not have much time for this project – we only had one day at the conference. Would we nevertheless be able to succeed in bundling all of the participants' different voices and views and agree on the most differentiated and far-reaching demands possible? We knew exactly the limits of the enormous time pressure we were under and the scale of the task. We were fairly nervous, but also highly motivated of course. Because of this we got to work early in the morning, cheering each other on without interruption. First, we gathered in the plenary



of the Konrad-Adenauer-Stiftung Academy. After explaining how the process would proceed, we finally got started. All the young people knew that their personal point of view was important, that their arguments counted and every single voice would be heard.

We therefore decided to conduct the discussions in four core groups and to further divide them up at the start. After all, the smaller the groups, the more intensive and inclusive the discussions held generally are. The groups were tasked with agreeing on four to eight core issues and key aspects to be included in the manifesto. They had just 60 minutes to do this. The stopwatch ticked by. The enormous tension was visible and tangible everywhere, but so was the positive energy.

After the initial results held firm in the small groups, the young people returned to their respective core groups and presented their demands there to the others. And then they got down to business. With colourful pens, key issues and demands were put on paper on flip chart posters and bundled. Here, too, we had provided a maximum of 60 minutes. The pressure on the young people continued to rise. Work in most groups continued even during the lunch break. To observe the depth of these young people's discussions as they listened to each other, declared their opinions, mutually supporting one another and carefully bringing together their different points of view carefully was great – an excellent example of how these kinds of international negotiations can be made participatory.

In the afternoon, there was no stopping them. All of the groups contributed their ideas and thoughts. On this basis, we drafted a truly unique document. We all gathered in the plenary hall and one representative from each small group presented their results. Then began the most important part of the work: the writing of the manifesto. We



wanted to make sure that every participant agreed with every desired point of the declaration. Since we only had three hours left, the highest degree of concentration, dedication and determination were required of each individual. We projected the first version we drafted on a large screen so that everyone could read and understand the demands step by step.

Enjoying our success

We read the statements aloud and listened to the comments and suggestions made by the participants. There were some corrections and additions to be made before everyone was in agreement with the details of the proposal submitted for approval. We then asked the young people to take a flag in their hand to vote on which aspects should remain in the manifesto and which should be cut. Line by line, we went through the entire package of demands, which at the time was more than ten pages long.

After hours of intense discussions and negotiations, we were both exhausted and euphoric at the same time. We no longer harboured any doubt that we were close to adopting an important document. And then we actually did it! The final round applause that evening was given to ourselves and the tireless work we had done that day. Laughing and beaming despite all of the emerging

The world youth parliament, KAS





fatigue, we took turns hugging one another. It was without doubt a very intense experience that we considered essential both to us as a group but also as individuals and that brought us further along on our way. Over a few moments, we took the time to pause and to reflect on the day's events and compare them with the complexity and importance of international political negotiations. This allowed us to gain a better idea of how we can help shape these international processes.

OUR AUTHOR

Kiara Worth is world traveller, writer, photographer and consultant for sustainable development, including at the United Nations. She has volunteered her supported for *youthinkgreen* since the 1st World Youth Sustainability Summit, including by editing the newsletter, *y.connect*. http://kiaraworth.com



INFO 1: TEN STEPS TO AN INTERNATIONAL YOUTH MANIFESTO

1. Research existing declarations and aims of national or international organisations relating to the topics at hand (e.g., declarations by the United Nations, UNESCO, etc.)
2. Set objectives, process conditions and thematic priorities (which manifesto, which core statement, which addressees, who has the right to vote?)
3. Preparatory work in core groups on selected topics: set out the key findings in a written draft
4. Look for a coordinator and facilitator for the final draft process
5. Discuss of the draft in small groups, incorporate additions and corrections
6. Present demands by topic in plenary/core groups
7. Coordinate individual demands from different drafts
8. Final draft of the manifesto and publication (online and offline)
9. Enjoy the result and the success together and celebrate
10. Seek the opinions of other young people and organisations (if open concept, possibly further discussion and additions)

INFO 2:
CENTRAL GLOBAL CHALLENGES

We consider and recognise the following as major global challenges that are highly complexly and dynamically interrelated and must be overcome in terms of sustainable development:



a) Environmental challenges:
such as climate change (with all its devastating consequences for eco-systems), the loss of biodiversity and deforestation, soil degradation and pollution caused by industrial agriculture and mining, the scarcity and pollution of freshwater resources, overfishing and pollution of the oceans, etc.

b) Social challenges:
such as population growth and distribution, the threat to food security and world health (including through climate change), the fight against poverty, growing development gaps and social inequalities (internationally and within countries), educational disadvantages, urbanisation, threats posed by wars, crises, crime and terrorism, illegal land acquisitions (land grabbing), dealing with (climate and environmental) refugees, etc.





c) Economic challenges:
such as the carbon bubble, economic growth based on fossil fuels and related CO_2 emissions, investment uncertainty in renewable energy, the risk of further economic and financial crises, the outsourcing of corporate structures within the context of globalisation and increasing competitive pressure, the associated illegal, inhumane and unfair production conditions (child labour, inadequate wages, lack of social protections, weekly working hours that are much too high, unstable employment and residential buildings, etc.), greed for raw materials and rare earth minerals, the lack of transparency and accountability for businesses, etc.

THE *YOUTHINKGREEN* MANIFESTO: FOR SUSTAINABLE LIVING

Preamble

We the participants in the 1st World Youth Sustainability Summit (10-20 May 2013), who come from 31 countries around the world, undertake to promote, call for and put to the test sustainable ways of living across the whole world. Based on our shared core values (multiculturality, solidarity, accountability and willingness to change), we are campaigning for continual improvements to social justice, the preservation of our natural resources, and the recognition of nature's rights. In addition, we encourage governments, civil societies, entrepreneurs, stakeholders and citizens to support and expand on the following proposals for both actions and solutions. The manifesto in question is deliberately transparent in terms of content and has been drawn up in the context of our international project work according to the requirements agreed by majority vote. This manifesto is under discussion and the complete version can be read and commented on by going to our home page. It is our goal to motivate and inspire young people around the world to identify and broadcast the opportunities identified within it; and to adapt and respond to these opportunities to make them relevant to their everyday lives. We shall then succeed in strengthening the voice of our generation, as well as calling for and carrying out our right to political involvement.

In the debate, which lasted for several months, we came to the following selected proposals and demands:

1. Internalising and raising awareness of the importance of sustainable ways of living – extensive promotion of education for sustainable development



• We must succeed in creating a positive image of "sustainability" through collaboration between governments, businesses, the civil society (including faith-associated organisations, unions and non-governmental organisations), educational institutions and the media. This is the cornerstone for promoting an awareness of more sustainable ways of living and of transforming this awareness to make sustainability compatible with everyday life.

• We have an in-depth understanding of the public relations work and the programmes and projects around "Education for sustainable development"; how, for instance, they were – and are – developed and promoted within the UN Decade 2005–2014 and the subsequent "Global Action Programme – Education for Sustainable Development" as key factors in shaping our future. We would like schools, other educational establishments, universities, vocational and academic institutions to intensify both their work in this context and their inter-institutional collaboration, as it was formulated in 2012 within the United Nations General Assembly Resolution (66/288 The future we want).

• Education for sustainable development requires a structural mooring in all teaching subjects and areas of study, based on coordinated institutionalisation processes. It cannot happen haphazardly and must not only be carried out by those skilled personnel who are especially committed. The implementation measures pertaining to education for sustainable development need to be specified on a national and local level, based on a common global understanding of sustainable development.

2. Strengthening nature's rights

• The popular misconception that nature has put unlimited resources at our disposal – and the associated over-exploitation of these resources without thinking through the long-term consequences – must be overcome.

• We need to understand nature as having rights, rights that we have to respect and that must be protected as our global heritage. Our Mother Earth ought to be seen as an entity possessing rights to existence, regeneration and preservation of her biodiversity. It is only when we live in harmony with nature that we and subsequent generations have a reasonable chance of a secure future.

• Laws and regulations that manage and regulate protection of nature and the environment in a meaningful way, and that prevent nature from being exploited, must be developed, fleshed out and applied consistently. Governments have a leading role to play here.

3. Ensuring a sustainable energy supply

• The use, effectiveness and profitability of renewable energy sources need to be developed and promoted at all levels of society. Energy production needs to be decentralised. Any legal restrictions to using and producing renewable energy need to be removed (as far as possible). Planning reliability needs to be strengthened.

• Subsidies for fossil-based energy sources need to be cut back gradually and a business tax introduced on the basis of the CO_2 footprint. These





funds must be used to develop infrastructure projects in the field of renewable energy. The withdrawal from nuclear power needs to be coordinated consistently around the world.

• Sustainable infrastructure and mobility management are part and parcel of a comprehensive energy transition. For example, it calls for the introduction of cost-effective, economic and environmentally-friendly transport systems; and associated public transport infrastructure. This includes cycle paths, car pooling cooperatives and vehicle-free areas.

4. Promoting participation and democratic developments

• The media have a critical role to play in promoting sustainable behaviour and lifestyle changes and it is important that they take on this responsibility. Training for those who go into journalism as a career needs to be upgraded and global press freedom fostered.

• Public participation can be bolstered by recognising and promoting traditional knowledge systems that contribute to sustainable ways of living. Governments need to act accordingly and support community initiatives that promote traditional knowledge systems. This also involves an inter-generational dialogue to encourage knowledge sharing.

Governments need to support civil society's participation in sustainability negotiations and fora, especially participation by young people, in order to ensure that the voices of all groups in society are fully represented.

Other topics for which we have compiled requirements (see extended version on the home page), include:

– Sustainable waste management and hygiene management,
– Sustainable infrastructure and mobility management,
– Sustainable consumption and production.









THE "TREE OF HOPE" DOCUMENTARY – SAMPLE FIELD WORK PROJECTS IN MOVING PICTURES

By Rasmus Sievers

1. The film's subject

Undji Usura stands next to the big stage. She looks forward eagerly to going on stage. She is 15 years old, comes from Namibia and, like the 200 other students, has been invited by *youthink-green* to the **International Youth Climate Week in Wolfsburg, Germany.** On stage, she will speak about and present her working group's findings regarding which renewable energy sources are already being used in Namibia. The young participants from 11 countries are united in a shared vision: to counter the climate crisis positively and proactively. They are, therefore, not only discussing the latest scientific findings, but also gaining an understanding of the problems and realities in other countries around the world. Afterwards, they look for ideas for projects that they can get involved with at home, with the aim of doing their bit to help protect the environment.



Rehearsals for the Green Carnival

The "Tree of Hope" documentary (see DVD included with the book) accompanies three different groups of students on three continents as they put these local "field work projects" into action. The groups are based in Germany, Namibia and India. The DVD shows the difficulties, obstacles and disappointments that the young Climate Ambassadors encounter trying to make the projects happen. Yet it also records the moments of pride and jubilation when they succeed in turning their project ideas into reality.

The first stage transports us to the megametropolis of **Delhi in northern India.** The mission that Jeni, Rishabh and the other students in the youthinkgreen group at Salwan Public School have taken on is "waste management". In other words, clearing up rubbish. Rishabh believes that the heart of the problem is a lack of environmental awareness. The students are keen to counter this with a large-scale festival – the "Green Carnival" – to which they invite everyone they know in the district.

Landfill sites are already bursting at the seams. The largest landfill site is situated in Ghazipur, at Delhi's gates. We visit the site with Jeni and Rishabh and we can see large numbers of people processing items for recycling by hand, under dreadful conditions. There are also children on the landfill site, collecting materials for recycling. This has a profound effect on Rishabh and Jeni, they are looking for solutions to this misery, which really falls under the government's area of responsibility. They are immediately filled with doubt about their project, in the face of the huge problems in the country it seems to them a mere drop in the ocean. They are therefore happy that their school partners with an NGO that teaches these children living on the landfill site in an improvised school. Their festival is a bright and colourful event that lasts for two days: visitors to it marvel at the street theatre, painting and recycling competitions, and thus learn something about waste management in passing. The children from the landfill school can be found right in the thick of it. This then brings Jeni, happily, to the following conclusion:

Jeni, 17



"This project began as an environmental festival. It's much more than that, though. We are now also aware of the social, philanthropic dimension – and that's great!"

In **Osnabrück,** on the other hand, the problems are completely different. Here, there is an elaborate waste sorting system in place, along with car-sharing policies that even include electric cars that run on green electricity – so what new ideas can the students from the youthinkgreen group at Ursulaschule, a secondary school in Osnabrück, come up with? Ultimately, their solution is to create a "Sustainable Shopping Guide" for their city, in order to raise awareness about the environment.

Judith, 18



"Our society has reached a point where I think no, I don't want to be party to this anymore, I don't want to live in this way".

We accompany Judith, Nico und Solveig in their research straight through the city centre. Is everything that claims to be eco-friendly actually eco-friendly?

Isabelle goes one step further and asks herself "do we ever even really need everything we buy?". As a sideline project, she joins up with Ann-Kathrin to instigate a clothes swap party. People ought to think about refraining from consuming, too. Don't shop, swap!

Isabelle, 17



"In every group there are, of course, idealists and realists. We have a surprising number of idealists in our group, which means that the realists sometimes have quite a hard time of it."

We break our cinematic world tour with a stopover: the **UN Climate Conference in Doha, Qatar.** Judith and the other youthinkgreen Climate Ambassadors from other continents are exhilarated at being part of this event, where the world's environmental history is being written. They want to reach the decision-makers, fire questions at them and put forward their demands. After all, these ministers are negotiating about THEIR future.

Discussions and demonstrations in the Gulf State

The young people are keen to set up a "Tree of Hope" in the traditional market at the heart of the city. All passers-by – Qataris as well as visitors – should write their dreams, wishes and demands for a green future on the green leaves. Expressing an opinion in public in Qatar is virtually taboo, so the campaign causes a small sensation. The reaction from the passers-by is encouraging: "You ought to present these demands to the people making the decisions!".

From the fringes of the market, they even articulate their demands via a demonstration – this is remarkable for Qatar.

On the streets between imposing buildings whose construction was funded by the export of crude oil and natural gas, the demonstrators, the majority of whom come from Arabic countries, demand that climate protection be expedited in this wealthy region, too. Nonetheless, the Gulf States are still among the nations in the world with the highest CO_2 output per head. Alexander and Nandi from the Namibia group are also at the demonstration. They hold high a placard that says "GO SOLAR"! Their home, Namibia, is, just like the Gulf States, predestined to adopt solar technology.



Their hometown, **Windhoek in Namibia,** would be perfect for riding bicycles! The best weather, flat terrain... there are, however, simply no cycle paths. Alexander has already been involved in a number of accidents. This is why Namibia's middle and upper class families are forced to ferry their offspring around from A to B by car – since there is also no reliable bus service. In addition, Undji identifies a powerful status issue:



Undji, 15

"Everybody dreams to become rich, or to own his own car. Nobody ever dreams of buying a new bicycle or living in a green way."

The *youthinkgreen* group, along with their teacher Carsten Antoni, is now attempting to change this, starting with tiny steps. How could the students improve their carbon footprint? How big a footprint do they actually have? They collect data with the help of a survey and evaluate it. Then they look at the alternatives. Could children who live close to one another create a cycling group?

What would actually happen if 50 students from the same district met up on their bicycles in the morning and, on their way to school, simply blocked the road? No sooner said than done: the bike-bus is born! The students even succeeded in getting onto the main news on Namibian television thanks to this great idea.

Windhoek at night, a room full of functionaries and business people, the mood is dignified and official. The event is being hosted by the "Namibian environmental fund". The *youthinkgreen* group is right in the middle of it. Janice presents the green bazaar they organised, the car sharing project and her next scheme: rebuilding a wind-powered water pump in dry Damaraland. The pump was destroyed several years ago by elephants and since then has lain broken.







Quitting is not an option



The next morning, thirsty for action, the group set off into **Damaraland**. Tracy and Jennifer come from the region and therefore speak the language of the Damara people. It is a new experience for the others in the group, which includes both black and white Namibians. After travelling across the dusty country, the shock could hardly be greater. Where is the broken wind tower that they must rebuild? Where is the top of the old pump? Instead, they are forced to watch while workers install a diesel-powered pump, which is not only less environmentally-friendly, but also far too expensive for the poverty-stricken residents of the village to maintain. Eventually it would go wrong and the people would again have no drinking water for several years.

The young people first had to deal with this disappointment. The teacher, previously so motivated, had also almost given up hope; the students, on the other hand, had not: they went to the teacher and told him that they wanted to retrieve the missing wind-powered pump parts from the regional authorities, no matter what the cost might be. Together they managed to achieve this, meaning that the *youthinkgreens* were able to carry out their original mission. Everyone pitched in, both the villagers and the young people lifting the heavy frame. Everyone pulled together when it came to erecting the new, old pump tower – and hup, it worked! Soon afterwards came the sound of fresh water splashing into the bowl.

In the meantime, the groups in many other places around the world have also made progress with their local projects. At the 1st World Youth Sustainability Summit in Berlin, the project groups meet together again to present the fruits of their labour to each other. The family has grown: students from a further 16 nations are enriching the summit with their great ideas and masses of energy. This culminates in a final show of strength. A shared manifesto with their demands to the world public needs to be prepared, negotiated and thoroughly discussed. Just how hard it is to do this with so many different cultures involved is something all the young people will take home with them as a valuable insight. They attain their goal, however, because everyone joins in: the *youthinkgreen* manifesto is adopted!

This, however, is only the beginning. "When I think about what people have already achieved," says Judith, "what will they have achieved in five or ten years' time!"

OUR AUTHOR



Rasmus Sievers (b. 1973), Screenwriter and Cameraman, has produced a variety of documentaries and short films, including the youthinkgreen documentary "Tree of Hope". Every so often he passes on his knowledge and skills to young, up-and-coming filmmakers, for example via "Filmklasse Deutschland" ["Film Class Germany"]. www.rasmus-sievers.de

2. The central theme of the film

Over the lifetime of the project the young people undoubtedly become experts on climate change issues – this isn't the case for people watching the film. The reason for this is that the point of the film isn't the scientific illustration of climate issues as such, but rather giving the students and viewers courage and the opportunity to show their own actions.

Out of their "comfort zone"

All too often, an individual faced with an overwhelmingly huge task will give up and not see the ways in which they could act. As the film illustrates, by working together people can achieve a great deal – we just have to leave our "comfort zone" and look for likeminded people.

In the film, the young people reflect on their role in society, which, following the two conventions, they understand means the global society. The more they find out about other countries, the more their sense of social responsibility crystallises. They scrutinise our consumption, for instance, and its significance for other countries, or recognise that climate protection is always bound up with social responsibility.

Overcoming obstacles and boundaries

On the way to their local projects, the students encounter a wide variety of different obstacles. Being a Climate Ambassador is not a smooth, straight, tarmaced path. Sometimes it is their own fears that get in their way: they fear confrontation or giving their opinions; or find that perseverance is the key. They also find, though, that after having successfully achieved their goals they can look back on the process and feel even more satisfied. Occasionally, things simply don't work out as planned. The students first have to learn to deal with disappointment. Rishabh and Jenita are dismayed, for example, when they become aware that they are only small cogs in the machine. Yet they are wrong, as they realise afterwards, because the effort they have made as just two people has had a big effect. In this way, we become witnesses to profound developments in the students' personalities, since these disappointments, and overcoming such obstacles, is what allows the students to grow as individuals.

3. How the film could be used for inspiration in the classroom



Making the most of the variety of media on offer.

In the first instance, the film is designed to inform, inspire and strike a chord with the viewers. It is just as important that viewers can closely follow innovative sustainability field work projects that are carried out by young people, and that the film adopts an international rather than a purely national perspective. In addition, the filmmakers were aiming to embed the series of topics on "sustainable development" within a profound cognitive process and to communicate this to the wider public in such a way to enable cognitive insights into the consequences of globa-



lisation – insights that would transcend a merely subjective interest.

To best access profound insights, it makes sense to examine individual film clips in the light of three aspects conventionally used in teaching:

- Which factual connections (political, social, cultural, economic and environmental) do the situations shown identify? (Subject insight)
- Which conclusions can be drawn from thinking through the social connections that affect the situation? (Social insight)
- Which value judgements can be read from the individual film sequences? (Value insight) (Further aspects: see points 4 and 5 of this text)

In addition to this, it is worth questioning how the young people behave and express themselves in the individual sequences:

- How do they approach the factual connections?
- Which options do they identify and test in terms of actions and solutions?
- Which value judgements change, or come to fruition in their minds?

There is a wealth of possible methodologies available. Depending on the level of knowledge in the group, it can be useful to give a short introduction before watching the film. A strategy that usually proves successful is starting from the viewers' personal impressions and then gradually guiding the discussion towards a more profound awareness and appreciation of the issues.

For the purposes of the project as a whole, it is preferable to pose the questions after the consequences, which can be surmised overall for the individual and the group from the film's message. The activity would be successful if the viewers were then inspired themselves to want to get involved in "sustainable development" issues, whether in terms of in-depth research and/or accomplishing their own projects – always from the perspective that We Are Change!

Der Dokumentarfilm »Tree of Hope« eignet sich für SchülerInnen aller Schularten ab der 7. Klasse für die Fächer Deutsch, Ethik/Religion, Sozialkunde, Gemeinschaftskunde, Politik, Erdkunde, Biologie, Englisch und Kunst sowie in vielen Arbeitsgemeinschaften.

4. Questions thrown up by the film

- The viewers travel to some very different countries, in which the climate issues and climate protection (cause of and approach to solving the problem) are constantly bound up with the everyday realities of life in that country. Which are the most promising aspects that could be addressed in Germany?
- Do global climate conferences make sense? What should I expect from this type of conference? What sort of alternatives might exist?
- What does the Federal Government's current environmental policy programme look like? Which stance has it taken in a European and also in a global context?
- Are young people who are keen to get involved with environmental or social



Daniela (Brazil) representing a living "Tree of Hope" at the UN Climate Change Conference in Doha

issues taken seriously, and do they receive sufficient support from their school/state/society?

- How could long-term environmental and social projects in which young people have high levels of autonomy be integrated into the school day?
- How can you motivate and enthuse fellow students, friends and teachers to throw themselves wholeheartedly into this issue?
- In the Osnabrück section, the film referred to the fact that only exceptionally gifted students can afford to join in with a project that takes so much of their time. Is this true? How can we reach mid-level ability or weaker students and young people from all social strata?

Questions for self-reflection:

- How could I personally help protect the environment?
- What does my own "CO_2 footprint" look like? Which of my activities have particularly damaging consequences for the climate?
- Would I be willing to give things up in order to cause less environmental damage?
- What are my social responsibilities – and which chances do I have to live up to these?

5. Think globally, act locally: what is worth thinking about

Windhoek

The German school at Windhoek has a dual-track Abitur [university entrance examinations] system (in German and English). Before this was introduced, the students preparing for their Abitur, which was then an English-speaking class, were far more mixed in socio-cultural and ethnic terms.

Delhi

Environmental awareness is not necessarily a question of social class. The families at Salwan Public School undoubtedly belong to India's middle and upper classes, yet environmental awareness is not especially obvious.



Delhi: the little prince opens the gates to the Green Carnival



Text on poster in picture: "Bring your old clothes, take new ones home!!! Swap shop heaven OS"

Osnabrück

Group dynamics always have a role to play, as soon as a number of people want to accomplish something together. This is briefly highlighted in this episode. The group from Ursulaschule in Osnabrück was characterised by having lots of students with ambitious goals in the project. This led to plenty of friction, but at the same time they also achieved a lot: Ursulaschule in Osnabrück set up two further projects that were not mentioned in the film.

It was clear in this episode, too, that you have to be an able student to have the "luxury" of participating in leisure activities like this. Nowadays, the pressure to succeed is enormous. It is therefore certainly worth thinking about how mid-level ability students can be reached.



Doha

Qatar hosted the UN Climate Change Conference; it also, however, has the highest CO_2 output per head in the world.

The film shows the demonstration, which was authorised by the authorities, in Doha for constructive engagement in the climate conference. It was one of the first major demonstrations in Qatar's history. In other respects, Qatar is seen as a relatively repressive nation.

During the negotiations in Qatar, one key point in the discussions was that newly industrialised and developing countries felt no responsibility for the existing emissions. They therefore refused to limit their emissions unless industrialised nations offered concessions and clear steps towards climate protection.

Berlin

The "Tree of Hope" was deliberately set up in the historic square at the Brandenburg Gate during the World Youth Sustainability Summit, it overcomes walls and unites nations.



OVERVIEW OF THE CHAPTERS IN THE FILM

Research on existing declarations and aims propounded by national or international organisations on the group of themes (e.g. UN Declaration, UNESCO, etc.)

1. International Youth Climate Week in Wolfsburg, Germany
2. *youthinkgreen* group in Delhi, India
3. *youthinkgreen* group in Osnabrück, Germany
4. UN Climate Change Conference COP18 in Doha, Qatar
5. *youthinkgreen* group in Windhoek, Namibia
6. 1st World Youth Climate Summit 2013 in Berlin, Germany

The chapters can also be viewed individually via the DVD menu.

6. Information about the film

TREE OF HOPE
(Documentary, 2015, 58 min. running time)

with
Undji Usura (Namibia), Judith Gebbe, Jenita Dhanak (India), Rishabh Lohiya (India), Isabelle Tisson, Solveig Degen;
representing all students and teachers within the youthinkgreen groups

Concept: Helmut Spiering
Book, camera & directing: Rasmus Sievers
Editing: Karin Jacobs
Consultant: Thomas Frick
Production management: Stefanie Schattner
Producer: Alexander Martens
Original soundtrack: Nikolas Mühe, Sundar Kasturi (India), Bobby Hasheela (Namibia)
Sound editing: Nikolas Mühe
Sound mixing: Eric Horstmann
"Mut zum Handeln" track: new arrangement by Daniel Arruda
"Mülleimerspiel" track composed by Tamas Kahane
"The one to move" track composed and sung by Jonas Langen, Josefine Siebenand
"Glowing Shanta Hearts" track composed by Dan – O
"La Tripleta" track composed by virtualdjmax

A production by Mafilm GmbH Berlin on behalf of jugend denkt um.welt – Gemeinnütziger Verein zur weltweiten Förderung der Umwelt- und Nachhaltigkeitsbildung e. V. [a not-for-profit, registered association for the worldwide advancement of education regarding the environment and sustainability].





PLASTIC BAG FREE OSNABRÜCK – GERMANY

By Vanessa Kalisch



Picture credit: YTG Osnabrück

Plastic is present everywhere in our society. If we wanted to live completely free of plastic, many of us wouldn't even be able to get out of bed, since even flooring contains synthetic materials. We wouldn't be allowed to wear the majority of the clothes sold in the shops, and even brushing your teeth in the morning would be a thing of the past. These three examples make it clear: the desire to completely avoid coming into contact with plastic in everyday life is unattainable. So what could we all do without, without paying too high a price? The answer is under our noses: plastic bags!

Plastic does not decompose, instead it breaks down over centuries into plastic microbeads. This means it is not degradable. These tiny little pieces of plastic find their way into bodies of water, and into drinking water too, which is how they then enter and make their way through our bodies. The toxic plasticisers can already be found in the blood and tissue of almost everyone on earth, even newborn babies.

This is just one of many consequences, but it proves that plastic is not just bad for the environment, but also for us, too. In addition, we need to take a look at where the plastic actually originates from. In doing so, the negative aspects of plastic production and usage become much clearer: plastic is produced from crude oil – a finite resource that required millions of years to form. In contrast, the length of time that we use



a product made from plastic for before throwing it in the rubbish is incredibly short.

The world's seas already contain enormous accumulations of plastic that are now three or four times the size of Germany. The biggest problem is not just the obvious pollution, but the fact that creatures get tangled up in the plastic, or eat it and then die. At present, there is no way of clearing these accumulations. We in Germany contribute too much to this calamity, because we use on average 64 thin carrier bags per person, per year. Climate Ambassador Malin Degen from Osnabrück agrees: *"I find it awful that we endanger so many lives by buying a plastic bag, which ultimately ends up in the sea, where it is eaten by creatures that live in the sea. I'm sure that no one wants to see themselves as an animal murderer. This could so easily be avoided, but only if we all join in."*

geBeuteltes Osnabrück

Since there are plenty of practical alternatives to plastic bags that are, unfortunately, still used far too little, we have started an ambitious project: we have declared war on plastic bags in Osnabrück. We want people and companies in Osnabrück to find alternatives. They could, for instance, use bags made from paper or jute when shopping.

Learning from Rwanda

You might have heard of Rwanda? It is a small country in East Africa where it is forbidden to bring in plastic bags. Tourists who fly to Rwanda have to undergo strict luggage checks to make sure not a single plastic bag arrives in the country (see also article in topic 5.2). Paper and cotton bags are used instead of plastic. We want to emulate this and do the same in Osnabrück. "We want rapid action, otherwise people will only talk and make promises to do something, but nothing actually changes," says Osnabrück-based Climate Ambassador Emma Weglage. We young people are not backing a ban, like the politicians in Rwanda, but are launching an appeal to reason.

First and foremost, we drafted an idea to fix on our goal, how we would carry out our project, how we wanted to start it, what sort of opportunities there were to raise awareness of our project, and which actions we wanted to take. We split into different groups: a PR team, a creative team, a campaign team and a support team.





That's enough!
No more plastic bags!
Plastic bag free zone
Osnabrück

Plastic bag free zone
Osnabrück



Our goal: by the end of 2015, we want the majority of the plastic bags in Osnabrück to have disappeared. By the end of 2017, we want to rid the town completely of plastic bags. The project is aimed at all age groups within the local population – but also at tourists, businesses and policies. There is a lot that we need to do to accomplish this. There may be lots of obstacles that we need to overcome. It will certainly not be easy to point out alternatives to the large chain companies in the centre of town and make them want to commit to our goals. We'll have to assume that these kinds of shops are not going to be interested in painted jute bags or DIY paper bags, for example – especially when it comes to production costs.

Our first successes and partners: in spring 2014, Mayor Griesert became the project's patron. As the administrative head, he is the one to give our plans the backing they need. We also received support from the public: terre des hommes (international partner); the University of Osnabrück ("Textile Design"); the Osnabrück Climate Alliance; the Lokale Agenda 21 group; and also from students and a primary school. Alongside the pledges of support, we also received donations of jute bags, for example. Even the attention that we get from

OUR AUTHOR

Vanessa Kalisch (b. 2000) has been the Climate Ambassador at Ursulaschule in Osnabrück since mid-2013, where she has been a driving force behind the "Plastic bag free Osnabrück" project. At the start of the project in October 2014, she was responsible for moderating the launch event. Vanessa doesn't yet know what she wants to do once she has finished school, since she has three years to go before she takes her Abitur [final examinations] in 2018.







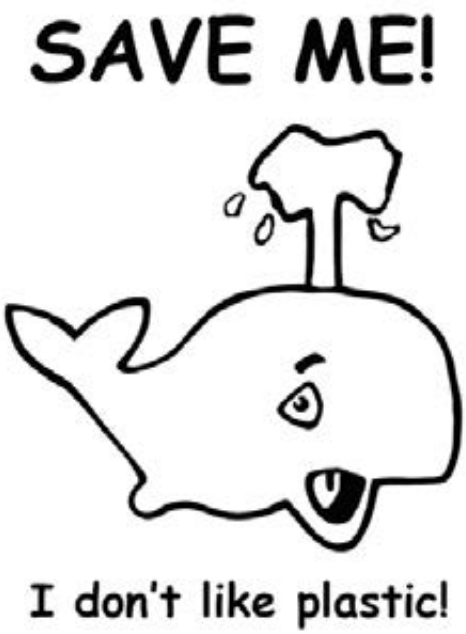




the media is important for our project. The NDR [a public radio and TV broadcaster] took up our cause in the title of its online article: "Plastik? Kommt nicht in die Tüte" ["Plastic? Not our bag, baby"].[1]

What will the coming months and years bring?

Together with our supporters, we want to continue running a number of campaigns in future. We already have a long list of ideas to pursue. These include substitution campaigns (jute bags for plastic bags); signs for shops that stop using plastic bags; recycling campaigns in which we turn plastic bags into stable, reusable bags; and art campaigns that illustrate the consequences of plastic (bag) rubbish.



This type of art campaign might involve staging a sheet of plastic on the Hase (a river in Osnabrück), or an installation of an enormous plastic bag.

I am not yet sure how much joy this ambitious scheme will bring us, but if we have achieved our goal by the end of 2017, we can in any case be really proud of ourselves. It will have been worth it then! Until then, we all somehow need to stay motivated, even if this is tough. In addition, we will need all the support we can get. So, if someone wants to take part in our project, they will of course be very welcome. We hope that lots of associations and institutions will join in and make their own contribution to achieving a "plastic bag free Osnabrück". Who knows? Maybe we'll even be able to inspire people living in other towns to unite with us and start a plastic-free movement.



Square, Practical, Jute

1) www.ndr.de/nachrichten/niedersachsen/osnabrueck_emsland/Plastik-Kommt-nicht-in-die-Tuete,plastiktueten122.html

INFO: AN OVERVIEW OF THE CAMPAIGNS AT URSULASCHULE

By Dr. Tobias Romberg, Journalist and Teacher at Ursulaschule in Osnabrück

In June 2015, the Climate Ambassadors trekked through the town together with Osnabrück's Mayor Wolfgang Griesert to pay tribute to five shops, shops that have banned plastic bags. Each shop was presented with a sign saying "Plastic bag free shop". Other shops are due to follow suit. The Mayor, as patron of the project, and the Climate Ambassadors addressed a joint letter to all shops in Osnabrück. The message is clear: climate protection starts at home. By the end of 2017 Osnabrück ought to be free of plastic bags. Everyone needs to get involved!

A few hours before the presentation of the shop signs, 8,000 brightly coloured plastic bags were strewn around the playground of Ursulaschule. Around 250 students from Years 5 and 6 got on their knees and threaded the plastic bags into chains. The Climate Ambassadors organised this "mass spectacle". To collect the bags, the Climate Ambassadors had modified dustbins to create "plastic bag gobbling monsters". They were placed in front of shops. A large number of schools in Osnabrück also ran collection campaigns.

10 days later, the Climate Ambassadors ensnared a building in the centre of Osnabrück with a chain made from these plastic bags. They were aiming to galvanise the residents of Osnabrück. They also did this for several substitution campaigns in the town. A dance school ordered 2,000 jute bags featuring a motif designed by the Climate Ambassadors to be printed; numerous partners funded the printing of 10,000 bags. They were given away or exchanged as positive publicity.

What will happen to the 8,000 plastic bags? These will be turned into new, durable bags for life: a difficult undertaking requiring many partners. Polycore will turn the bags into granular material, from which Osnabrück University will produce individual components. The Heilpädagogische Hilfe Osnabrück [an inclusive social enterprise that employs people with disabilities] will then bind these together to make bags. Anything else? The Climate Ambassadors get partners involved, install themselves on the pavements and at events – e.g. at a regional climate summit – to promote their mission, report from neighbouring districts, appear in front of the camera and give interviews.

All to achieve a single goal: an Osnabrück free of plastic bags. www.plastiktuetenfrei.de



SCHOOL-BIKE-BUS IN WINDHOEK – NAMIBIA

By Alexander Brock

Picture credit: YTG Namibia

If you want to travel from A to B in Windhoek, Namibia, you have two options: you either take a taxi or travel in your own car, because Windhoek has no public transport system. There are only a handful of buses, which run twice a day back and forth between the various districts of the town for the benefit of the commuters. Our school, the Deutsche Höhere Privatschule Windhoek (DHPS), has hired its own two buses in order to transport at least some of the students from the Khomasdal and Katutura districts to school. Most students, however, arrive at school by private car. We at youthinkgreen Namibia were searching for a more environmentally-friendly option. "Maybe on foot?" was the idea that immediately sprang to mind. The usual response was "You've got to be kidding!" "That takes far too long and it's not safe." "What about by bicycle?" This suggestion also had my fellow students up in arms: "You must be insane! It's really dangerous!"

These qualms were not simply pulled from thin air. If you look at other African cities though, you see that bicycles are a fully integrated part of everyday traffic on the roads. What, therefore, is the Windhoekers' problem with bicycles, and how can we convince them to use one? This was the central question for our sustainable mobility project at DHPS. We wanted to show the whole school community quite plainly that the current transport situation was unacceptable. The best approach, in our eyes, was to calculate the yearly CO_2 output produced by the vehicles the students used to commute to and from DHPS. What a challenge! Yet if the result turned out to be as shocking as we feared, would the students then be willing to change their behaviour?

Experts support our scheme

We began our project by organising a representative survey in order to understand the actual transport situation and the students' views on the issue of mobility. Since we hadn't learned these scientific methods at school – and also had no experience in this area – we brought in help from outside[1]: Dr. Robert Riethmüller from the Hochschule Polytechnikum Namibia, Dr. Kenneth

Rethinking Mobility at DHPS



Want to make a change, make a move!

The YOUTHinkGreen Namibia Team wants to calculate the carbon footprint for transportation to and from DHPS. For this YOU and your parents have been selected randomly to help us!

Grade: . . . . . [please specify] Class Teacher: . . . . . [please specify]

Branch: ☐ English ☐ German **or** ☐ DIAP ☐ NSSC

Please take a moment to answer the following questions together with your parents:

1. How do you get **to** school? :
   ☐ Bus ☐ Taxi ☐ Car ☐ Bicycle ☐ Walking
   ☐ Motorcycle ☐ other . . . . . [please specify, e.g. car sharing]

2. How do you get home **from** school? :
   ☐ Bus ☐ Taxi ☐ Car ☐ Bicycle ☐ Walking
   ☐ Motorcycle ☐ other . . . . . [please specify, e.g. car sharing]

3. If you answered yes to driving to/from school by **car** or **motorcycle** then please specify:
   Make: . . . . . [please specify] Model: . . . . . [please specify]
   Year of Manufacture: . . . . . [please specify] Engine Capacity: . . . . . .ccm
   Type of Fuel: ☐ Petrol ☐ Diesel Transmission: ☐ Manual ☐ Automatic

4. How many other DHPS pupils travel with you **most** days (only car and motorcycle users)? :
   ☐ none ☐ one ☐ two ☐ three ☐ more . . . . . [please specify]
   The other DHPS pupils in the car are: ☐ sibling(s) ☐ friend(s)

5. How many trips do you do **to** school **every week**?: . . . . . [Don't forget about afternoon classes!]

6. Where do you live in Windhoek? ☐ DHPS Heim [otherwise please specify]
   Street/House No: . . . . . / . . . . .
   Erf No: . . . . . Suburb: . . . . . .

7. What distance do you have to travel to school (**one** way)?: . . . . . km
   How long is your travel time from home to school (**one** way)?: [approximately] . . . . . min

8. Are you willing to do car sharing to reduce the school's transport carbon footprint?:
   ☐ Yes ☐ No
   If you answered 'No', please elaborate: . . . . . .

9. Ask your grandparents / parents and find out how they got to school every day?
   ☐ Bus ☐ Taxi ☐ Car ☐ Bicycle ☐ Walking ☐ Motorcycle ☐ other . . . . . .[please specify]

10. Do you have any ideas / suggestions how your family can reduce the school's carbon foot print and reduce the family transport costs at the same time?: . . . . . .
    . . . . . .
    . . . . . .

Thank You!

giz

COOPERATION REPUBLIC OF NAMIBIA FEDERAL REPUBLIC OF GERMANY

MOVE WINDHOEK
www.MoveWindhoek.com.na

youthinkgreen
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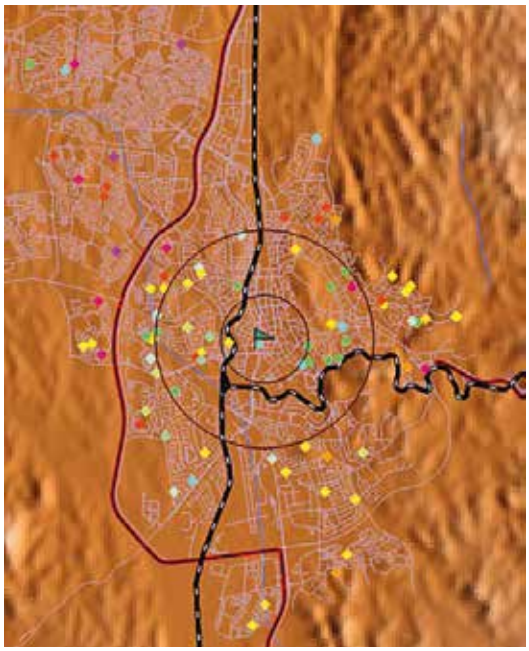
Odero, plus several employees at the Gesellschaft für Internationale Zusammenarbeit [Society for International Collaboration] (GIZ) gave us a helping hand in developing the survey. This was then handed out to 179 randomly selected students from the first year of primary school to the final year of secondary school. From these we received 111 completed forms back again. The data collected included the students' home addresses, the type of transport they used to get to school, and questions about car sharing and alternative methods of transport. As we had expected, most of the students travelled to school in private cars. We therefore also asked about the brand, model, engine capacity and gearbox. Besides that, we also needed to know how far they lived from the school and how much time they needed on average to travel there.



Our next step was to evaluate the surveys and record the students' home locations on a map. This, too, was an approach that we had to work on outside of lesson time. After consulting our experts at GIZ and the Polytechnikum, we then developed an Excel spreadsheet. We were able to digitalise the data identified within the space of a single afternoon. It was, nonetheless, a lot of work and we were only able to tackle it because every member of our *youthinkgreen* Namibia group diligently played their part.

Data evaluation, digital mapping

We used the QGIS[2] geographical information system to map the homes, as well as Windhoek City Council's online cadastral map[3]. The mapping process was very time-intensive, since each of the 111 homes of those surveyed had to be individually recorded. This work was really worth it, though, because in the end we had a map that provided visual evidence for the first time that the majority of the students at our school live within a 2.5 kilometre radius of the school: a distance that can easily be covered by bicycle! Using our Excel spreadsheet, we calculated the CO_2 footprint of the school transport. The exact result: 385,440 kilograms of carbon dioxide are emitted annually by the students' daily school transport. Is that a lot? A Toyota Hilux would have to drive 35 times around the world to produce the same amount of CO_2; a VW City Golf a whole 84 times. A dishwasher could run for 85 years, a hairdryer for 135 years and a washing machine for 311 years. From this point of view, 385 tonnes of CO_2 is a huge amount!



1) http://youthinkgreennam.org/namibia/field-projects/mobility-transport/developing-the-survey-tool/

2) www.qgis.org/

3) http://maps.Windhukcc.org.na/



The bike-bus vision becomes a reality

Our survey also showed that only seven per cent of the students shared lifts in cars, however 85 per cent were willing to do so in principle. We decided to rely on the students' spontaneity rather than hoping their parents would change their driving habits based on our initiative. On 19 April 2013 we organised the very first "bike-bus" to our school. The idea behind the bike-bus is that the group travels the route by bicycle together. This way of travelling is safer than riding alone, because drivers pay more attention to a large group. It is also sustainable and lots of fun for everyone involved.

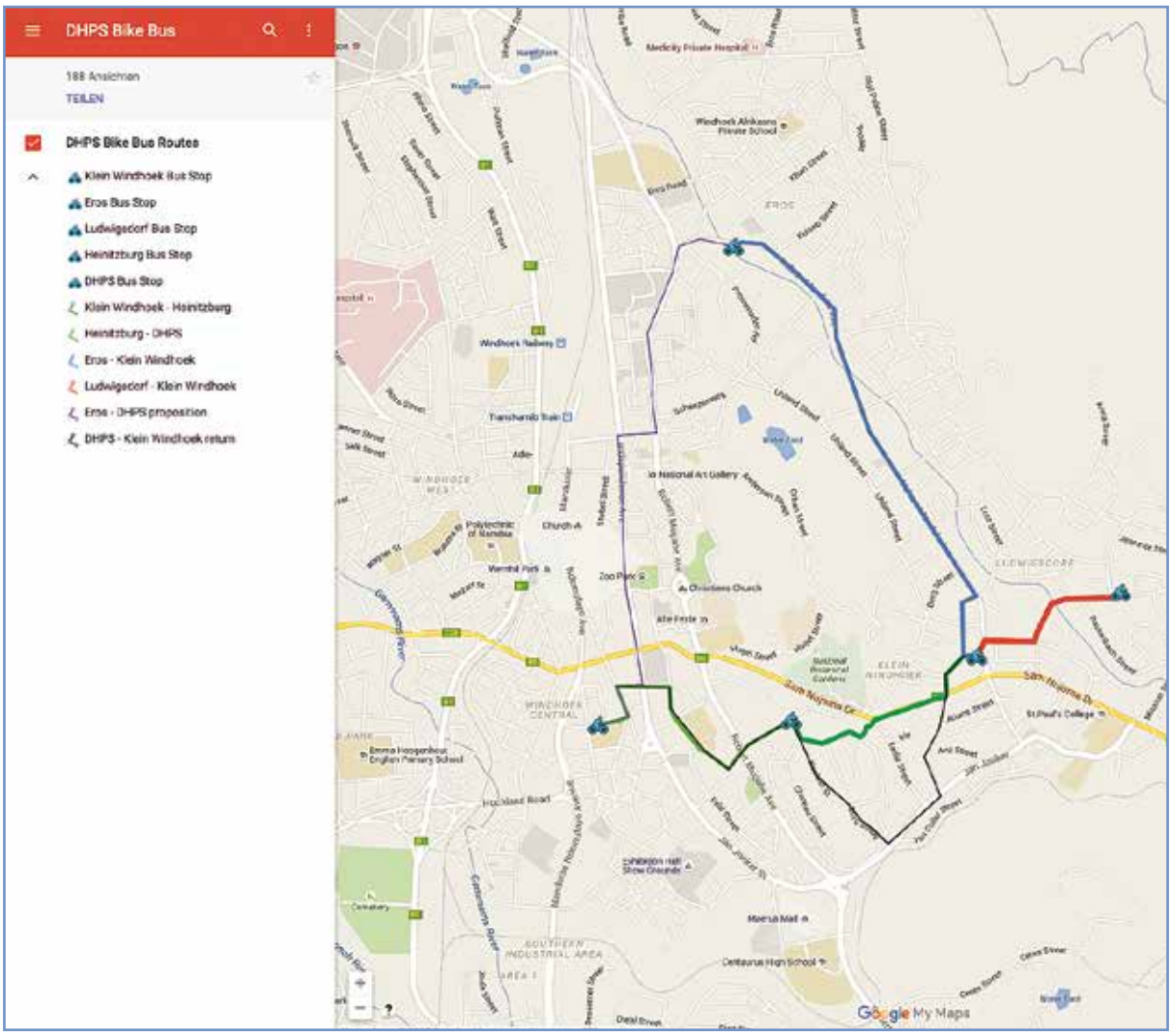


Although we were only able to announce the event three days beforehand, 65 students took part and experienced what was, in Windhoek, a highly unusual way of getting to school. No one had imagined it could be so much fun reducing carbon dioxide emissions.

Afterwards, everyone involved agreed: we need a regular bike-bus. Further bike-buses ran in June and August – unfortunately with slightly fewer people taking part. On one occasion, however, our school authorities surprised us: with no prior warning, on 16 July we found bike stands installed in the school playground. Six months previously, such a request would surely have fallen on deaf ears. Since then, a committed core of eight to 10 students regularly cycle to school.

Where it goes from here...

In 2015 we are aiming to run the bike-bus once a month on a regular basis and also beginning to build bike-bus stops in various districts around Windhoek. These stops work in a similar way to normal bus stops. Students can cycle to school together, synchronising with the timetabled departure times. We want to number the stops so that students can meet each other more easily and then cycle to football training or school together. This then relieves parents of their driving duties and reassures them that their children will stay safe. As a by-product of this, the school's CO_2 emissions will keep reducing...


DHPS Bike Bus
188 Ansichten
TEILEN
DHPS Bike Bus Routes
Klein Windhoek Bus Stop
Eros Bus Stop
Ludwigsdorf Bus Stop
Heinitzburg Bus Stop
DHPS Bus Stop
Klein Windhoek - Heinitzburg
Heinitzburg - DHPS
Eros - Klein Windhoek
Ludwigsdorf - Klein Windhoek
Eros - DHPS proposition
DHPS - Klein Windhoek return
Google My Maps



CONSOLIDATING ENVIRONMENTAL IDEAS IN COLLABORATION WITH GRIPS THEATRE

By Anne Herrmann

In 2013, eight students at the Bertolt-Brecht-Gymnasium school in Pasardschik, a small town in Central Bulgaria, put together a montage of scenes called "Open Your Eyes" – a play on the theme of "critical consumption". The *youthinkgreen* Bulgaria group had worked for several days on the staging of this under the guidance of the drama teacher Anne Herrmann and also Kora Rösler, a member of *youthinkgreen*. The scenes from the production gave them and the audience valuable inspiration for changes they could make to their daily consumption habits.



On the first day of work, the initial priority was getting to know each other. There were various ice-breakers that helped us bond as a group and which gradually led the young people to the idea of theatre as a medium. Some already had experience in theatre, while others didn't. We developed the first storyboards, short scenes and discussed what a play actually represents. While taking these first steps, we were already referring to the series of topics around the environment and consumption and asked ourselves questions about these that affect all of us. Young people in particular often identify themselves through their possessions. These play a central role in their peer group in terms of giving them a sense of belonging and developing their personal identity.

The topic gave us a means of "locking onto" their world. In addition, we wanted to make others aware of the environmental and social contexts of consumption by taking an educational, playful, theatrical approach. The questionnaire that had been answered in advance had given us lots of good starting points. What's more, we all quickly realised that we had similar experience when it came to the topic of consumption, since we are all tempted to consume – often thoughtlessly.



On the second day we went into the topic in more depth and used the media, newspapers and the internet to find out more about the production of textiles and technical devices such as mobile phones and computers. The young people evinced a tremendous thirst for knowledge and were excited to discover new things and get to grips with this multifaceted series of topics. We agreed on a shared title: "Open Your Eyes". News of the performance at school was spread by word of mouth and heavy use of social networks such as facebook.

Rehearsals for the performance

On the last day, the scenes that had been developed in the group were rehearsed again and then compiled to form a play. We reduced the students' inhibitions regarding speaking loudly and clearly by employing vocal and physical exercises, which helped them to feel more secure when presenting in front of others. "Open Your Eyes" featured a montage of scenes that both elucidated the changing communication habits and also critically discussed consumers' buying behaviour with regard to mobile phones and clothes. In terms of stage design, we had chosen to strew clothes all over the floor. The young people were dressed in black from head to toe.

In the first part of the montage, the actors appeared on stage one by one, remaining isolated from each other and fully preoccupied with their mobile phones. Little by little, they imitated the sounds of SMS, Facebook or Whatsapp. They paid no attention to one another and seemed unaware of each other's presence.

Occasionally, they "froze" again, and addressed the audience with simple but progressive questions, for example: "how many drivers cause accidents while talking on their phones?"; or "did you know that technical devices have a predetermined breaking point?"; and "how many tonnes of mobile phones do Europeans throw away every year?" In response to the questions asked by the performers, there followed indifferent and uninterested-sounding comments such as "who cares", or "let's just go and buy a new one!". The scene ended with all performers moving about as if they were crazed, out-of-control machines. They made all sorts of different noises and finally collapsed in a heap.



OUR AUTHOR

Anne Herrmann (b. 1984), Freelance Drama Teacher, is a board member at GRIPS Werke e.V. She works with people of all ages in Berlin, throughout Germany and in other countries in Europe. At the same time, she is completing a correspondence course in Culture and Media Management in Hamburg.



“Super sales” are out

In the second part of the montage, the young people woke up on the stage that was strewn with clothes, tried these on in front of imaginary mirrors, and strutted about in front of each other. Finally, they entered a sort of shop together where clothes were being sold in an ironically-staged “super sale”. Here, clothes were touted as being made by “children’s tender little hands”; as being “guaranteed to be bad for your skin”; and “only 8,000 litres of water went into the manufacture of a single pair of jeans”.

Suddenly, one student stopped. He pointed out that it is not always necessary to buy something new, something that was produced under inhumane conditions that damage both people’s health and the environment. As an alternative to always buying things new, the actors staged a clothes swap party on stage – thereby bringing the performance to a close.

The performance was rewarded with loud applause from fellow students at the school, the teachers, parents and the local Pasardschik television team. The audience – mostly young people – appeared to be very impressed and inspired by the staging and, in particular, by the denouement of the performance. Directly afterwards they decided that they would hold a real clothes swap party at the school in the near future, in order to put the opportunities shown on stage to the test and see how well they could be adapted to their everyday lives. Over the next few weeks, the young people took time out of their schedules to re-rehearse and refine the scenes and to practise performing the piece, since, on 16 May, they would perform it again with great success at the Alliance Forum in Berlin for the 1st World Youth Sustainability Summit, in front of the other participants at the summit and the general public.



GENERAL RULES FOR CREATING A SCENE MONTAGE

a) General thematic and scene-related guidelines:
- agree on a topic (together)
- debate the topic thoroughly (research, discuss, improvise scenes)
- improvise, modify, optimise, re-improvise the content
- determine and test the dramatic sequence
- rehearse dramatic skills (voice projection, getting into character, working with gestures and mimicry)
- announce the presentation or send out invitations
- presentation: performance.

b) General guidelines for the actors:
- punctuality must be maintained
- everyone acts with everyone else
- there is no wrong way on stage, all methods are right and may be tested.



Excerpts from Steliyana Angelova's diary (18 years old, Bulgaria):

The performance of our play, "Open Your Eyes", that our *youthinkgreen* Bulgaria team worked on and staged was an exciting and unforgettable experience for me. Thanks to Anne and Kora we learned lots of acting tricks, repeatedly refined scenes, wrote dialogues and monologues, devised characters, held discussions about the most urgent environmental questions in our region, and drew comparisons with the European standard. We discussed how we wanted to incorporate these serious topics into our play...

Our play can be described as highly innovative and expressive. It concerns the almighty chaos that embraces everything, including people. The chaos has been caused by a wave of technological developments. The revolution of mobile phones, tablets, iPads, iPods, nanotechnology and artificial intelligence began decades ago and has made the actions of millions of people on earth determined by others, and possibly even made people addicted to them. Everyone knows this, but not everyone has declared war on the consequences of this technological revolution. We have done this through our play. We have shown that we do not want to simply exist; we want to live safely and securely, since we are aware of both the pros and cons of the pioneering new achievements. We are interested in what happens in the world, the paradoxes of globalisation and, above all, in shaping our own future. In our play, we also enacted how the new technologies affect our natural, interpersonal relationships. The audience could immediately see by our robotic gestures, facial expressions and our whole method of acting how people, enthused by their technological toys, distance themselves from one another, gradually losing their ability to communicate and starting to live in an illusory world.

At the sustainability summit in Berlin we presented our country – Bulgaria. As a small and, in terms of its economy, not especially developed country with a large number of emigrants, Bulgaria has gained a conflicting reputation among other European countries. Our personal motivation was therefore to demonstrate that Bulgaria has not just a few but thousands of people who are interested in the world, nature, developing technologies and their own future – and who want to get involved in the decisions. We really wanted to be a youthful figurehead for these people in Bulgaria. On the stage in Berlin we also felt, as it were, like representatives of these views and environmental protectors from Eastern Europe.

I cannot put into words the level of excitement and tense anticipation that was felt ahead of the big performance at the Alliance Forum at the Brandenburg Gate on 16 May 2013. The audience included politicians, scientists, journalists, climate experts, nature lovers, the other youthinkgreen groups and our workshop leaders, who believed in us and expected the best. I shall never forget the pride on our teachers' faces, Penka Ivanova and Christina Sekulova. The thought going through my head at that moment was simply that these emotions are what make life worth living.

I take great personal motivation from the combination of our realistic project goals, the internal satisfaction, the pride in my teachers' eyes and the newly attained knowledge that I can use every day. I have learned to stride more courageously towards the future; to believe in myself and in the messages of dedicated people. youthinkgreen has taught me to think optimistically, to reason realistically, to act fiercely and to live rationally! Thank you very much, *youthinkgreen*!





THE FOG CATCHER – USING WATER SUSTAINABLY IN PERU

By Pablo Portal

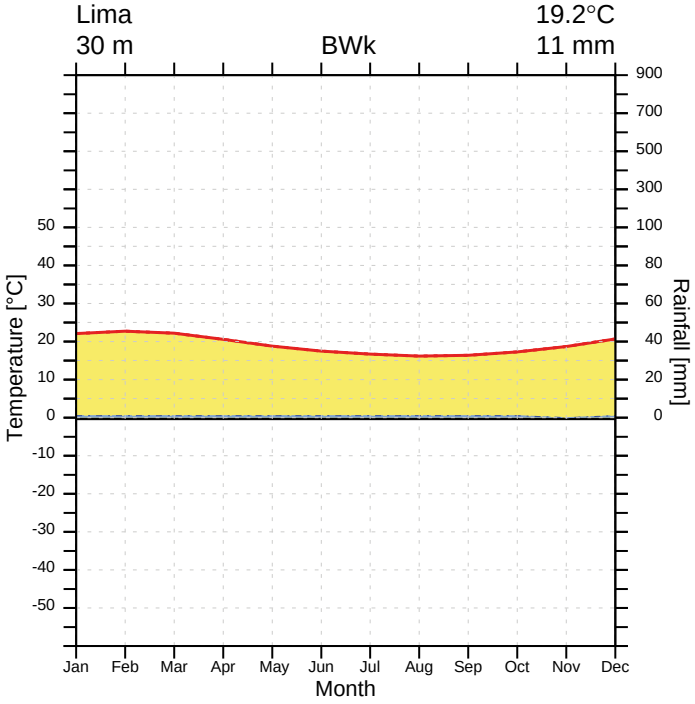
Picture credit: YTG Peru

In 2011, the *youthinkgreen* "Climate Ambassador" project brought together 16 students at the Colegio Mayor High School who had arrived in Lima from all corners of the country – from the coast, the high country and the rainforest region. After three months of intensive training in the core issues around sustainability, they decided to dedicate themselves to and focus on the water supply aspects. The increasing scarcity of water represents one of the most severe problems for the Peruvian people. How, though, can small actions successfully trigger visible changes?

Although 70 per cent of the tropical glaciers are found in Peru, and the country has over five percent of the earth's global surface water resources, these resources vary hugely from region to region. Thus 98 per cent of the surface water reserves fall on the Amazon area, while the coastal strips only receive two percent. The coastal desert, where the majority of the Peruvian population lives, obtains all of its water from the fog in the winter months, from the rivers and the Andean glaciers. The people living in the capital, Lima, are also almost completely dependent on melt

water from the Andes. Owing to the Humboldt Current, which passes in front of the coast of Peru and transports cold water from the south northwards to the South Equatorial Current, this area receives extremely little rainfall – approximately just 10 millimetres a year on average.

It is generally forecast that the change in climate will exacerbate the drought in and around Lima, since the Andean glaciers are melting. Since 1970, studies have shown that 30 to 50 per cent of the glacier volume has already melted away[1]. The variability, too, of the rainfall is due to global warming. The water supply of approximately 10 million people is at risk, according to glaciologists writing in the technical journal The Cryosphere[2]. Moreover, the people in Peru are feeling the consequences of water wastage and water pollution more and more: the key water sources are polluted or dried out and drinking water has become a pricey commodity. In the rainforest, too, water is becoming more scarce due to deforestation. So how can we Peruvians return to living more sustainably and in harmony with nature?



© Bernhard Mühr, www.klimadiagramme.de



Talking with contemporary witnesses

The Colegio Mayor High School students did not simply want to learn data and facts from their textbooks, however, but to speak to the local people affected by this. We therefore visited an indigenous ethnic group, members of the Asháninka people, in "Pampa Michi", Chanchamayo, within the Junín area of the rainforest, and asked them to what extent they were affected by the water shortage and how they had had to adapt their lifestyle. The Asháninka people still live by subsistence farming. They carry out a slash-and-burn policy in the rainforest in order to plant cassava, sweet potatoes, corn, bananas, rice, coffee, cocoa or sugar cane in a sustainable way.

They replant damaged areas of the rainforest and, in a school that they built themselves, they instruct visitors in the methods they use to live sustainably.

1) www.scinexx.de/wissen-aktuell-15499-2013-01-22.html

2) www.the-cryosphere.net/7/81/2013/tc-7-81-2013.html



© Milton Rodriguez

They told us in conversation, however, that they were forced to change their settlement site much more frequently than previously. In addition, they said that the ground was drier, so they found it difficult to use for farming.

We were inspired by the lifestyle of these people and asked ourselves what could be causing the issues they had described. It soon became clear though that we would not find a definitive answer to this complex issue any time soon.



We didn't give up: through our extensive research and in the conversations with the indigenous people of Chanchamayo, as well as with residents in Lima, about environmental issues such as water shortages, the melting of snow-topped mountains in the Andean region and the drying up of underground springs on the coast, we gained a wealth of new insights.



This led to the initial ideas for possible steps to mitigate these problems. Our opening questions for our projects were: which actions could we take to increase environmental awareness in our country? What do we want to achieve in the long-term with our fellow human beings?

At first, we were not sure what our options could look like. This did not, however, hold us back from getting active and venturing our first attempts... because we had internalised the motto of the *youthinkgreen* movement: "Want to make a change? Make a move!"

Water from the air

We decided to make the water supply in our region more sustainable. To do this, we first built a solar burner: an instrument that turns saltwater into clean water using the sun's rays and evaporation. We also built a glass greenhouse and bought a solar collector, which heats the saltwater. For a fully-functioning solar burner we also required PVC pipes and hoses, which would allow the saltwater to circulate. Finally, we built a frame from wood, polystyrene and glass. We were able to watch the evaporation process in the glass greenhouse, thanks to which we then received clean water at the end of it, even if only a small volume.

Desert regions like the Peruvian coast see virtually no rain at all, although the atmospheric humidity can reach almost 100 per cent during some months of the year. The fog hangs thick and heavy over the coastal desert during the six winter months from June to September and condenses mostly on the hilltops and plateaus. This therefore gave us the idea of taking advantage of this and we constructed a so-called "fog catcher", which would extract water from the air. The idea is not a new one: we took inspiration from pilot projects belonging to non-governmental organisations (see links at the end of the text). The fog catchers are a construction of two upright masts made from bamboo, metal or "Guayaquil", a type of Peruvian wood. A fine net or matting is stretched between these poles and the moisture droplets from the







fog condense on it. The water obtained in this way is collected by pipes and channelled through a filter into a tank (see construction manual on page 171).

Fog catchers can play an important role in water supply, especially in the higher-level outskirts of Lima and Peru's other coastal towns. Although the water is not of drinking water quality, it can be used for watering areas where fruit and vegetables are grown, or for washing clothes or dishes. One fog catcher costs around 360 Euros and generates around 100 litres of water daily, which covers about 60 per cent of daily water usage.

We chose to implement the project in Lima's northern outskirts, where, due to levels of extreme poverty, people suffer most from the ongoing water shortage. There is hardly any infrastructure there. In total, a million people have no running water in their homes. Water is brought to them via tanker, but they have to pay for this and, overall, they pay more than people with a water connection to their homes pay.

In addition, they can also purchase water from private sellers, who extract groundwater from private springs. The higher up the hillside the Peruvians live, the higher are the costs they pay.

Fog catchers are a simple and efficient solution here. It was great fun building them together with the people in the outlying districts. We shall never forget the happiness and gratitude in their eyes. We want to dedicate ourselves long-term to alleviating the water crisis among the Peruvians. We have now taken the first successful steps in this direction...

NUESTRO AUTOR

170 Pablo Portal (*1967), estudió pedagogía y ciencias sociales. Brindo asesoría al grupo de *youthinkgreen* de Perú, el cual también participó en el congreso internacional en Wolfsburg (2012) y en Berlin (2013). Es director del colegio Enrique Guzman y Valle en Lima desde el año 2015.





Water supply in the deprived area of Lima
©Andreas Mihm

Sources:

- Universidad Nacional Autónoma de México (UNAM) (2009). «La niebla, posible fuente de agua potable». Gaceta UNAM (6). p. 5
- www.datosdelanzarote.com/Uploads/doc/20060122093109568captadores-de%20brumas.pdf
- http://www7.uc.cl/geografia/cda/pdf/est_patache/losatrapanieblas_desarrollorural.pdf
- http://docs.nrdc.org/international/files/int_11020801a.pdf

INSTRUCTIONS: HOW TO BUILD A FOG CATCHER

Materials required

- 2 long poles around 6 metres in length, made from metal, bamboo or wood
- Thick PVC pipes to collect the water
- Thin PVC pipes to form the connection to the tank
- Water filter
- 4 metre x 6 metre close-meshed net or matting
- Ropes and cords
- Tank for collecting the water
- Saw, hammer, nails and a ladder



© Anne Lummerich

Work steps:

1. Prepare the ground, you must build on a flat, level surface.
2. Embed the tank in the ground.
3. Fix the poles securely into the ground. Dig holes of at least ¼ the length of the pole.
4. Attach the net/matting between the posts so that it looks like an advertising banner.
5. Place the pipes under the material so that the water will drain into them and be channelled into the tank.
6. The water filter must be placed directly in front of the tank.

We adapted this project, there are other such fog catcher initiatives in and around Lima.





A SUCCESSFUL GREEN START WITH SOLAR ENERGY IN EGYPT – INSPIRING ACTIVITIES BY COMMITTED YOUNG STUDENTS

Picture credit: YTG Egypt

It all began with a small recycling project by 17 dedicated young people at the Europa-Schule school in Cairo. As the students graduated and left school, it was unclear whether the *youthinkgreen* group would continue to exist. Then, however, engineering student Abdel Rahman heard about the *youthinkgreen* campaigns from his friend Mahmoud, a former student at Europa-Schule. Abdel contacted the Berlin office and promptly created a new group at Cairo University. Since then, the students have organised a national *youthinkgreen* summer school and won an award for their design, the "Solar Tree". The following report tells the story of how young people's green ideas can be carried far beyond the school years and systematically pursued.

Sometimes it is just the way of things: social commitment to school projects begins and ends. By the time they leave school, if not before, young people head off in their individual directions. They seek out work experience opportunities in other countries and explore the world, or they consider which degree course or job sector might suit them. During this period of being "in limbo", when young people need to decide on a new direction, whether this means going off in search of adventure or a foothold in as yet unknown establishments, many school-based project groups go their own ways again. This is what happened with the youthinkgreen Climate Ambassadors at Europa-Schule in Cairo, who formed their group in 2012. 17 students in Year 10 were given the chance at that time to travel to the *youthinkgreen* climate summit in Wolfsburg and discuss sustainability issues such as energy, mobility and consumption with 200 other young people from a total of 10 countries. They initiated and planned their own projects and gained their first experience in tasks such as fundraising, press work, film and management, as well as in their own field work projects.

Back at home, the Climate Ambassadors from Egypt followed up their recycling project at school. They collected plastic and paper and worked in close collaboration with the El Mudii non-governmental organisation, which supported over 500 deprived families in Cairo with their recycling work. They informed their fellow students and those in their social environment about sustainable waste management and recycling and raised awareness of the need to keep public places clean. Once the *youthinkgreens* had finished school, however, we in the Berlin office heard nothing more from them for a while.

One day, though, we received an e-mail from engineering student Abdel Rahman Fahmy, who had learned about the youthinkgreen initiative from his friend Mahmoud. Abdel Rahman suggested that we set up a new group at Cairo University, which would expand on the activities at Europa-Schule and represent youthinkgreen in Egypt more powerfully.

Abdel Rahman says: *"I have lots of energy and am keen to get involved in activities and projects like those youthinkgreen has to offer. I know that your project work will help me to deploy and develop my social and technical skills."*

His numerous ideas for making this plan and new projects a reality initially rendered all of us in the Berlin office speechless, since it was clear to us that this young man was following ambitious goals. Abdel Rahman soon enlisted a large number of fellow campaigners from his and other degree courses for *youthinkgreen*, as well as professors, in order to apply the knowledge gleaned at uni to new sustainability projects.

Abdel Rahman's thoughts and reflections before the project started:

"The electricity in Cairo is often switched off, due to over-consumption. The government intends to use more coal as a source of energy, in order to solve supply problems. In my view, we seem to be regressing several decades, to when coal was still the main source of energy for many!"

"One day, I arrived at university and sat with our local youthinkgreen team. We tried to find solutions to the daily problems in Cairo. My head was bursting with questions and I had no idea where to start finding answers:

- *How can we take action against local issues?*
- *Can we use our knowledge to solve these problems?*
- *What do we need?*
- *Who can help us?*
- *How do we start?*
- *What do we expect from the project?"*

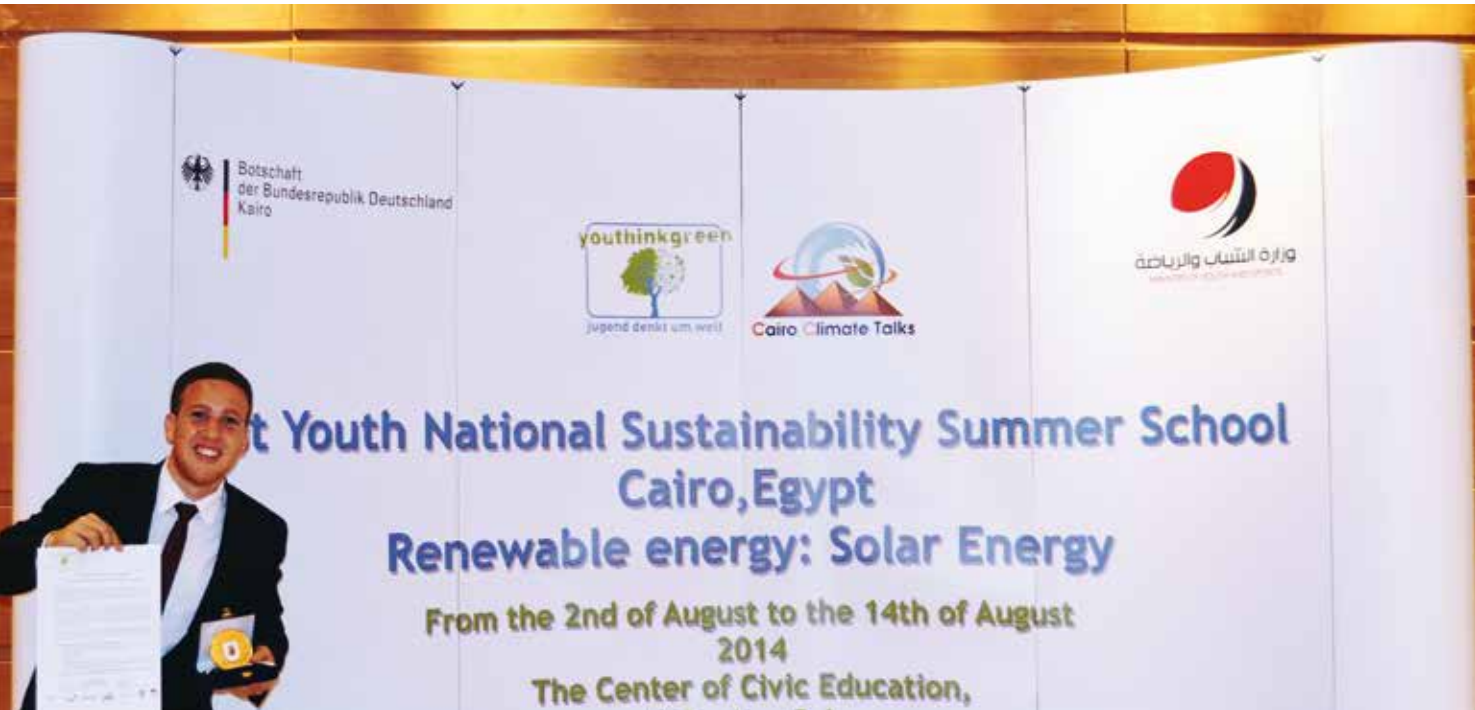
This was the start of a long-term collaboration between *youthinkgreen* and the Engineering Department at Cairo University. The students initially raised their profile in 2013 with small events, promotional stands and a "Tree of Hope" campaign, and discussed options for sustainable and resource-saving lifestyles with passers-by.








Spurred on by the copious positive feedback from fellow students and professors, the group around Abdel Rahman decided to offer an annual, national summer school at the University, which would be geared towards a specific environmental sustainability topic. The first summer school took place from 2 to 14 August 2014 at the Center of Civic Education in Gezira, Cairo; its key theme was renewable energy. The 30 or so student participants worked in teams and had the chance to develop innovative project ideas for renewable energy, as well as practising and



putting their presentation and management skills and entrepreneurial thinking to the test. Abdel Rahman and the students received active support in order to run the summer school from the German Embassy in Cairo, the Deutsche Gesellschaft für Internationale Zusammenarbeit [the German Society for International Collaboration] (GIZ), the Egyptian Ministry for Youth and Sport, and the Cairo Climate Talks and Price Waterhouse Coopers institutions.

Since energy supply in Egypt faces enormous challenges and radical change (as Abdel describes above), the students knew that they were pioneering the use of renewable energy and they developed various prototypes such as the "Solar Tree", which will hopefully be able to be used locally in future.

The solar tree is constructed from metal and looks like a real tree with branches – just with solar cells on top. Our solar tree is equipped with eight solar panels – four of which have 250 Watts and the other four have 60 Watts. These solar panels harness the sun's energy and turn it into electricity. 4,300 Watts are available in total, if the sun is shining, and 624 Watts for the two batteries for night-time illumination. The tree can supply enough electricity to power a wireless device, four portable laptops, 10 mobile telephones and one advertising screen.

This product even won the youthinkgreen group the second prize in the "Maker Hackathon Cairo's Competition" – the first hardware contest in Egypt. They also developed a business plan to bring the "Solar Tree" to market. We are waiting eagerly to celebrate this milestone together; maybe it will be this year!

Abdel Rahman says: *"Ultimately, our motive is to use the potent force of young people to encourage green thinking and sustainable development. We – the young people – are the ones who will change the future and we have the ability to make the environment a more welcoming and healthier place. We just need the support to allow us to get started and enable us to build a green future."*













Biogas equipment also represents a possible solution for the group around Abdel Rahman with regard to the lack of energy supply, especially in rural regions. The students are keen to design a prototype for this, too, so that the equipment can supply enough energy not just for a single family but for an entire large building. Their goal is to get the equipment batch manufactured later. In order to better combine and coordinate a number of their activities, Abdel Rahman has requested support from the cooperation partners to set up their own office, and has received initial commitments.

The story from Cairo, which began with the students taking part in the climate summit in Wolfsburg, and which is continuing with the planned establishment of a youthinkgreen office in Cairo, as well as a Second Youth National Sustainability Summer School 2015, shows that, sometimes, all that is needed to further expand upon visions and projects is for like-minded young people to meet, share their ideas and experiences with one another, form a team and find partners, acquire the necessary expertise, have fun together and then move forward together to turn dreams into actions.

Abdel Rahman wrote to us recently: *"We've got great news for you: the TU technical university in Berlin has a campus in El-Guna and is going to sponsor us by letting us use their premises on the Red Sea to hold the Second Youth National Sustainability Summer Camp. We are over the moon and grateful for the support and encouragement of so many people for our commitment..."*

You can find out the latest news of the group's activities here: http://youthinkgreen-egypt.org/









THE "GREEN CORNER" OF *YOUTHINKGREEN* – A CHALLENGE FOR YOUR GROUP

By Felix Beyers

In 2014, *youthinkgreen* was invited to participate in the YOU exhibition in Berlin with its own stand. We were immediately highly motivated and we put our thinking caps on: How do we want to present ourselves? What should we offer? What would be interesting and exciting for the visitors to this exhibition?

This led to a huge brainstorming poster with any number of ideas. However, reality soon dawned: How would we finance our stand? What money could we use to pay for the necessary materials, etc.? After all, the project we were working on at the time did not provide us with any additional financial elbowroom. But we did not want to simply give up. We agreed on the topic of "alternative forms of consumption and utilisation", and we agreed to design our stand with simple means. Our attics and basements at home (including those of our friends and neighbours) proved to be a helpful treasure trove.

The stand – the "green corner" – of *youthinkgreen* – jugend denkt um.welt e. V. at the youth exhibition in June 2014 not only offered visitors the opportunity to take part in puzzles, arts and crafts activities, and much more: the opportunity to acquire in-depth knowledge and find out about special topics by participating in an interesting way.

Here are some examples and ideas about this:



1. Survey:
Lots of empty glasses labelled with different forms of consumption (jointly producing, repairing, sharing, exchanging) can be filled with little notes and visitors' opinions. This produces a survey result, for example about what schoolchildren most like to share, produce, repair or exchange.

2. Posters:
Develop product passports on posters – e.g., for jeans, chocolate, mobile phones. Ask yourselves: How are these products manufactured, how many resources are consumed and how can the product be produced in a more environmentally friendly and socially responsible way?

3. Quiz:
Stick ten questions about sustainable forms of consumption and utilisation onto a piece of cardboard. The answers can be written on the back.

4. Giving box:
Integrate a giving box into your "green corner" Unused items can be exchanged here. If everyone takes part, there will be a busy exchange.

5. Ecological hand print:
Build a box with an opening on the top. Hang green threads out of this opening with instructions and options for action written on paper attached to them. This means each participant can pull their own thread and will receive a tip for living in a more environmentally friendly way.



6. Upcycling workshop:
Organise a workshop for creating something new from something old. Think of something exciting so that as many people as possible will take part in the workshop. For example, stitch old, worn out bicycle inner tubes into a handbag or build a hammock. www.weupcycle.com, www.weupcycle.com/en



© Paul Wiese

The opportunities we offered to try things out and take action were very popular amongst the young people. The instructions below can help you to create an interactive environmental stand in your classroom or at your youth club.

With creativity and a little initiative, you can design and build the "green corner" very easily yourself.

Instructions:

1. Defining workgroups:

Form workgroups so the following tasks can be carried out with enthusiasm and at a good pace and the stand can be set up and looked after in your classroom. In addition, rotate through the groups every month **so that each pupil takes on different tasks.** One way to divide up into groups is as follows:

a) The **building team** – makes sure that the teachers are involved, the stand is created and maintained in the long term with additions and new features.

b) The **knowledge team** – conducts surveys and considers specific areas of knowledge every month that are of great interest to you; these topics may also extend beyond the curriculum for your year. Your stand can also provide information about various current issues in a diverse range of methods.

c) The **action team** – works out interesting actions that provide motivation for participation relating to the particular topics, and incorporates these into the concept of your stand.

2nd Task areas for the workgroups:

a) Building:

- **Create a suitable site** in a corner of your classroom. In most cases, a space of about two by two metres in size will be sufficient.



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- **Design with passion** and build the stand out of tables and partitions that you have made yourselves. There will presumably be an adequate supply of old materials in the attics or basements of your homes. It will be good to give them a "second life". An attractive "green corner" that has been set up with careful attention to detail encourages participation.

- **Have a clear maintenance plan**, so the stand will be looked after and kept in good condition, even in the long term.



© Paul Wiese

b) Knowledge:

- **Choose main topic areas** that are also interdisciplinary. With a careful selection of different topics, the "green corner" can offer variety and will become an "eye-catcher" in your classroom. It can easily be made to look different every month.
- **Select topic corners.** Different topics and current events can be presented in the "green corner".
- **Collect current reports** from newspapers and magazines dealing with the topic of sustainability and integrate them into your “green corner”. These topics can enrich lessons at any time and can be discussed in detail.

c) Activity:

- **Develop actions** that make your stand exciting and attractive and match your defined main topic well, for example, a giving box.
- **Make** posters, flyers or objects out of recycled materials. These provide a wealth of information at a glance, and should also give rise to questions that encourage critical thinking about your own ways of life.
- **Gather** initial small project ideas and visions for sustainable consumption and lifestyles.

OUR AUTHOR

Felix Beyers (b. 1988) worked as an intern and project member at the *youthinkgreen* office in Berlin. He is currently studying for his Master’s degree in environmental and sustainability sciences (LUMES) in Sweden, and is providing committed support to young people as a volunteer.















PROJECT WORKSHOP: TURNING IDEAS INTO ACTION

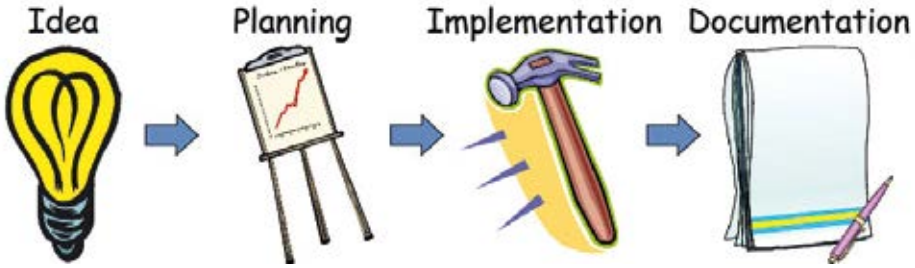
By Nadine Böttcher



Picture credit: YTG Italien

Noah, Frieda, Ben and Zoe are in their ninth year at school. After the autumn holidays, it is time for the annual Project Days. They should provide suggestions and collect initial ideas. Just like Zoe, Frieda, Ben and Noah, we are often faced with the challenge of planning, implementing and documenting projects – whether at school, university or in our subsequent professional lives – and we may perhaps even have to evaluate their success as well. But how?

Generally speaking, a project involves the following phases:



But now there is the question of how these phases can be put into practice in detail, and brought to life.

If you already have a group or a small team, work through this project workshop step by step and answer the key questions that gradually complete the puzzle of project management. Roberta Corradi (*1995) and Silvia Giovannini (*1995) from the *youthinkgreen* group in Trento (Italy) have also put many projects into practice using these instructions, and have garnered important experience in the process. Working on the project has developed their personalities. Their reflections will help you to better understand the steps and try them out yourself.

1st project phase: The journey starts with an idea

For example, imagine that you would like to plan the next summer party for your sports club. Or perhaps there a different topic that you are keen to explore? Would you like to have a repair café, a skate park or a community garden for your town, and would you like to submit your ideas to the local council?

REFLECTION *YOUTHINKGREEN* ITALY – DISCOVERING YOURSELF ANEW

“I was certain I didn't have anything to contribute. Everyone else was much more committed than I was, I was not particularly active at school and my performance was not very good. But through our project about sustainable cosmetics, I discovered my talents and became more self-assured.
I waved goodbye to my inferiority complex.

When we had to present one of our projects at the press conference, I was so nervous that I didn't want to take part. Then, as a group, we began to prepare ourselves for it and we practised how to speak in public. Small cards with notes (providing the most important names or dates) helped me to do this so I would not forget the most important points. Of course, I also drew smiley faces on them: They gave me the courage to keep talking.
I waved goodbye to my Stage fright.”

"In the past, I found it easy to convey my ideas. Sometimes I did not even let other people get a word in edgewise. I expected everyone to accept what I suggested. Through this project, I have learned that we are stronger together and how important it is to exchange opinions to find the best solution to a problem.
I waved goodbye to my stubbornness.”

REFLECTION *YOUTHINKGREEN* ITALY: FINDING THE BEST PROJECT IDEA

"The most difficult thing for our team was to agree on just a few of our thousands of ideas. We wanted to do a lot. One girl said one thing, another said the opposite! Then someone else would chip in and wanted to turn everything in the whole project on its head. At the same time, we learned to approach the matter in a structured way: First, we worked on brainstorming so we could group together similar ideas and narrow down the large number of our ideas. It was important to conduct a discussion as well so that everyone had the chance to speak and show one another mutual respect.
Once we had started our first project, we were naturally faced with additional challenges: How to organise a competition?
What rules should be respected? Who could be on the jury? At the start, our questions and doubts were answered by our teachers and the ytg team in Berlin.
In addition, we were encouraged to go our own way. We are particularly proud that we have become more independent and bolder. We have learned that we should not immediately abandon our plans (or dreams) if it seems difficult at first to arrange an appointment with some prominent personality. Our motto in all of these actions was 'the courage to act'."



Or maybe you need to carry out a project as part of your school work, or you simply want to try something new that you enjoy because you are interested in the environment and social issues.

If you still don't have an idea, the text about the future and the ideas workshop in Section 5.3 will help you to develop this idea on your own or together with your group.

2nd project phase: Team building

You should not underestimate the importance of your team. In most cases projects live or die with their teams. Consider the following points.

1st step: Building the "right" team

- Who do I enjoy working with and who do I work well with?
- What different capabilities do we need on the team?

2nd step: Defining cooperation

- When, where and how frequently do we want to meet?
- What's the best way for us to communicate? By email, Facebook or via an online work platform?
- Who has time available for the project and how much time?
- What expectations do we all have for the project?
- Who will take on which task or responsibility?
- How do we intend to provide one another with feedback?

Once you have answered these questions together, draw up a creative **team kaleidoscope (organisational diagram)** showing the team members and their skills, their role in the team and possible areas of responsibility. This preliminary work is very important and is essential for getting projects going successfully. It is only when people who intend to get things done together and mutually appreciate their various skills and perspectives meet up that ambitious targets can be pursued in the long term (see Info 1: "A good team").



REFLECTION *YOUTHINKGREEN* TRENTO: "NO ONE IS BORN A MASTER"

Our experience showed that it would have been better for all participants to have been active right from the beginning. With us, as is often the case with group work, some people did a lot and others did little or nothing at all. We did not have any interdisciplinary expertise; we did not know about methods of good group leadership. Those of us who took on the leadership roles might have benefited from outside advice in order to better understand and adapt to the different characters of the group members. In addition, we should have allocated our time better: On some days, we had little to do, but then we had to work around the clock shortly before the most important moments.

INFO 1: A GOOD TEAM IS ESSENTIAL FOR ANY PROJECT.

You have found your dream team if you can tick these boxes:

- Everyone is clear that you are all in the same boat;
- Everyone is pulling in the same direction;
- Each of you can rely on the others;
- There is conviction and confidence that everyone is gaining something from the project;
- Everyone is working with the awareness that they are able to achieve something, both personally and as a group;
- An open attitude prevails and everyone is ready to learn something from the others;
- Everyone respects one another and indicates they are ready to help in case of problems;
- The composition of different personalities with different ideas and approaches is not regarded as a problem, but a strength and an enriching factor;
- Work is carried out effectively, and the team achieves high-quality results.



3rd project phase: Goals and strategic planning

What, when and how do I want to do something, and what do we want to achieve? That is the central question for project planning. The project goals should take account of the SMART criteria so they are specific, measurable, attractive, realistic and have a timetable.

It is important and good practice to have goals. However, it is much more crucial to build a bridge from the current situation – the "here and now" – to the goals in the future.

- How do we propose to achieve our goals?
- What do we propose to use to achieve our goals?
- When do we want to have achieved our goal?

Even if a project is like a journey on which you can allow yourself to be driven by "gut feelings" from time to time and can change the route according to your needs, the overarching goal should always be the set destination. To achieve this successfully, it is important to establish and stick to a budget and a timetable.

Answering the list of questions below will also help you to identify possible obstacles and develop a **plan B** with which you can achieve your goal by another route and avoid stumbling blocks. Having a plan B can also help you to monitor yourself along this process, to have alternatives to hand and to complete the project satisfactorily. Even if you do not have a specific plan B, you should remain flexible, adaptable and patient particularly in terms of carrying out your projects.

Once you have defined your goals, consider what tasks should be done in order to complete the project. A large number of tasks will occur to you – large and small, important and less important. Mark the important tasks by highlighting them, for example, and call them **milestones**.

- What tasks need to be done?
- When do these tasks need to be done?
- Which tasks are milestones?
- Which team member will carry out which tasks?
- How can we ensure that the tasks are completed?

Many of the questions about the tasks already indicate that it is a matter of putting them in a time sequence. Draw up a **timetable** for this. How creative or simple you make this is left to your discretion. Consider how and with what you prefer to work. For example, make a Gantt chart or a roadmap that represents the time sequence.

Another important aspect is the question of the support you need – whether this be financial support or support in terms of human resources.

- How much financial support does our project need (budget)?
- Where could we ask about getting the money?
- Do we need partners/supporters? If yes, who should we consider? Who is pursuing similar interests to the one you are in your project?

Possible points of contact for support in your project might be your school or university, foundations, public authorities, ministries and associations. Remember that if there is financial support involved, an adult will usually need to take over responsibility for bookkeeping.

With the team kaleidoscope, the tasks timetable and your budget, you are now well-prepared for successful project work. This is the first occasion for "celebrating" as a team.



A »Tree of Hope« from plastic bottles

INFO 2: POSSIBLE INTENTIONS FOR WORK IN PROJECTS:

The responsibility and authority of team members derives from the tasks that are assigned to them.

- Each person shares all important information within the team.
- If it is likely that important targets might not be met, discuss this immediately within the group.
- If mistakes are made, we attempt to learn from them and avoid criticism.
- We speak openly about problems and work together on solutions.
- For each decision, we ask ourselves, "What could the consequences of this be?"
- We regularly reflect on our work and subject our results to critical discussion as well.
- If possible, we inform the general public about the progress made on our project.

4th project phase: Now it is deeds that count – implementation (in the practical world)

It is important to keep an eye on progress in the project (controlling). If anything should get out of hand, you will recognise this immediately by the delays in your timetable or overruns in your budget. After all, if a task has not been completed by the set milestone, it may well be that the next one cannot be started on schedule, which will result in the entire project being delayed. It is not rare for this to occur, and ideally it should already have been allowed for in the planning.

Implementation also includes regular team meetings to discuss your progress and any deviations from the project plan, to clear obstacles out of the way and to strengthen team spirit. In almost all projects, there are also dry periods in which motivation can flag for a number of different reasons, such as if a problem appears insurmountable, if you become uncertain about your project goals, if there are internal conflicts or if team members are unavailable due to time



pressures. Do not be afraid to seek outside advice or ask other young people with a lot of project experience so you can re-motivate yourselves as a team and continue developing.



REFLECTION *YOUTHINKGREEN* TRENTO: WHAT WE WILL TAKE WITH US INTO THE FUTURE

In our team, we succeeded in distributing the roles well according to interests, motivations and abilities. In doing so, we observed that it is important to tackle projects that we all support together. In that case, you also have less anxiety about trying something new in order to achieve your goals. Here is an example of this: We needed to find sponsors for our project. Those of us who were working on this had a lot of concerns at the beginning. Some attempts failed, but we did not lose the courage to keep trying and knock on many doors until we obtained the required support. Even when we were permitted to enter the "Commitment and Actions" category of the 4th Environment Prize awards in December 2012 but did not win, we did not bury our heads in the sand. This is because it was very interesting for us to be there and to find out about so many other environmentally friendly and sustainable ideas in Tyrol, South Tyrol and Trentino.

For many others, the project was also a good opportunity to discover and/or develop skills and attributes, such as readiness to help, creativity, group leadership and communication skills. As far as creativity is concerned, we want to provide a specific example: One student wrote, "I was given the task of preparing posters and flyers as publicity for our initiative. I enjoyed it so much and many people thought that the results were so good that I considered getting involved in that further in the future. Who knows whether it will become my job later? Another positive aspect was that we were supposed to write our monthly reports for documentation in German as well as English. We found the bilingual character and the multi-lingual aspect of the international conferences in Wolfsburg and Berlin particularly appealing, and this experience contributed to us continuing to work with foreign languages."

5th project phase: Documentation and evaluation

The project has been carried out successfully and you have received a lot of encouragement. For many, this is the moment when the project is completed. After all, it would be nice to have some leisure time wouldn't it? You may even want to start on your next project straight away? But why is documenting and evaluating the project important? It shows whether the targets that have been set were really met, and it is an important learning document. When you start your next project, you

will not be starting again from scratch; you will already know what the possible stumbling blocks are and why not everything might have gone so well in the project. In addition, if you publish



your documentation, many will be able to learn from you or even adapt your project to their local area. Don't forget to also consider the extent to which the project has enriched you personally. You will be able to draw the greatest motivation from this for further engagement and your professional development.

A selection of the projects undertaken by the *youthink-green* group in Trento:

Eating a healthy diet will result in more energy throughout the day.

We complained to our head teacher that the products available in the school canteen were neither healthy nor environmentally friendly, and they were not produced under socially sustainable conditions either. We wanted the situation to change. At some point, our combined efforts led to success. Since 2012, the school community has only been offered organic and local products to purchase.

Self-made cosmetics with greater sustainable characteristics

When we found out that cosmetics contain many dangerous substances such as "dimeticones", "paraffinum liquidum" and "EDTA", that made us very angry. These substances are not just unhealthy for people. They also harm the environment because they are produced from crude oil! As a result, we started to search for sustainable products in the shops. But these were comparatively expensive. Behind the large, colourful packaging, there was only a small amount of material, and the products did not deliver on their green advertising promises. Quite the contrary: The same amount of waste was produced; sometimes even more. The cosmetics industry has a turnover that numbers in the billions.

Following lengthy consideration, we chose a rather unusual path. We wanted to produce our cosmetics such as lip balm, shower gel and soap, in our homes in a natural way. As a result, we conducted detailed research into our options. Soap is manufactured using fat, various oils and lye from the pharmacy. Lipstick can be manufactured from food colourings and Vaseline, which is regarded as a safe and non-toxic skin care product. Our findings: It is cheap, practical, environmentally friendly and very enjoyable. In addition, it enables us to reuse boxes, bottles and tins, thereby reducing waste.

Rubbish can be aesthetically pleasing

A colourful canvas featuring nothing but juice cartons inspired us to organise our art competition, "TrashArt". The aim of our project was to inform our fellow pupils about environmental problems by encouraging them to get creative. We launched a competition featuring two categories: We searched for works of art with a particularly strong environmental message, and ones made of recycled materials. The works were evaluated according to the criteria of originality, creativity and effectiveness.



Starting early

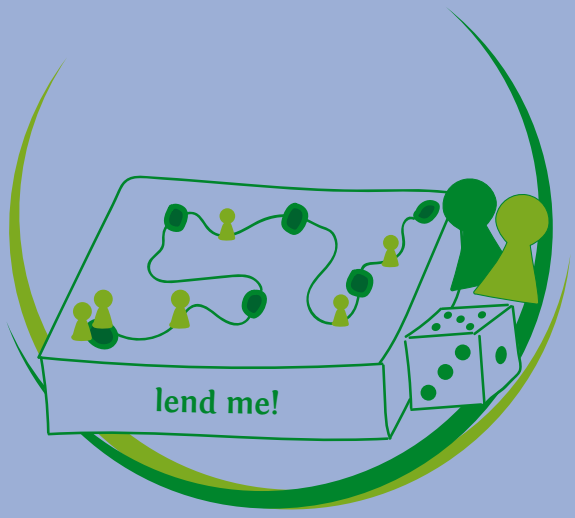
A long-standing pillar of our project work is sustainability and environmental education. In October 2014, the local council in Roncegno Terme gave us the opportunity to present our project ideas to the Trento provincial government so as to obtain financial support – and it proved successful! We prepared many activities for children aged four to 13 (in educational institutions and central locations). We separated rubbish with them in a playful way, made music and danced, ate organic food, wrote on green sheets, creating a "Tree of Hope". And of course we distributed the "green thread" as a reminder of this beautiful day. In this way, we were able to increase the children's awareness of important sustainability issues, and not only by chalk and talk in the classroom, but outside in the fresh air, amidst nature.

The teacher at a primary school in Trento had also read about our projects in the local newspaper and was very interested in them. She contacted us and asked our group to organise small activities and games on the topic of "separating rubbish" for her pupils in year three. To do so, we collaborated with the Museum for Modern Art (MART) in Rovereto; together we created an interactive teaching unit, which we also successfully put into practice.



WELCOME TO THE ISLAND OF MEYBIE

EXPERIENCE AND TRY OUT ALTERNATIVE FORMS OF CONSUMPTION!



© Carlo Schwarzmann

Poetic interactive theatre for young people

Text by Ariane Missuweit and Nadine Böttcher

Illustrations by Julia Both and the team from 123comics (www.123comics.net)

 Part of the "Changing consumption" project

Slightly unusual rules of play

They still exist: wonderful, authentic, unique and mystical worlds. Those in which completely different values from those in our Western consumer society seem to apply. Inhabited by people who practise mutual give-and-take. Personal standing is not determined by money or possessions. Instead, it is important for this community of people to live in freedom, for and with one another. The well-being of nature, personal development, time prosperity and good social relationships are deeply important for the inhabitants of these places. The people there like to share things and give presents, to delight their fellow human beings with their skills and talents, and to develop their own strengths to the service of the community.

Many of these worlds are real, others (still) only exist in our imaginations or as a utopia. Sometimes these places are restricted to our most immediate circle of friends and family; others exist beyond cultural and national boundaries. However, the purpose of our interactive game and the thought journey to the island of "Meybie" is to dream up such places, to experience, create and participate in shaping them.

Eyes open: surprises can be expected

In this game, there are no firm rules and no winners or losers. Of course, travelling with a nice group can often be the most fun. You only win if you collect as many impressions as possible, and experience something new about yourself and your needs. Which modes of behaviour and what experiences make you happy in the long term? Which (material and immaterial) things really mean something to you? What do our consump-

tion models have to do with environmental and climate protection? And what approaches lead to a good life and a sustainable society?

There are no right or wrong answers to these questions, but there are a great variety. No limits are imposed on your wealth of ideas in this game or on this journey. However, you are of course allowed to introduce rules within your own group if you wish.

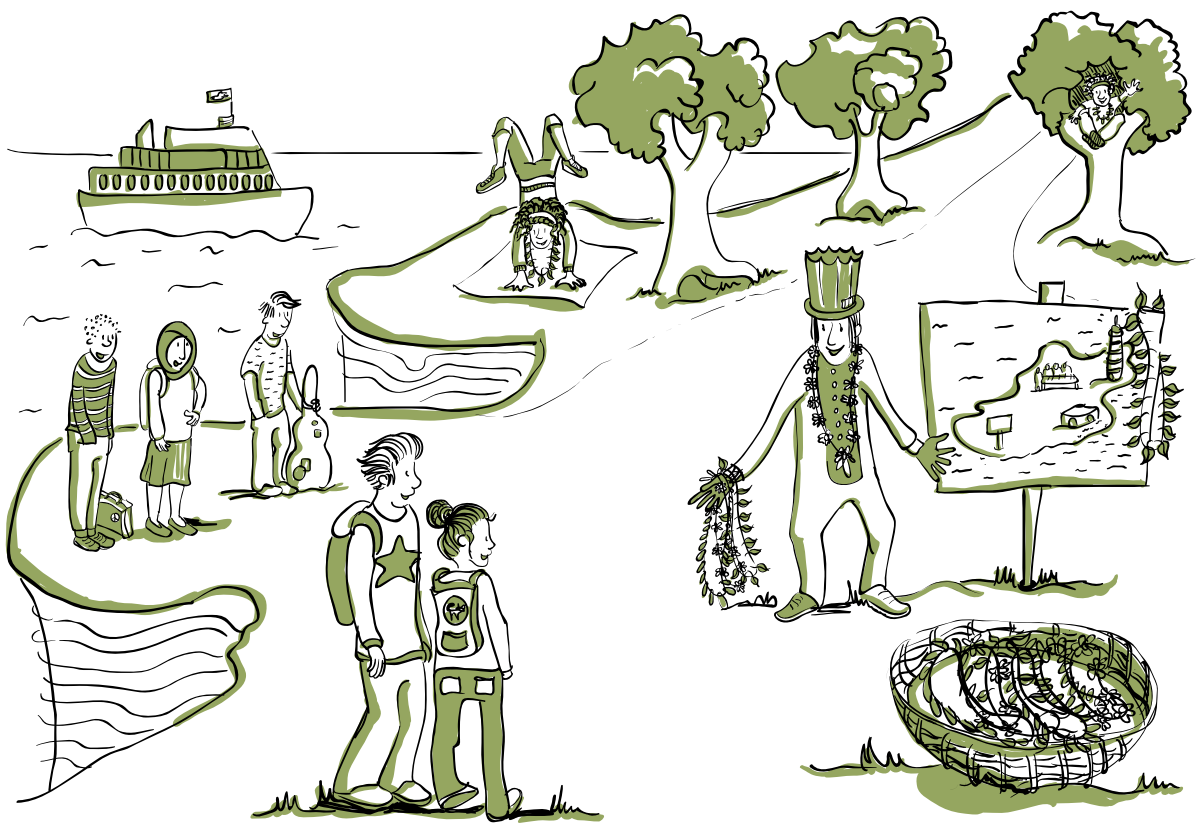
Let's get going!

An imagined journey to the mystic place of "Meybie"

Station 1: Crossing and arrival at the Island of "Meybie" (starting point for everyone)

Are you up for adventure and like finding out about unusual places? Then we invite you on an excursion to an island called "Meybie". This is our secret travel tip; only a few tourists have the opportunity to visit the island. There is no tour guide or website about this mystical place, so we can only give you a few items of information.

First of all, you must take a ferry to get to the island. Once you have arrived, you will be welcomed by the island's inhabitants. The "Meybies", as they call themselves, should be addressed in a somewhat unusual way. After all, they are unfamiliar with our world of consumption. It is rumoured that many of them wear lampshades as hats. But we assure you that the "Meybies"a-re, without exception, friendly, hospitable and open-minded towards tourists. At the entrance to the island, you will also find a board listing the special places and attractions on the Island of Meybie:



Entrance sign: Welcome to the Island of Meybie. Here you will find:

a shopping street without shops (but with tea-rooms);
a bakery that produces fortune cookies;
a creative workshop;
a restaurant where everyone has to take part in cooking;
a mobile library;
a school attended only by children who want to learn (but there are no teachers and no regular teaching);
and a yurt – a kind of tent – in which stories are told every evening and people make music together.

"We, the Meybie inhabitants of this island, wish you a warm welcome. Please respect our wishes, as follows: Tourists are allowed to touch, use and eat everything they find for one day and to join us at any time. Entry to all our oases of entertainment, teaching and relaxation is free. Your offers to trade and co-design are expressly permitted. No rubbish, environmentally harmful packaging or leather may be brought in."

Game task 1 – A: In a few sentences, write down the hopes and fears you associate with the upcoming journey. What do you think your consumer world and the consumer world of the "Meybies" have in common and what do you think is different? Start an initial conversation with the Meybies who have welcomed you.

Game task 1 – B: Do you have any items or garments made of leather or plastic with you, which you will have to take off before you explore the island? Then lock them up in the shed that is located next to the entrance sign to the island. Once you are finished, move off and search for one of the following stations.

Game task 1 – C: Empty pockets? There is no money on the Island of "Meybie". The inhabitants of the island do not accept your notes and coins either. As a result, consider carefully which objects, skills or activities you can offer them in exchange. Each person makes their own list of goods to trade. Mark what you think is most valuable, and what you can offer time and again because you have a great deal of it and it can never run out. If you like, write down your "goods for trade" and talents together with your name on the blackboard that the inhabitants of the island study every day.

Station 2: The bakery

Fancy something sweet? Then you've come to the right place: Benny's Bakery! The "Meybie" inhabitant welcomes you and invites you in to help him. He wants to provide baked goods similar to Chinese fortune cookies for the entire island community for its next celebration. He invites you in to assist him and join him in baking cookies containing wonderful messages or pearls of wisdom.

Game task 2 – A: Write down some of your messages, wishes or requests for a different kind of consumption and a happy life on the small paper strips, and put them inside Benny's fortune cookies.

Game task 2 – B: Done! In gratitude for your kind cooperation, you are allowed to sample a fortune cookie together with your friends. Inside it, you will find the "fortune messages" from the other helpers. Discuss your wishes and requests.



Station 3:
The creative workshop

Another "Meybie" inhabitant, Maya, has inherited a large collection of used goods and clothing from her family. These have been in her junk room for a long time now. Unfortunately, the old things are not in line with her taste, and they also appear somewhat worn. However, Maya thinks it would be a shame to throw them away. After all, they contain a large proportion of the work and the attitudes to life of her parents and grandparents. As a result, she decides without further ado to make different and wonderful things out of them, which she can then use herself or give away as presents – cushion covers, chair covers, clothes, hats, fabric handbags, side tables and much more.

Game task 3 – A: Inspect the pile of remnants and used items and select some of them. What things could you manufacture from them, thereby retaining or even increasing their utility value? Work in teams to do this, and make preliminary sketches.

Game task 3 – B: Make a plan for how you can manufacture your chosen object by yourself: Which tools will you need and how much time will it take? Who do you want to give it to or provide it for?





Station 4:
The mobile library

Finally, you come across the library you have heard so much about. Here, there is an unbelievable number of exciting books to borrow, such as The book of slow infinity and The book of beautiful authenticity. Both books are only half finished. Hanna, the amusing librarian, rides her pretty work bike around the island every day, bringing books to the “Meybies”. She explains that the “Meybies” write many of the stories themselves, working as teams. Once someone has finished writing one section of the story, they give Hanna the book at the next opportunity and she passes it on. This creates a varied mix of stories.

Game task 4 – A: Consider what stories might be contained in these books. What topics and characters do you think will play a significant role in the stories? Discuss this in your travelling group. Search for one of the two named books and read the stories that have been written in it so far.

Game task 4 – B: Take part in the project and write a short story yourselves for one of the two titles. Leave the ending unfinished so that others who receive the book after you will be able to write a continuation of the story. Seek out one of your fellow travellers to whom you want to give the book in person.

Station 5:
Restaurant visit

The island's restaurant, “Outlook”, is located close by. It is situated high up in an old lighthouse, which accounts for its name. It is always full. And the furnishings are very rustic: small wooden tables, old fishing nets and shelves all lie around, and there is a telescope in one corner and pictures painted by the island's artists are on display. The “Meybies” come here to cook together, talk or simply enjoy the view of the sea and the entire island. They bring food from their vegetable gardens and the small fish shops. The mentality here is not just "self-service"; it is “cook-it-yourself”.


RESTAURANT

Game task 5 – A: Meet up with the restaurant's chefs and consider together what you would like to eat. What menu can you come up with that you can cook for a few new acquaintances? There is no Internet access anywhere here, so you can only suggest dishes that you know how to cook without a recipe have learned by heart. Write them in the restaurant's cookbook so that later visitors can benefit from them.

Game task 5 – B: Do you also know which of the ingredients you need for the dish you want to cook are grown locally and are seasonally appropriate? And which of the ingredients you need are not available because they come from far-off countries and regions? What possibilities are there here for fair and ecological procurement?

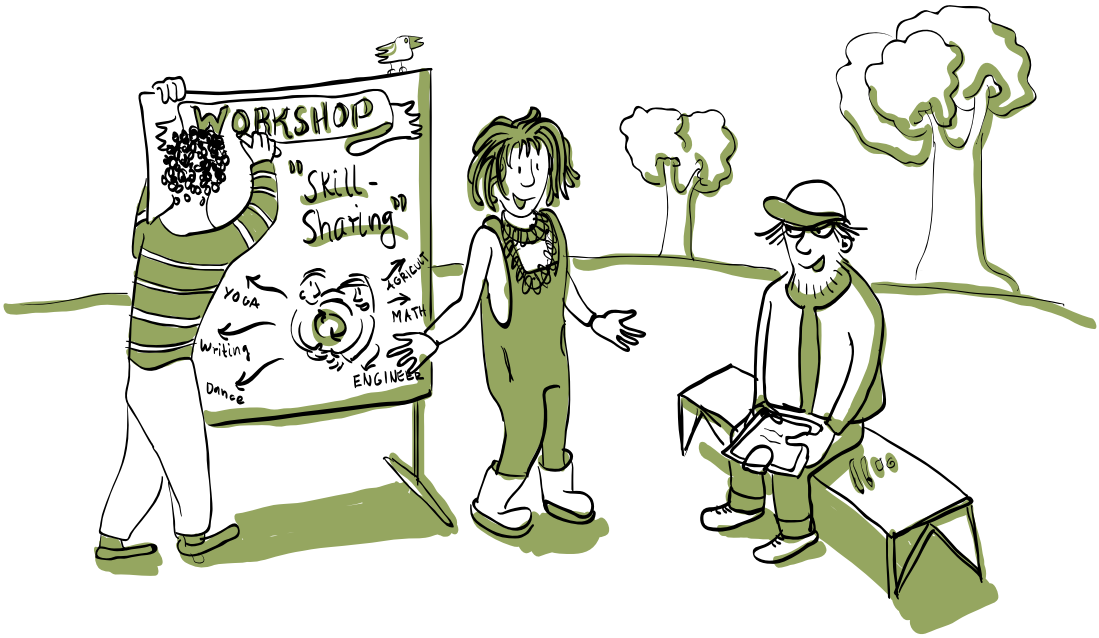
Station 6: What your heart desires

You reach the famous shopping street of the "Meybies", called "Alluwant". They say you can get anything here. However, you do not see any shops at all. You do not hear loud music and you do not see any advertising banners. Instead, there is a beautiful little pond, a park with many park benches, colourful lamps and small huts in which hot tea and biscuits are being served. Some "Meybies" and tourists – it is easy to tell them apart – are sitting on the benches and writing things down on notepaper. You join them.

Game task 6 – A: Here, you can write down in detail everything you need or desire. The "Meybies" then pass on these wishes to their cobblers, tailors or other workshops for everyday requirements. In this quiet place, there are no brochures that you can look at, no shop windows or annoying salespeople. Write down or draw your wishes (including colours, shapes, sizes, decorations, etc.), but be careful: The "Meybies" do not know brand names or branded goods, so they will not be able to reproduce them either.

Game task 6 – B: Go (back) to station 3, the creative workshop. Maybe you can make the item that you want yourself using the remnants from Maya's junk room?





Station 7: The school of life – searching and offering

Just like in our consumer world, there are stumbling blocks on the island from time to time. Above all, this is because some skills and a certain amount of knowledge are lost in spite of the greatest efforts to pass them on. As a result, the "Meybies" have set up a school in an old, colourful and empty villa called "Eden", where the inhabitants and tourists can practically continue their education throughout their lives, and are able to teach one another.

Game task 7 – A: What skills do you have that you would like to put to use for the benefit of the community? What activities do you particularly enjoy? What course could you offer here? Write down what you can offer and how to contact you on the blackboard at the entrance to the villa.

Game task 7 – B: What things and abilities would you like to acquire here, or which talents would you like to build on? Search amongst the guests at Villa Eden for someone who can teach you these things, or find kindred spirits for experiencing and practising your talents together. Also take a look at the blackboard for this.

Station 8: A cosy evening in the yurt

Although progress is important to all inhabitants of the Island of "Meybie", so is maintaining traditions. Particularly on cold days, the inhabitants gather in their yurts, and tell funny stories to make one another laugh happily.

Game task 8 – A: What stories of your grandparents' can you remember? Tell them to your travelling companion or to the entire group in the yurt. What board games or card games do you know if you do not wish to tell a story?

Game task 8 – B: Or can you sing, beatbox or a musical instrument? Then start up a small chamber concert together in the yurt and record it on video for everyone who could not be there on this unique evening.



Station 9: Saying farewell, reflection and returning home

Done! It is the end of a long and very adventurous journey. What you need to do now: Prepare to arrive back in your old world. There is a risk of culture shock upon your return. So prepare yourself well.

Game task 9 – A: How can you tell your family and friends about the "Meybies" and their achievements without people thinking that the story is crazy or a fairy tale? Are there things that you missed whilst you were on the island and you would suggest bringing for the "Meybies" on the next visit? Or would it be better to protect the "Meybies" against crowds of tourists, or only to recommend the island as an insider tip?

Game task 9 – B: What was the best experience during your journey? What place on the island would you like to integrate in your everyday life, and what obstacles and hurdles would you encounter in doing so? Discuss these questions in your travelling group, and note them down on large sheets.

Game task 9 – C: Consider how you could invite other people to discover the island. Write an advertising slogan or draw up a draft flyer that you can distribute amongst your friends and acquaintances at home.



Appendix/ additional information:

Options for the game and the journey:

Only the first station (arrival) and the last station (departure) are the ones that you absolutely must pass through. You can select the most exciting stations from amongst all the others according to your own preferences and the time you have available; you can even add new stations.

You can set out on the journey either as an imagined game directly where you are, in a room, in your school, in your youth club, at home or in a nearby park (game level M – Meybie). The second option is to involve your immediate vicinity, your neighbourhood or your community (game level C – community). For game level M, you will need between five and ten experienced players to play the Meybie inhabitants and show you the island.

What you need for the travel game as participants:

A spirit of adventure, the ability to cope with "culture shock", curiosity, a desire for action, creativity, community spirit, innovation, the desire to experiment, readiness to share, trade and give presents, friends, writing implements, notepad.

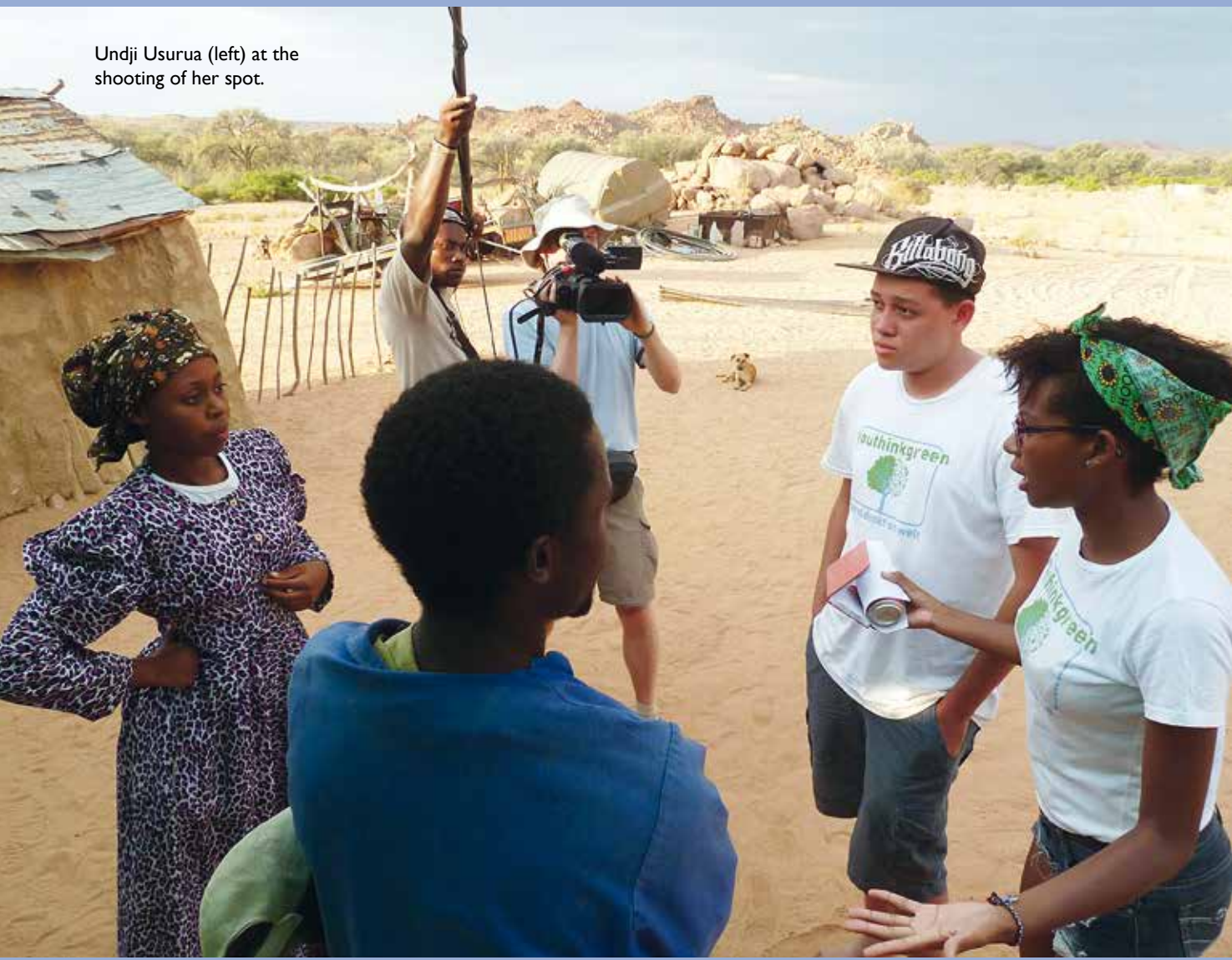
Further information for team players, teachers and game leaders can be found on our website:

www.youthinkgreen.org/konsumwandeln/

konsumwandeln
jugendlichgemeinsamkreativ

INFO ABOUT THE PROJECT:

Changing consumption is a socio-ecological further education programme for young people between 13 and 22. In several workshops, young people from all over Germany meet up to research and experience innovative forms of consumption and utilisation that are conducive to community spirit. Making things together, sharing skills, reusing old materials, creating giving platforms, organising parties to swap possessions, etc. can reinforce cohesion and contribute to greater participation. Together, we develop attractive project ideas that are being implemented locally and regionally through late June 2015. The project is sponsored by the Federal Environment Agency and by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.



Undji Usurua (left) at the shooting of her spot.

TELEVISION LIES – WE EXPLAIN

From the *youthinkgreen* screenplay workshop: Publicity films and sustainability – from understanding to filming

By Thomas Frick

Storyboard: © Ferdinand Huber

1. Escaping the urge to consume, and holding out against it correctly

16 May 2013 – Allianz Forum at the Brandenburg Gate in Berlin. At the culmination of the 1st World Youth Sustainability Summit, the Climate Ambassadors of the "*youthinkgreen – jugend denkt um.welt"* youth initiative presented the history of their project to their guests and partners – from the original idea to its development into an international youth initiative. Politicians and VIPs were invited, as were Berlin's media. The room is full, and excitement can be felt everywhere.

On the stage, 16-year-old schoolgirl Undji Usurua from Windhoek, Namibia is proudly presenting her own short environmental film. It is about a farmer in a Namibian village who wants to kill a pair of wild elephants because they have destroyed the pump for the village well. The screenplay is based on a true story. The main character, played by Undji, is the farmer's daughter. She understands better than her father that animals need water. This means when the well is rebuilt, it is necessary to make sure that both the villagers and the elephants have access to the single source. It must be split. That is why "Sharing is caring" is the moral at the end of the story.

The ad itself, made by the Namibian group, is hard hitting. The audience is thrilled and claps loudly; the spectators are visibly moved and, after the showing, they reflect on the relationship between people and nature – an important step towards greater awareness of the environment.



Première at the 1st World Youth Sustainability Summit

Undji's short film is not the only one. More than half a dozen short ads written by the *youthinkgreen* Climate Ambassadors, about 300 of them in total, are having their public première today. Some of them were filmed by professional teams with famous film and TV stars, such as Dieter Hallervorden, Jessica Schwarz and Josephine Preuss playing the main and supporting roles.

Where did the students learn these skills? An eight-day film seminar is an important component of the *youthinkgreen* Climate Ambassadors' training. For this reason, I visited the students in their home countries on behalf of *youthinkgreen*. The film workshops were first concerned with asking critical questions about the modus operandi of traditional TV advertising and, second, teaching the participants how to use advertising media for their own purposes to attract greater attention.



The short films by our Climate Ambassadors can be seen on *youthinkgreen's* Vimeo channel, amongst other sources.

M1 **Advertising is an instrument of seduction. We can protect ourselves against it. We can use it ourselves.**

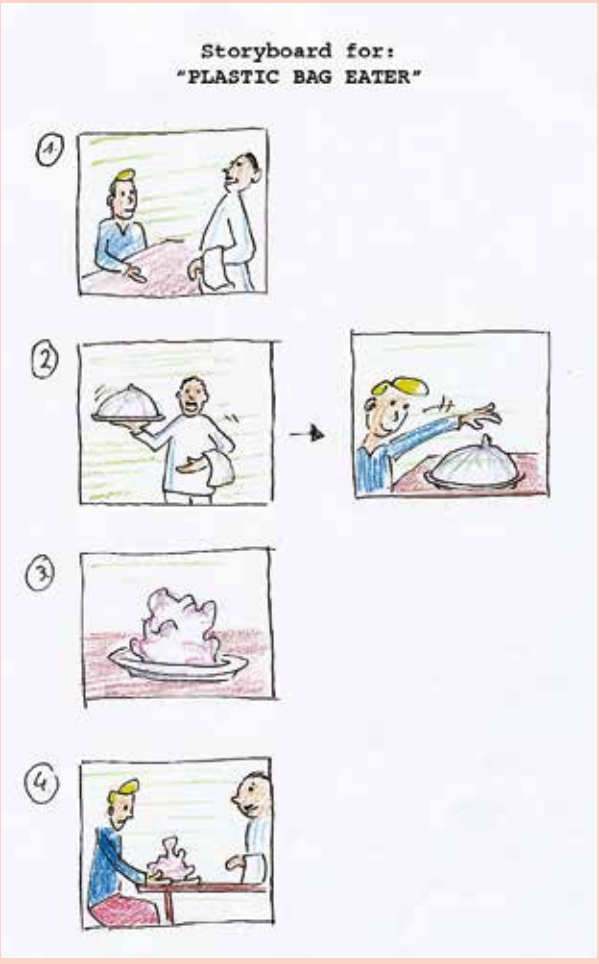
2. Analysing stories

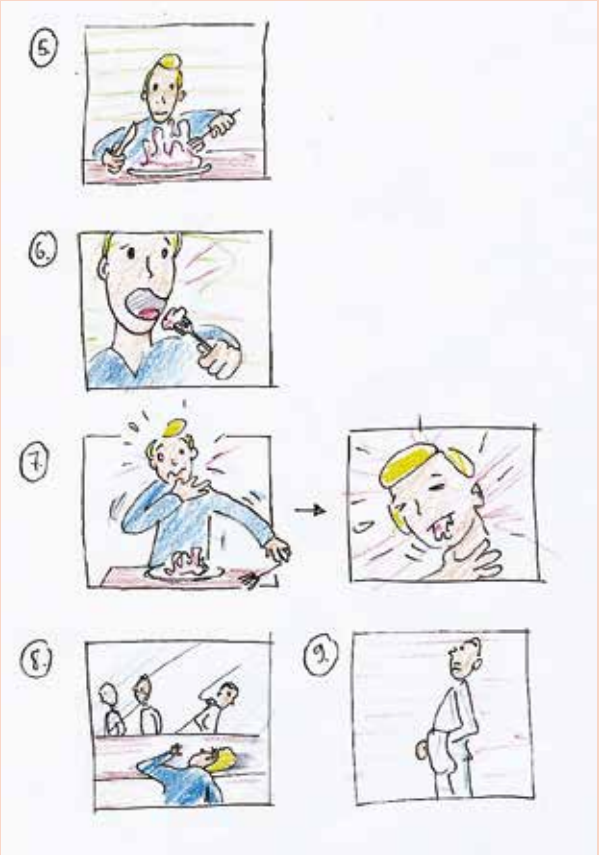
In June 2012, one year before the première, I got to know Undji and 20 other students in the Namibian *youthinkgreen* group at the Upper German School in Windhoek.

To understand how **advertising** works and how it is used to motivate people to **consume**, we first watched various adverts and analysed them.



Thomas Frick is a director, author and script editor. You can find out more about him at www.frickfilm.com





EXAMPLE

In the French *youthinkgreen* film entitled, Plastic Bag Eater, (see accompanying DVD) a head waiter is serving a meal in a fine-dining restaurant. He is played by Dieter Hallervorden, whilst Detlev Buck takes the role of the guest.

The waiter wants the guest to enjoy himself, but the meal consists of a plastic bag. The waiter is confused, but the guest appears to enjoy it at first.

But then he starts coughing and struggling for breath. Worried, the waiter slaps him on the back. But the guest only waves him away angrily.

The guest turns blue and before the waiter can do anything about it, the worst is happening: His guest sinks under the table and suffocates.

Even before the waiter can find an explanation, the voiceover is heard saying, "This happens all the time…" The waiter asks in amazement, "Really?" and the voiceover continues, "…to penguins, dolphins, turtles and whales!"

Then the "jugend denkt um.welt" logo appears and is repeated by the voiceover.

The head waiter is the **protagonist**. His **objective** is for the guest to feel good. The **obstacle** is the strange meal. The waiter's first (incorrect) **strategy** is to ignore the danger. This leads to a **catastrophe** in spite of his further efforts. In other words, the guest dies. After that, there is only one **solution** left – a rethink.

The terms protagonist, objective, obstacle, strategy, catastrophe and resolution are the most important **tools** in our **dramaturgical toolbox.** They are the basic elements of a story.

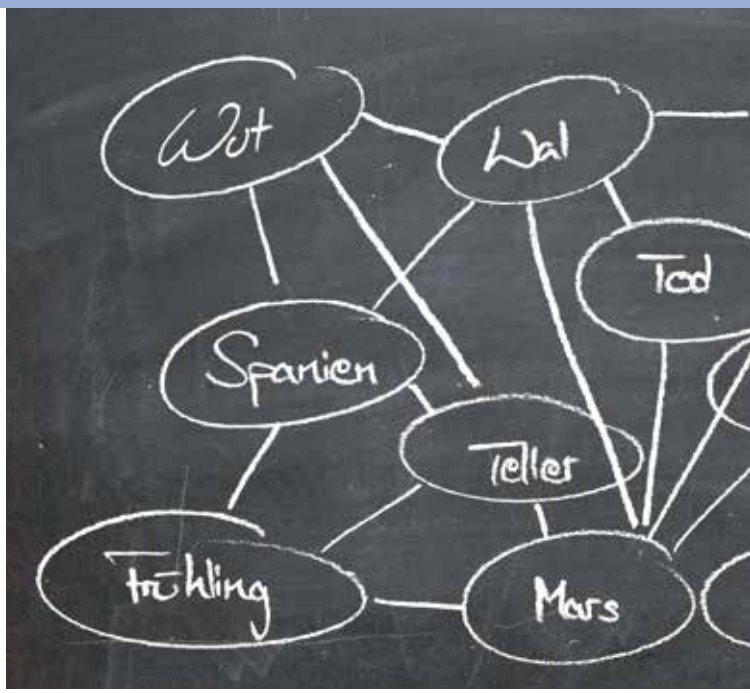
3. From topic to idea

Getting to know one another playfully, finding ideas and becoming familiar with the first theoretical principles

We start by talking about our expectations for the workshop and setting them in order, gathering initial ideas and analysing them. Mostly, there are unstructured topics or insights but many of the participants also draw a blank. However, appropriate tools are available for the first task of coming up with ideas, including brainstorming. All the seminar participants call out terms without any mental filter, according to what pops into their heads.

M2 Collecting unfiltered terms in **brainstorming** liberates you from the pressure of having to specifically create something sensible.

Brainstorming is a game. Soon, sheets and boards are full of terms, words and phrases. We put them into **context**: What fits together, where are the **contradictions**? Suddenly, the game is full of **movement**. Apparently, conflicting terms trigger **trains of thought** – the starting points for stories.



Brainstorming chart

M3 Seemingly contradictory or mismatched terms stimulate the brain to build a link between them.

In this way, we come up with the openings for stories and characters with surprising characteristics with demanding explanations and resolutions.

EXAMPLE

At first glance, the terms 'plastic bag' and 'head waiter' have nothing to do with one another, just as little as plate and death or restaurant and whale, for example. But when you allow them to leave an impression on you, they may well lead to a story like the one described above.



Once you have a clear head, everything seems possible. I explain that an author with a piece of paper is like an almighty god– literally everything is permitted and possible. In the second step, it is important for someone to read what has been written down to try to draw insight from it.

By producing a text and allowing it to make an impression on other people, we are accepting a **responsibility** that requires solid **research**. Research (searching for information, e.g., through targeted viewing and interviews, reading specialist literature in libraries and online) is one of the most important prerequisites for creative work.

M4 You can only write what you know. Research and brainstorming will help you on the path from topic to idea.



French Climate Ambassador and author Leonie Segala and her lead actor, Dieter Hallervorden, during filming of The Plastic Bag Eater (see accompanying DVD)

PRACTICAL EXERCISES

- Name and explain environmental topics and circumstances that are important in your local area.
- Which of them particularly interest you? List your selections and justify each in detail. What environmental goals would you like to pursue?
- Present your results to the group.

4. Unpacking the dramaturgical toolbox

M5 **Dramaturgy** is the craft that helps us to structure events and information and arrange them in time and space to generate emotions.

Without doubt, it is easier to complete a work of art if you have a good stock of tools. What does a story actually consist of? To find out, I get the students to tell jokes. Some of them make us laugh, which means we feel an **emotion**. We discuss within the group why this is the case. We soon realise that stories have things in common, including one or more **main characters**. We can identify with them.



M6 **Identification** means that the audience empathises with the character's desires, longings and goals. Good stories have these kinds of identifiable figures, are also known as "heroes".

he heroes of a story are not necessarily likeable, kind-hearted and brave people or role models.

They can also display less praiseworthy character traits, such as anxiety, eccentricity, jealousy or meanness. It is important that we can share their hopes and fears until they have achieved their goals. These figures should always be given a **name** and an **age** in screenplays. The main figure with whom we emphasise most because he or she is pursuing the most important objects in a story is called the protagonist.

The **protagonist** is number one in our toolbox.

EXAMPLE

Our Icelandic Climate Ambassadors wrote a story about Jack (45), who crawls out of an igloo with a shovel in his hand and runs out into the middle of a snowstorm.

Of course, he is the main character because the dangerous situation means we immediately develop strong feelings for him. We can imagine that he is freezing and searching for warmth.

Now he does something completely crazy: First he loses a glove, and then he starts to undress. As he stumbles through the driving snow, naked and freezing, the audience must think he's gone mad.

Then, suddenly, he rams his shovel into the snow and a geyser shoots into the sky.

A voiceover is heard to say, "There is always hope. Alternative solutions!" After that, we see the protagonist taking a cosy hot bath in the middle of the snowy wasteland.



→

PRACTICAL EXERCISES

- Develop a possible protagonist from an available topic. Give him or her a name and an age.
- Describe why the topic is important to him or her.
- What feelings are aroused by the protagonist?

We recognise that a protagonist must have **direction** – something that he or she **wants** to find out, achieve, conceal, forget, prevent, obtain, eat, love, etc. The hero of our story needs an objective. The reason for this is often a problem that demands a solution. Without a problem, there is no need to act. The urge to act is also referred to as **motivation**.



This **objective** is number two in our toolbox.

EXAMPLE

Jack's objective is to find warmth. His problem is the cold, the hostile environment and, we believe, the madness that made him run out into the snowstorm. To cap it all off, he undresses.

Jack's motivation to find a warm place is extremely powerful and easily understood by the audience. The fact that Jack is actually not mad at all, but is following the plan of tapping into a source of thermal energy does not change the situation of us sharing in his hopes and fears. Our strongest emotion is directed towards the objective – one that we understand and experience directly: heat.

PRACTICAL EXERCISES

- List your protagonist's objectives or problems.
- Formulate these in the first person, as if they were your own. What feelings does this trigger in you?
- Arrange the objectives or problems according to their significance.

M7 The hero has no alternative; they must do something as soon as they recognise the objective. This drives the plot forward.

When we act, there are two basic possibilities: our actions are either successful or unsuccessful. An immediate success would be boring. The story would come to an end as soon as the objective is reached.

What we urgently need are plausible **actions** that nevertheless do not lead directly to the objective. And we need to do this without our hero seeming stupid or we would lose interest.

These correct or incorrect approaches to the solution are also called **strategies**. They are tool number three in our toolbox.

EXAMPLE

If Jack were to emerge from his igloo and jump straight into a warm swimming pool, the story would presumably lack both excitement and emotion.
In order to make an interesting short film, we need a strategy that appears to be wrong at first. Jack's approach to the solution of finding protection and warmth is to run out into the unknown. We observe that with mixed feelings. This solution does not immediately lead to the objective, making our concern for the protagonist grow. There is an exciting development in the situation when Jack loses his glove. What will he do? Will he turn back or keep going? Both of these strategies would be understandable. Either could fail and either could save Jack. They are in conflict with one another.
Then something unheard of happens: Instead of returning to the protection of the igloo, Jack exacerbates the situation. He takes his clothes off. His strategies become more risky.



The decision-making situation between two possible strategies with an unclear outcome is referred to as **conflict.**



If you pursue a strategy, you will also encounter **obstacles**. These are tool number four.



PRACTICAL EXERCISES

- List possible strategies for your hero. Arrange them in order of strength.
- Select a credible and obvious strategy, but one that is not expedient. What negative effects and complications arise from this?

EXAMPLE

Jack encounters impressive obstacles in the form of cold, snow, headwinds and lack of orientation. He loses his glove. He seems to go crazy. All this increases the tension. His strategies also cause the obstacles to grow. They become greater the further he distances himself from the igloo, i.e. the more risky his actions are. For the audience, the causal link between correct and incorrect approaches to the solution and the resulting new problems that arise is particularly enthralling.

Obstacles are probably the most effective dramaturgical element. They have an escalating, culminating function. Obstacles ensure that the protagonist has something to do and makes us want to know what ideas they will come up with for strategies.

Obstacles are more exciting if they are as unpredictable as possible or are even intelligent. How should that be done? By having them develop their own strategies. And who better to do that than a living, thinking obstacle. This gives us the opponent, the antagonist.



If your **narrative flow** gets bogged down – have your characters, especially the protagonist, confront obstacles.



An **antagonist** is an intelligent obstacle.

EXAMPLE



22 guys kicking a leather ball around a pitch is not particularly exciting. However, things change if we elect one of the teams or an individual player to be our protagonist. Then we know their objective – the goal at the other end of the pitch. That automatically makes the opposing players antagonists – living, thinking obstacles. The better they are, the more exciting the game is. Our identification grows in proportion to the information that we have about the fellow players and the circumstances of the encounter.



It is particularly exciting if a protagonist can achieve something important or if danger threatens (rising up the goal scorers' rankings, overcoming an injury, a conflict with another player, the threat of being banned). Sport reporters spend most of their time presenting this information to us in the most dramatic possible ways. By doing this, they ratchet up our level of identification as well as the tension. Another thing that can happen is referred to as the height of the hero's fall.

We should know the ground rules so we can follow the game and enjoy it. A game like cricket is so uninteresting and boring to most of us because we do not understand it.

So in a story, we should not break the rules of the game once they have been established. Let's assume that our hero is a totally normal person who finds himself in difficulty. It would then be very disappointing if he suddenly cast a magic spell to help himself.

M11 The public needs clear **ground rules.** An audience wants to participate in the thought process and the decision-making.

PRACTICAL EXERCISES

- What new obstacle results from your protagonist's first strategy?
- Are other credible and impressive obstacles and intensifications possible?
- Is the plot still moving within the rules of the game that you yourself established?

In the meantime, we have reached the middle of our story and are hopefully looking forward to a lively and surprising sequence of strategies and obstacles, which will build on one another if possible. The **risk** our hero has to take to reach his objective is increasing all the time, accompanied by growing levels of effort, anxiety and doubt. He also experiences hope and small moments of happiness when he reaches his **sub-objectives.**

These small victories and defeats are milestones on a path that has not yet reached its end. Because of this, as the protagonist attempts to reach his objective, we fear he might not succeed. This is why he first has to experience a real setback: he needs to fail initially, so he can learn a truly lasting lesson.



To do this, we need tool number five: the **catastrophe**

EXAMPLE

When it comes to staged catastrophes, it is not always necessary for a ship with 1,514 souls on board to sink, as is the case in the film "Titanic".

From a dramaturgical standpoint, it is more important in this film that Rose, a young, upper-class, unmarried woman is striving to overcome the social barriers in which she is trapped and to grow up. She succeeds in liberating herself to a certain extent. She is helped in this by the creative, happy-go-lucky young man, Jack, who becomes her mentor and sweetheart despite the fact that he comes from a background of poverty. The catastrophe for Rose as the figure we identify with is that Jack perishes in the tragedy and Rose loses him forever. After that, she has to find her own path alone. We can empathise with her. Of course, it is terrible that so many people die, and we also feel compassion for them. However, we principally identify with the main figure, Rose.

The catastrophe is the point at which the opposite of what the protagonist had been hoping for all along happens. It is the absolute **lowest point,** when there no longer appears to be any other solution. However, there is a proverb that says, "The darkest hour is right before the dawn." The main character has now committed all the major errors that he has to learn from.

When we are weaving a story, we can specifically develop the catastrophe out of what the hero wants. Starting from the theme of our story, we lead him precisely to the point at which success appears to be impossible.



A story with a good dramatic structure demands that the protagonist undergo catastrophe.



PRACTICAL EXERCISES

- Compare your protagonist's objectives with his situation at the moment of catastrophe. Where is the greatest possible defeat to be found?
- List strategies and obstacles, and check whether they have led to the catastrophe in logical steps.
- To what extent does the catastrophe reflect the theme you have selected?

Following the absolute lowest point, the ext step is generally the end of the story: the **resolution**, the decisive battle, the finale, the finishing straight and possibly the **happy ending.** Our protagonist shows what he has learned. He applies it and wins. If not, the story ends as a **tragedy**.



This **resolution** is the sixth tool in our box.

Sometimes the resolution is positive, sometimes negative, and sometimes a bit of both, i.e. with ups and downs. We often find out the "moral of the story", which is the author's view about which path is the better one. The last and fundamentally altered strategy borne out of the pain of catastrophe sweeps away the remaining barriers to the protagonist's inner development. Under certain circumstances, a resolution may involve the realisation that it is enormously important to stand up to the antagonist, to address one's own problems or not to be satisfied with partial victories. In shorter formats, it is sometimes the last decision or the final statement.

PRACTICAL EXERCISES

- State the conclusions your protagonist has drawn from the catastrophe!
- Which fundamentally new perspective does his final strategy contain? To what extent does this reflect your opinion of the topic?
- What emotion is triggered by a decisive victory or a decisive defeat?

M13



In advertising, the resolution is generally the moment at which the only true **product** is recommended to us.

M14



The advertising message, usually involving showing the brand, is called **branding**.

At the end of a story and the **emotional roller coaster** it contains, we reach a point where we have been deeply touched emotionally, i.e. amused, saddened or surprised. We feel most connected to the protagonist and the author. Our subconscious is at its most receptive state to receive a **subliminal message.** "Buy this! Listen to that! Choose this! Believe that!" We are in an open emotional state; we are distracted and easy to influence. This is how advertising works. For us, it is important to see through these mechanisms, including as a way of conveying our own messages.

The message should leave a mark. Like a rubber stamp, we announce what our message is about at the end of the story.

However, if it is about a product and the product is shown in a particular image, this image is referred to as the **pack shot.** There is often a **slogan** linking the preceding story with the branding, often a surprising statement that elevates what has been experienced to a new level.



The logo of our *youthinkgreen* initiative is a stylised tree with sustainability elements. Together with the German and English text, this is how all our publicity films culminate.

M15 The statement or the slogan is also referred to as the **claim.**

Particularly when it comes to advertising messages, accuracy and brevity are called for. If there is a lot of information to impart, it is better for this to be done on a **website** or as part of a **campaign**. The advert can be used more effectively for generating a captivating emotion, piquing curiosity and referring to a possible additional source, such as **www.youthinkgreen.org**, for example.

M16 Too many final messages tend to cancel each other out.

EXAMPLE

The accompanying DVD contains the short *youthinkgreen* film, Solar Car Park, based on a screenplay by Climate Ambassador Judith Gebbe from Germany. Her goal in the story was to call for a rethink in the areas of mobility and energy.

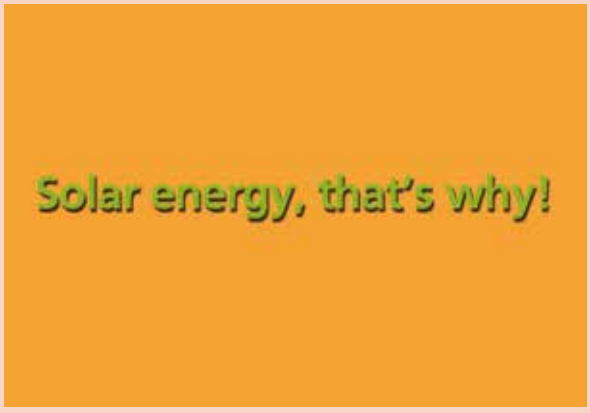
At the same time, our partner, ThinkBlue from Volkswagen, which financed the film, wanted us to refer to the sustainability of electrically powered cars in connection with solar power.

In addition, we might have wanted to provide a whole host of information about the financial, economic and historical backgrounds of solar power, technical details about solar panels or the link between our initiative and the topic. That would have ended up being a very large number of messages at once, and the main statement would have gone unnoticed.

So Judith made her protagonist a mother being bombarded by annoying questions from her child in the car park after shopping. She is suffering in the heat, she still has to stop at the petrol station and somehow she must persuade her child, who is grilling her with questions, to get into the car. As a result, she initially answers all her son's questions patiently, and they always start with, "Why…". The claim is ultimately made up of only a few words.

When her vivid imagination suddenly produces a gigantic solar roof over the baking car park, casting a cooling shade whilst generating energy, the only words are, "Solar energy, that's why!"

The final piece of information provided is the logos of *youthinkgreen* and ThinkBlue. This branding quickly makes it clear where additional information can be found if the message has piqued your curiosity. Compare the storyboard to the short film, *Solar Energy*, on page 214. →



1



Lukas, hurry up. We still have to refuel!
Mum, why is the ice-cream melting?

2



Because sunlight contains energy!

3



4



Whhhy?

5



Because heat is energy. Come on, we still have to refuel!

6



Whhhy?

7



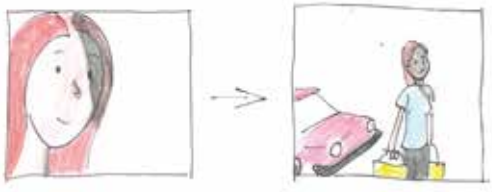
Because our car also needs energy!

8



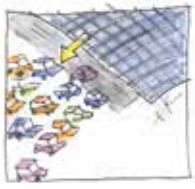
And why can't our car use the sun as fuel?

9



The mother smiles. A shadow covers her...

10



The car park is being covered by a roof carrying solar cells.

11



Solar energy

That's whhhy!

12





Conclusion:
The six most important tools for a story are: 1. Protagonist, 2. Objective, 3. Strategy, 4. Obstacles, 5. Catastrophe, 6. Resolution

PRACTICAL EXERCISES

- Formulate a "snappy" slogan that links your story to the object of your storytelling.
- Test and discuss your claims in the team. Is your claim surprising? To what extent does it invite a higher level of thinking and feeling? Does your product or message appear as a powerful response to the problems of your protagonist? Does your branding sum up a powerful message? Is the message comprehensible? Is an emotional connection established between the story, claim and branding?

5. Structuring the story

M17 Every storytelling structure generally has a **beginning**, a **middle** and an **end**. In dramaturgy, we also talk about the **three acts.**

What is known as the **three-act structure** is one of the most common and simplest dramaturgical principles out there. It is used in professionally and painstakingly designed films as well as in the theatre, musical compositions, novels and documentaries.

However, shorter forms, such as adverts, clips, and even jokes, comics, sketches or speeches follow the approach that the ground rules, personalities and their motivations must first be established so that there can be conflict involving them and, in the end, a resolution.

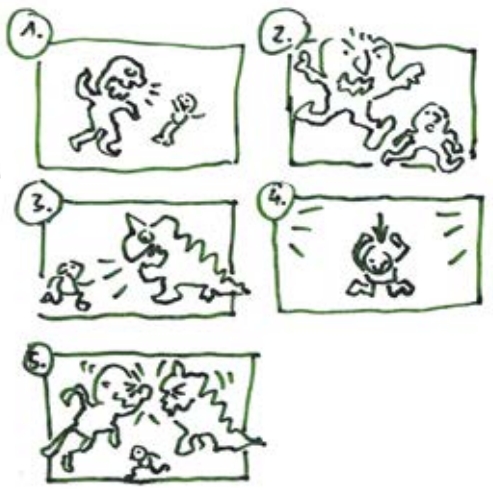
The three-act scheme is a universal principle because people need to learn from the solutions found and the mistakes made by others. People have an urge to watch someone seeking and finding and draw their own conclusions from the process.



First act: Goal Setting
Second act: Crisis
Third act: Catharsis

An audience's ability to feel compassion enables us to use a process we call **catharsis** (from the Greek word meaning 'cleansing'). Deeply moved by the fate of a fictitious figure, we examine our own moral decisions and motivations against that figure's strategies and mistakes.

To repeat what has been learned in practice, workshop participants draw a brief **storyboard** comprising no more than five pictures. A person is given a problem, develops a strategy, encounters difficulties, changes the strategy and encounters new obstacles. As a result, the person appears to suffer a complete failure, and finally either stands or falls. The problem or objective of the protagonist should be apparent in the first picture on the storyboard, the first strategy in the second picture, and so on.



1. A tiny man is threatened by a monster; 2. He runs away; 3. He encounters a bigger monster; 4. He gives up and becomes even smaller; 5. The two monsters collide with one another and the tiny man is able to escape.

PRACTICAL EXERCISES

- Draw a storyboard with five pictures.
- Together, analyse it using the toolbox.
- Name the emotion that is established at the end of your story.

6. From the idea to the screenplay

6.1. Developing a synopsis from the idea

M18

A synopsis is the short, written record of an idea for a film. It is only a few lines long and can be formulated in very general terms.

The synopsis can be compared to a painter's sketch and it contains all the important elements – the protagonist, his problem and approaches to the solution, the plot and conclusion. This is the simplest way to be able to edit, discard or supplement the basic elements of a plot without having to call an entire screenplay into question. The synopsis is a declaration of intent. It makes clear what is involved so the basic idea can be recalled later or presented to someone in a condensed form.

EXAMPLE

During his research into environmentally friendly ideas, Brazilian Climate Ambassador Tomer Gidron stumbled across a real invention that is used in many impoverished areas of the world. PET bottles filled with water and bleach channel sunlight into huts where there is no electricity. Tomer created a protagonist called Derp and developed the following synopsis:

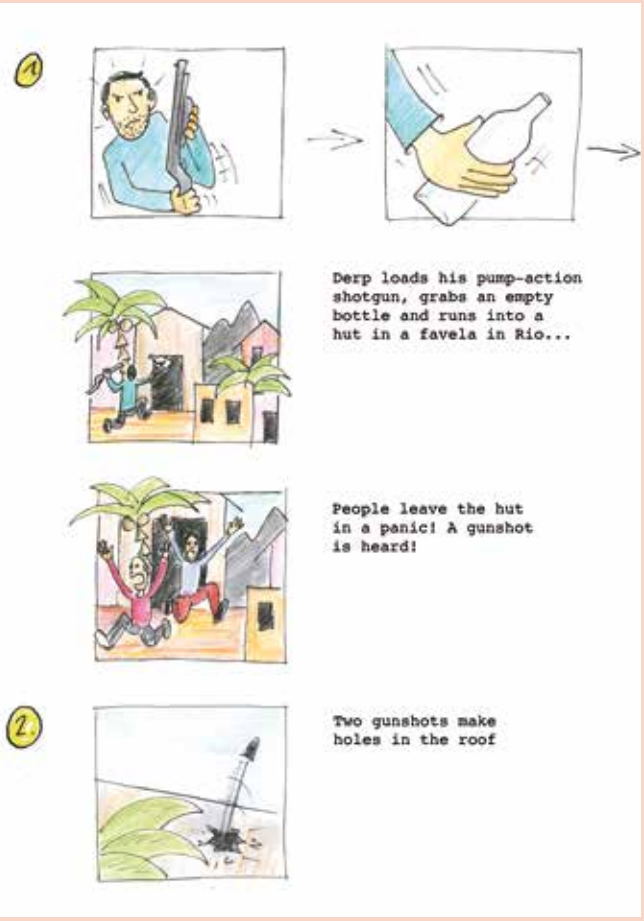
Lights on!	Tomer Gidron	Number of pages
Synopsis 2	tomer@xxxxxx.com	
27.03.2012		

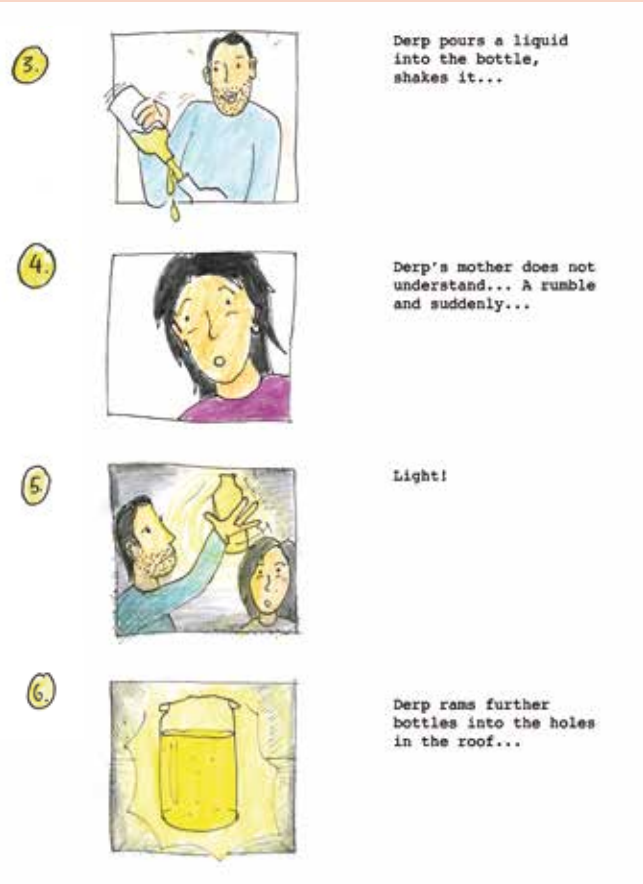
Lights on!
Synopsis by Tomer Gidron

DERP (26) is very poor and lives in a favela in Rio de Janeiro. His family does not have enough money to afford electricity. He sees a lot of empty PET bottles in the street and has an idea for how he can light his house during the day. He fills a few bottles with water and a bit of white paint, and sticks them in holes in the roof, causing light to flood into the hut. His idea is very successful. Many people in the neighbourhood use this method and are grateful to Derp.

CLAIM: "An idea is worth more than a thousand words."
LOGO: jugend denkt um.welt

Later, the story was developed further.
Compare to the storyboard on page 218.





7



People come closer out of interest and are amazed...

8



There is dancing everywhere...

9



Children are doing their homework...

10



Housework is being done...

11



The favela blossoms ... gunshots can be heard near and far.

12



An idea is worth more than a thousand words!

youthinkgreen!

In just the past few years alone, some 500 different synopses have been written as part of the *youthinkgreen – jugend denkt um.welt* project and later developed further into screenplays.

M19

Good **data management** is important so ideas do not get lost. Identify your synopses with their title, author, version and date. The same information should also be included in the **header** of each document.

PRACTICAL EXERCISES

- Split into pairs and advise one another in the role of an author or script editor. Use the toolbox step by step for this.
- Write down your ideas for short films in the form of synopses. Make sure they look professional. Use the spell checker.

6.2. Developing the synopsis into a treatment

M20 The treatment is a kind of intermediate prose version on the way to becoming a screenplay. It is more extensive than the synopsis. All actions are described in detail and in the correct order. It only contains what you can see and hear on the screen.

What someone thinks, feels, wants, hopes for or is afraid of are literary descriptions and must be assembled into a plot that people can experience. Otherwise, they do not belong in a treatment. General factors or abstract information must be eliminated, for example the statement, "because of his difficult childhood…". The childhood in this example can only be experienced on the screen if there are pictures and sounds for it, in other words proceedings.

M21 An action in the treatment takes place specifically in the here and now.

There is no past tense like in books (e.g., "He wandered through the woods."). Either we see someone wandering through the woods in the here and now or we don't. A flashback does allow us to jump back in time, but what we see there is once again happening in the here and now and is described in the present tense.

EXAMPLE

One example of a successful treatment comes from Trento in Italy:
First, the synopsis: LUCY (5) is given a magic lamp by the elf GALADRIEL (800). At first, the lamp does not work because it runs on alternative energy. However, when the conventionally generated electricity fails in the entire town, a light still burns in Lucy's room. "May it be a light for you in dark places, when all other lights go out." The short film is referencing the famous film trilogy, The Lord of the Rings, and is working with the image of the elves as beings linked to nature.

The Lamp
Treatment 2 by Alissia Griso

We see a house in a small town.
An elf of breath-taking beauty, who looks like Cate Blanchett as GALADRIEL, knocks on the door.
LUCY (5) opens it. The elf gives her a wonderful lamp. Lucy is delighted.
In her room, she plugs the lamp into the socket but it appears not to work.
Lucy cries.
The elf appears on a green hill and starts to blow.
On the next hill, a windmill starts to turn.
Lucy is still crying. But suddenly the lamp starts to shine – brighter and brighter.
Lucy smiles.
All the lights in the town go out. Only one house is illuminated.
It is Lucy's window.

SPEAKER: "May it be a light for you in dark places, when all other lights go out."
LOGO: jugend denkt um.welt

A storyboard prepared for the treatment of *The Lamp* can be found on page 220. →

1.



In a little town...

2.



at the door of a little house... the elf Galadriel rings!

3.



Little Lucy opens.

4.



Galadriel gives a lamp to Lucy, who is very happy

5.



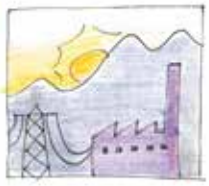
Lucy connects the lamp to the electric socket. But it does not work!

6.



Lucy is sad.

7.



When the sun goes down the powerplant of the little town stops working.

8.



And all the lights of the whole town turn off.

9.





Galadriel stands on a hill and blows a agentle breeze over the town

10.



A wind turbine starts to run.

11.







There is no light in the whole town exept... a single window...

12.



Lucy's lamp is burning and Lucy is happy!

13.



Galadriel speaks: „May it be a light in dark places when all other lights turn off...

14.



...renewable energy last for ever."

Youthinkgreen

PRACTICAL EXERCISES

- Develop your synopsis into a treatment. Maintain a professional format with a header, page number and a clear file name. Use the spell checker. Create a new document for each new version.
- Make a folder in which you collect each version of your material, your research findings and all the images for the presentation.
- Just like in the synopsis, work out different versions and discuss them with your partner. Incorporate possible corrections.

6.3. Developing a professional screenplay from the treatment

M22 There are four basic elements that reoccur time and again in each screenplay according to international standards: **header, scene heading, stage direction** and **dialogue.**

Just like in the synopsis and in the treatment, we start with the **header** that contains the title, the version (e.g., "Screenplay 1"), the date, the author, the author's contact information (usually telephone number or email address) and the continued page numbering.

The **scene heading** contains the picture or scene number, the location of the scene (this is also known as the slug line) and an indication, usually abbreviated, of whether the scene takes place indoors or outdoors, during the day or at night. There is a scene heading above each new scene.

M23 A new scene starts when the location or the time changes. For example, many films consist of one scene, whilst others have many.

The **stage direction** is written in normal continuous text – in complete sentences – and provides all the necessary information for acting. Again, just like in the treatment, there are no expositions or flights of literary fancy.

All that belongs here is what is actually going to be seen in this sequence in the film. Once the cinematic aspects have been resolved, each setting appears as its own line.

The fourth important element in formatting a screenplay is the **dialogue**. This consists of a character line and the line of dialogue itself, both as block indentations to the left and right. All of this put together should look like the following example:

EXAMPLE

The professionally prepared screenplay for the short film, The Angry Farmer, by Undji Usurua can be seen on page 222 →

The furious farmer
Script 4 by Undji Usurua
16 September 2012

IMAGE 1 FARM I/N

Darkness. We hear the NOISE of rampaging elephants. Metal scrapes against metal. A beam of light from a torch flashes, the FARMER (35) wakes UNDJI (16).

FARMER
Get up! Get up!
The elephants are here!

The daughter jumps out of bed. The farmer grabs his gun and runs to the door.

IMAGE 2 FARM I/N

The farmer rushes out of the hut with the gun and torch; the daughter follows.

FARMER
I will shoot the elephants!

UNDJI
Dad! No!

By the light of the torch we see a bent windmill and angry elephants in the darkness. A dog barks wildly. The farmer aims the weapon at the elephants.

IMAGE 3 FARM/WELL A/T

The sun rises.
The village at daybreak.
The farmer and daughter come out of the hut.

UNDJI
Dad!

FARMER
I am going to shoot the elephants!

He grabs his jacket.

UNDJI
They are thirsty – like us!

FARMER
They are taking our water!

We see the destroyed windmill at the well.
Father and daughter approach. The farmer grabs a bent part.

FARMER
Look at the destruction...
I am going to shoot them now.

UNDJI
Let's build a well for them too!

The father begins to think.

UNDJI
Then they won't destroy ours.

The father nods.

IMAGE 4 WELL A/T

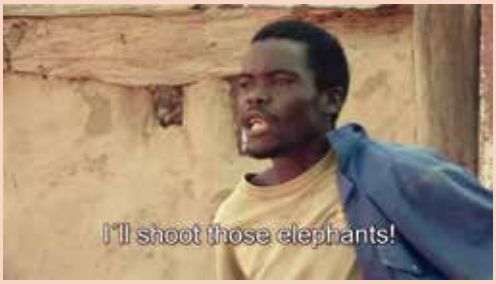
In various images documenting the action we first see hands at work. Then Undji wearing a youthinkgreen T-shirt, as she rebuilds the windmill with other climate ambassadors and her father.

IMAGE 5 WELL A/T

Finally an elephant stands at the finished well.
From a distance the father, daughter and the group of climate ambassadors watch:
... as the elephant drinks and sprays itself with water while trumpeting.

TITLE INSERT: Sharing is helping!

LOGO: youthinkgreen NAMIBIA









M24

The professional screenplay format is an important point when it comes to turning the idea for a film into a reality. It is the most important type of presentation, including for film agencies, financial backers and all the members of the film crew.

A clear and unobtrusive **font** should be used for this. It is not a good idea to write a story set in the middle ages in runes. Technical instructions are highlighted in CAPITAL LETTERS (upper case). However, these should be used as sparingly as possible. Instructions such as ZOOM, CUT or PAN should only appear in this version of the screenplay if they are absolutely essential for understanding the story. We leave the technical design work to the director and the cameraman. They write what is called a shooting script.

In an advertising screenplay, there are two possible ways of representing the claim. In capital letters, we either write, **"SCRIPT INSERT,"** followed by the slogan in text. Or we write, **"SPEAKER,"** with the words written as a line of dialogue below that.

The number of pages in a professional screenplay roughly indicates the length of the planned film in minutes. Works with a lot of dialogue require somewhat more length.

M25

Screenplays with too much elaborate detail end up being unclear. A good scriptwriter will write intuitively, specifically and with no frills: **What do we see? What can we hear?**

PRACTICAL EXERCISES

- Write a screenplay based on your treatment. Make sure you achieve a professional overall appearance. Be sure to also use the spell checker and have your partner proofread it.
- Also check and discuss the result with regard to comprehensibility, legibility and superfluous information.

7. Summary and outlook

After the eight-day screenwriting workshop, the Climate Ambassadors have learned much more than it is possible to present here. They made several practice films and read through their screenplays with different roles to improve their dialogues. The dramaturgical toolboxes were supplemented by many other elements. The students honed their results repeatedly, conducted new research, gave presentations and analysed the results in the group.

A lot of work went into teasing out the best possible solutions before a short climate film like Undji's could be created.

EXAMPLE

Along with many other initiatives, the fieldwork project conducted by the Namibian students led to the implementation of the well building project in Damaraland. Today, people and animals in the region once again have a water supply. Sharing is caring!



Undji Usurua during filming of a practice film

Undji Usurua describes her own development like this:

"When I was 14, the whole world seemed only to revolve around me and the people around me. I was a naive, narrow-minded and extremely shy girl. I didn't realise that the screenwriting workshop would be such a significant event in my life. The workshop provided us with an unforgettable opportunity to grow as individuals – and totally differently from normal teaching. There, we are told what to say and write; there is no room to express yourself. The seminar, however, offered us an extraordinary life and learning experience. We were encouraged to deepen our knowledge of environmental problems in Namibia and to look for solutions to them.

Two years on, at the age of 18, I can say with pride that I have matured mentally. The young, shy Undji has disappeared. I have discovered hidden talents within myself. I have started to make my voice heard and to persuade people to commit themselves to the environment and animal conservation. I have learned to express my thoughts and ideas through moving, metaphorical language. The filming work, where I got to direct, operate the camera and act, triggered a chain reaction in me. I broke out of my comfort zone and started to behave responsibly and with commitment, not being satisfied with moderate results, but looking for the deeper meaning in everything. I was even bold enough to learn one of the most difficult African languages, Nama-Damara, also known as the 'language of clicks'. 'To accomplish great things, we must not only act, but also dream'. I have done more than absorb these words by Anatole France within myself – I have started to put them into practice."

Similarly to Undji in Namibia, hundreds of young Climate Ambassadors have been trained in screenwriting and filmmaking by *youthinkgreen* in **Germany, Poland, Croatia, Iceland, France, Belarus, Italy, Bulgaria, Turkey, Egypt, India, China, Brazil and Peru**. A screenplay workshop can enliven everyday schoolwork – for example as part of a project week – by leaving a lasting impression and pointing the way. It is not only useful for professional orientation in media careers, but is also an outstanding way of finding out about the structure and impact of advertising in a light-hearted manner. Students learn about greater awareness in dealing with the media, and, for example, the issue of the urge to consume.

The technical basis for the workshops is available everywhere. Normal **classrooms** with **blackboards**, **flipcharts** or **whiteboards** as well as a standard **school computer** for writing and video editing are usually sufficient.

For the filming exercises, we generally use readily available amateur technology such as **cameras**, **smartphones** or the trusty f**amily video camera.**

M26 **Nowadays anyone can learn how to make effective films. *youthinkgreen* is continuing to offer screenwriting and film seminars.**



Climate Ambassador Nils Carolath thanks Detlef Buck for his cooperation with the short climate film, Plastic Bag Eater.

CLIMATE PROTECTION AND SUSTAINABI AS THE GREATES GLOBAL CHALLENGE

Konrad
Adenauer
Stiftung

3.1. Rethinking: Anchoring sustainable development as a guiding principle in society

ILITY

ST

Introduction
Page 230
Changing the world together –
thinking and acting appropriately for the future
By *Jakob von Uexküll*
Page 234
Thinking for yourself – thinking laterally – committing yourself: to a world with a future that is worth living in
By *Yvonne Zwick*
Page 240
Do we have a right to a "good life"?
By *Dr. Thomas Fatheuer*
Page 249
Politics in practice: Creating new worlds with "buen vivir"
By *Prof. Alberto Acosta*
Page 255
The forest – a perfectly coordinated team
By *Dr. Erwin Thoma*
Page 258
Living for the forest:
Interview with forester Norbert Schmelz
Page 266
Practical education:
Teaching and learning pathways in the forest
By *Josef Gebbe*
Page 271
Environmental guardians versus entrepreneurs:
Interview with Dr Fritz Vorholz by *Isabelle Tisson*
Page 282
Why traditional media have trouble with reports about "sustainability"
By *Eva Mahnke*
Page 288
School subject of "Saving the World" –
or: Is it actually possible to learn sustainability?
By *Dr. Marianne Dehne*
Page 298

3.2. Crisis: Global warming and the destruction of key ecosystems



© Roberto Verzo

Introduction
Page 306
"More than hot air": Interview with climate consequences researcher Prof. Dr. Schellnhuber by *Karoline Kmieciak & Ariane Missuweit*
Page 309
The Amazon rainforest – a lifesaver in dire need
By *Dr. Thomas Fatheuer*
Page 320
Hoping for rain
By *Dr. Auma Obama*
Page 327
Practical education:
Helping people help themselves in Kenya
Page 328
Water is life – the Global Peace Service charity (Weltfriedensdienst e.V.) is fighting against water theft
By *Katrin Steinitz*
Page 333
The Secret of the Underwater Cave – a story
By *Ulrike Sinzel*
Page 344
Why the ocean is slowly but surely becoming acid
By *Ulrike Sinzel*
Page 349
The eternal ice is melting – a habitat is disappearing:
An interview with Arved Fuchs by *Ariane Missuweit*
Page 355

3.3. Tour de force: The international battle for climate protection and climate justice



Introduction
Page 366
Climate refugees: Do we need to extend the scope of human rights?
By *Prof. Dr. Manfred Nowak*
Page 368
The human face of climate change
By *Dr. Andrea Schapper*
Page 375
Paths to climate justice: The battle for multilateral agreements
By *Prof. Dr. Mary Robinson*
Page 382
From real life: The climate campaign of the German Red Cross Youth
By *Jessica Fritz*
Page 389



© Klaus Fahlbusch

3.1 RETHINKING: ANCHORING SUSTAINABLE DEVELOPMENT AS A GUIDING PRINCIPLE IN SOCIETY

Introduction

The challenges facing our world at the moment are highly complex, and they are going to affect us all sooner or later: climate change, dwindling natural resources and scarcities of fresh water and foodstuffs. One thing seems clear: We must not waste any more time discussing the problems we are facing and resigning ourselves to powerlessness and paralysis. We need to "rethink". We must take definitive action and change our ways, not only as individuals but also collectively. This is what many scientific climate research studies show. Equally, we must not allow ourselves to haphazardly pursue small, "individual actions and short-term projects for greater sustainability. Instead, we must attempt to keep the "big picture" in sight all the time. But what does this enormous social puzzle look like? What are its greatest and most important components? This section will cover all of this.

Finding new paths

First of all, it is important to clarify what "sustainable development" really means, and how it can be put into practice across the board. The guiding principle of sustainability has now become one of the firm, fundamental values of German politics (cf. Probst, 2013). Since 2002, Article 20a of the German Basic Law (Grundgesetz) has stated, *"Mindful also of its responsibility toward future generations, the State [shall] the natural foundations of life […] by legislation and […] by executive and judicial action all within the*



framework of the constitutional order." As a result, this key concept of sustainability strengthens and supplements our democratic principles.

Development is sustainable if it involves us treating environmental, economic and social resources in a sufficiently responsible, efficient and fair manner so that our society can remain viable in the future. Do you think this statement is vague and non-specific? Many people think so, and yet this definition itself indicates why most sustainability concepts appear to be abstract and complex. "Sustainability", you see, cannot be achieved directly – there is no specific and generally applicable recipe for success. Instead, sustainability is a concept that provides a framework of values for models and approaches leading to a solution.

Consequently, sustainability is a guiding principle that raises many questions and issues on different levels (individuals, groups, municipal and regional communities, national and international companies) and in different areas (environment, education, business, law, politics, the media, etc.) to be knitted together. Consequently, the following texts will repeatedly draw parallels with the discussion's questions and suggestions from the authors in the other sections. We will also describe the national and international approaches we must take to protect our climate, the environment and human beings. One key question here is the following: Which far-reaching social changes will sustainable development unleash, and which new conflicts regarding fairness and distribution will emerge as a result?

Pro or con

In his contribution, the sponsor of the Alternative Nobel Prize, Jakob von Uexküll, has presented readers with a stark choice: Do they want to be part of the solution or part of the problem? He is calling on the younger generation to play an active part in change. Yvonne Zwick, spokeswoman for the German government's "Sustainable Development Council" *("Rat für nachhaltige Entwicklung"),* argues that a sustainable world requires people who can think laterally and contribute ideas: young people who play a constructive part in discussions and finding solutions, and citizens who examine and question the implementation of sustainability promises made by businesspeople and politicians.

We then examine the transformation processes in Ecuador and Bolivia, which are significantly

characterised by the South American countries' own view of their own indigenous roots. This focus here is on the fight against poverty and social inequality in these counties, as well as their critical attitude towards Western development models and capitalist modes of thinking (see contributions by Dr Thomas Fatheuer and Prof Alberto Acosta).

In his contribution, forester and wood construction entrepreneur Dr Erwin Thoma provides insights into the world of the forest, where the conceptual roots of sustainable development also lie. Thoma considers trees "social entities" that communicate busily with one another and uphold a "partnership of peers". But can trees really be compared to a school class or a football team? "Yes, indeed they can," opines Erwin Thoma, because forests are good examples of a functioning community spirit. In his interview, Norbert Schmelz tells us that being a forester demands much more than knowing about the trees and the animals of the forest, promoting their health and maintaining the equilibrium between living creatures. And Josef Gebbe from the "Noller Schlucht Learning Centre" *("Lernstadt Noller Schlucht")* uses the various teaching and learning pathways of the forest as a way of presenting educational approaches that allow young people to have an "original encounter" with nature once again.

In his interview, journalist Dr Fritz Vorholz explains why the permanent duel between the environment and business does not necessarily contribute to sustainable development, and what role politics has to play in this process.Furthermore, in this section we investigate the question of why mass media tend to report badly rather



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than effectively on sustainability topics, and how digital media influences this (see the contribution from Eva Mahnke). What role do various educational institutions play in sustainable development? This is the question addressed by Dr Marianne Dehne in her contribution. At the same time, she emphasises that "sustainability" is a topic that cuts across all others, one that should be integrated into all school subjects and at various places of learning – from nursery schools to senior citizens' academies – and not just as an ancillary knowledge package, but as a basic subject of debate. This makes the process particularly exciting and fosters participation. After all, the search for new and future-oriented models of civilisation and business lies at the core of the social "transformation" towards sustainable development. And this conversion requires a comprehensive and open-ended learning process for all of us.

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CHANGING THE WORLD TOGETHER – THINKING AND ACTING APPROPRIATELY FOR THE FUTURE

By Jakob von Uexküll



**"It is no use saying, 'We are doing our best.'
You have got to succeed in doing what is necessary."**

Winston Churchill

How can we describe the current state of the world without casting listeners into despair, but instead engender hope? I have already spoken about the challenges of our time in many places, and I have received very different responses. At a university in Canada, one student stood up and called out, "Thanks a bunch for leaving the world in such a mess(!)" In Bangkok, I spoke at an international school where most of the students were drawn from the Indian elite. They responded very differently: "Only Europeans think like that. We're optimists, and genetic technology will solve our problems!"

When the Club of Rome first warned about the "limits of growth" back in 1972 – more than forty years ago now – many people accused it of exaggerating. Nowadays, most people accept that the Club of Rome was right, even if some risks were overestimated and others underestimated. Many technologies have been developed with the intention of getting to grips with the challenges we are facing, but nothing has changed because the problems have burgeoned faster than the solutions. Each of us should ask ourselves, "Do I want to be part of the solution or part of the problem? Do I want to be a passive part of the solution, or do I want to work proactively to bring about changes?"

Today, some people think that our inactivity is accelerating global warming and that Planet Earth will end up becoming uninhabitable. There are researchers who fear this could be the case in only a hundred years. A contrary view is taken by various people, including Danish statistician Björn Lomborg. Although he is not a climate change denier, he does think that economic growth will not have any negative consequences. The idea goes like this: sea levels will rise and Bangladesh might be under water in a hundred years. But when we look at growth rates, that country will be as rich as the Netherlands by then and will be able to build dikes to protect itself.

This mistaken belief is based on the idea that Mother Nature will continue to provide the resources needed for economic growth. However, the preconditions for economic growth are a stable climate and a healthy environment. True strength lies in nature, not in people. At the moment, we are running up more in debt than we are generating in wealth. It is possible to



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negotiate about financial debts – but our children and our children's children will end up paying for our ecological debts.

You cannot negotiate with nature

There are some people who talk about measures to combat climate change by saying, "It's too expensive to do something now! We'll do it in the future when we're richer!" What they overlook is that if we continue to wreck the Earth, it may very well be that we will not be richer in the future at all. And there is no negotiating with melting glaciers. Destroying the environment to such an extent that the damage is irrevocable is tantamount to a crime against future generations.

Nowadays, there is a lot of debate surrounding our climate and energy costs: apparently renewable energies are too expensive. Aha! Fossil fuels are subsidised, but renewable energies are too expensive? Once coal has been burned, it's gone. Solar energy that isn't used today can't be used tomorrow either. The difference is that the sun and the wind are free. It would be crazy not to use them. However, whether something is economical or not is decided by those who hold positions of power. Theirs are not objective views, because cost/benefit analyses are a function of power. We must always consider what has been taken into account in these analyses, and what has been left out. The result always depends on what has been included in the analysis, and what costs are placed on the backs of future generations. However, there are many things that cannot be put off for the future.

In the Middle Ages, people had to speak Latin if they were to debate with the powers-that-were – the church. The same thing applies to the topic of finances today: there are only a few people who can speak and understand financial jargon. However, if you do not understand how money is created, you are powerless. The people who do speak the language of financial jargon do not want us to understand what they are saying. It is important that we engage in politics and distance ourselves from the prevailing cynicism. We have got to understand how politics works. In ancient Greece, those who involved themselves in politics were called *"polites"*, and those who did not were the *"idiotes"*.

Award-winning laws

Nowadays, there are best-practice examples in many areas. However, we do not just need best-practice examples, but best-policy examples as well. Parliamentarians often hear from governments: "That's not possible." This is why we need best policies to show that options do actually exist. It is very important to identify and disseminate a good policy. Laws are required to achieve



Aerial view of Bangladesh

change. After all, most people do not want to break any laws. That's why I founded the World Future Council (WFC) seven years ago. Members come from all four corners of the globe and the experts in the WFC are committed to thinking and acting responsibly and sustainably with future generations in mind.

The WFC has tasked itself with identifying and disseminating good laws. Every year, the "Future Policy Award" is given in a particular field; this is the equivalent of an Oscar for the world's best laws and policies. To date, this prize has been awarded for the exemplary policy on food security introduced by the Brazilian city of Belo Horizonte, Rwanda's sustainable forestry policy and the coastal and marine protection policy of Palau.

In 2013, the WFC organised a trip for African mayors to Belo Horizonte so they could see for themselves the food security programme in place there. This outstanding programme reduced childhood mortality in Belo Horizonte by 60 per cent within only ten years. It is regarded as the world's most comprehensive law relating to immediate action against hunger and a sustainable supply of healthy food. The World Future Council is also very active in the areas of climate and energy. For example, it has identified Germany's energy feed-in tariff law as an exemplary policy and is disseminating it internationally. This law was unknown in other countries, and in order to promote it more widely, the WFC first had to come up with an English term: "feed-in tariff".

Realistic solutions already exist

The challenges that we are facing today are intertwined with one another. However, thoroughly realistic solutions are available. 100-per-cent renewable energies could be achieved quickly; it is not impossible. Moreover, we should no longer be controlled by gross domestic product: There are other indicators that say a lot more about the situation in a country. Greater attention should be paid to these progress indicators. Together with six other organisations, the World Future Council forms part of the EU-financed BRAINPOoL project (Bringing Alternative Indicators Into Policy). This is intended to develop a fairer and more sustainable society by improving

World Future Council

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OUR AUTHOR

Jakob von Uexküll (b. 1944) is a Swedish/German author; holder of the Order of Merit of the Federal Republic of Germany; founder of the Alternative Nobel Prize (Right Livelihood Award); initiator of the World Future Council: www.worldfuturecouncil.org/



and spreading the use of alternative indicators of wealth.

How can we bring about change and become an active part of the solution? We can learn a thing or two from lobbying organisations. They are present where decisions are taken: in parliaments. Though this is often uncomfortable and unpleasant, that is how things can be changed. One person in the right place at the right time can exert a great deal of influence. It is a major problem that future generations do not have a vote even though they will be affected most by the decisions we make today. For this reason, our "Future Justice" commission is calling for ombudspersons tasked with protecting the rights of future generations.

The World Future Council was intensively involved in preparing the United Nations Sustainable Development Conference (Rio+20) held in Rio de Janeiro in June 2012. In the concluding document, the UN Secretary General was asked to present a report on solidarity between the generations and the rights of future generations; this was published in September 2013. The report sketches out various models for institutionalising the protection of the rights of future generations at the UN level, and above all it sets out the model favoured by the World Future Council: a dedicated UN High Commission.

Upcoming generations will have to face the question of whether they want to criticise, dream or work actively for change?

Links:

- An overview of the publications by the World Future Council can be found here: www.worldfuturecouncil.org/publikationen.html
- Publication on the topic of ombudspersons for future generations, “Guarding our Future How to include future generations in policy making”: www.futurejustice.org/wp-content/uploads/2013/04/Ombudspersons_for_Future_Generations_Broshure_WFC.pdf
- Club of Rome: “40 years Limits to Growth”: http://www.clubofrome.org/report/the-limits-to-growth/
- Overview of Björn Lomborg's publications: www.lomborg.com/publications
- Overview of the Future Policy Awards presented to date: www.worldfuturecouncil.org/fpa0.html
- Future Justice Commission: www.futurejustice.org
- BRAINPOoL: www.brainpoolproject.eu



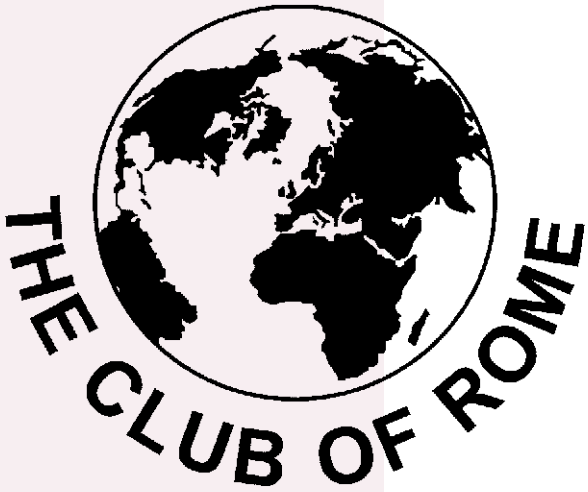
LEARN • UNDERSTAND • ACT

1. Jakob von Uexküll is a guest speaker in global demand.

a) What experiences did he have when describing the current state of the world?
b) What conclusions did he draw from this?
c) Carry out some online research into his biography and the institutions he founded.

2. The Club of Rome warned about the limits of growth back in 1972. The book is even regarded as the "original case study in sustainable development" and the "bible of the environmental movement".
Research this in the library or online. The following portal provides a good overview, for example: www.nachhaltigkeit.info.
Answer the following questions:

a) Who are the authors and who are the initiators, clients and sponsors of the study?
b) At the time, what predictions did scientists make about social developments?
c) What future scenarios did they developed based on their calculations? What specific approach does the study take compared to previous studies? What was the effect of the publication worldwide?
d) How do experts evaluate the future scenarios made in 1972 from today's perspective? Which predictions have already come to fruition and which are still regarded as probable in view of the next decade?
e) What do the authors of the study currently feel about their predictions, and how do they evaluate the actual developments that have taken place?
f) What significant social developments have taken place that the authors did not predict?
g) In the meantime, numerous new studies have been published by the Club of Rome, including a future forecast for the year 2052. Find out about this in detail and discuss the contents in groups..



3. Explain the relationships (as causalities or interactions) between sustainable development and climate protection. Represent this graphically as well.

4. Power questions

a) Discuss the author's opinion: Those who have social and economic power exert a significant amount of influence on the interpretation of social challenges and the best possible approaches to solving them.

b) Which social groups had the most power in various historical eras? Who do you think has the most power today?

c) What proposals does the author submit for approaching this problem, i.e. fostering greater justice, breaking up power structures and promoting and implementing the best solutions for society as a whole?

5. The author, von Uexküll, talks about a "crime against future generations".

a) Research the term "intergenerational equity" and draw up a list of reasons why current environmental destruction is a crime being committed against the generations to come.

b) There are various approaches we can take to strengthen the rights of future generations, e.g., through legislation and new UN institutions. Research this matter and discuss the various possibilities.

6. The author calls for people to play an active part in bringing about changes and being part of the solution.

a) Each year, the World Future Council awards a prize for the world's best laws and political ideas. Research current award winners and their achievements. What do you think an environmental law should include in order to be worthy of winning an Oscar?
Write your ideas down.

b) Uexküll says that it is necessary to be "in the right place at the right time" in order to significantly influence politics and business. Consider what opportunities you have to take an active part in social change towards a sustainable future. Carry out individual brainstorming and then combine your results. Design a poster for this as well.

c) Find out about politics in your local area. Where are decisions taken in your community? What laws about environmental and sustainability issues are currently being discussed in your region? Which actors exert significant influence on politicians? Select a local environmental issue that is close to your heart and commit to bringing it to public attention.

d) Don't just criticise; get involved. Be sure to also conduct research into options for joining a children's and youth parliament, or founding a new one in your community.

THINKING FOR YOURSELF – THINKING LATERALLY – COMMITTING YOURSELF: TO A WORLD WITH A FUTURE THAT IS WORTH LIVING IN

By Yvonne Zwick

When it comes to the topic of "sustainability", many companies, politicians and citizens feel that they will be subjected to a new "ecological dictatorship". However, instead of imposing requirements, it is more a matter of taking common decisions and the struggle to come up with solutions that will benefit not only the environment and the economy but also society in general. The "Council for Sustainable Development" works on behalf of the German government to contribute to a national strategy and identify central areas of activity. It regards sustainability as a call for commitment. Personalities are needed to play an active and constructive role in discussions and decision-making.

Rat für NACHHALTIGE Entwicklung

There is a principle in journalism that I regard as a guiding principle for enlightened citizens: "Don't wed yourself to any idea, not even good ones." This call is actually intended for journalists and encourages them to report in a balanced, critical and neutral way. It may well sound provocative if I now use it in the context of the noble and melodious goal of sustainability. Am I allowed to do that? I believe I must!

How often do we see advertising about sustainable products, sustainable clothing and green economic growth? Posters go up displaying that melodious word of: "sustainability". But when you ask what it means, there is often no answer. Or else the question is put off with the response that "it's all one and the same" – that sustainable products cannot be differentiated from conventional ones and are simply more expensive, that energy efficiency categories do not tell you anything and that you should simply uncritically place your trust in what companies do or do not promise. The main thing is that you are the one making the purchase! Consumption is apparently the most important civic duty.

Seduction by business

Even the supporters of the "Lifestyle of Health and Sustainability" (LOHAS), i.e. people who follow a lifestyle characterised by health awareness and healthcare as well as sustainability, allow themselves to be seduced by the successful consumer goods industry and marketing. And many companies do actually offer ecologically "sustainable" products at higher prices without the revenues being re-



turned to the producers and workers at the start of the supply chain.

Nevertheless, it is worthwhile asking what specifically a company does to increase the positive effects of its sustainability strategies. Do the measures contribute to allowing other people (employees, customers, suppliers and partners) to lead a good life, or are they merely intended to swell the company's own already well-lined pockets? We all bear joint responsibility in this regard, irrespective of whether we come from a developed, industrialised country or a developing economy, which nevertheless differs with respect to the tests that lie before us: We in industrialised nations must put pressure on our companies to take effective measures to minimise environmental and social harm throughout the entire wealth creation chain, and to allow economic participation in profitable business. But what role do developing and newly industrialised countries play?

OUR AUTHOR

Yvonne Zwick (b. 1976) is a theologian and is currently working as a spokeswoman for public relations at the Council for Sustainable Development. Her work focuses on sustainable consumption and lifestyles as well as corporate social responsibility (CSR and SRI).



INFO 1: TWO DEFINITIONS OF SUSTAINABILITY

From the report, "Our Common Future", by the Brundtland Commission, the World Commission on Environment and Development of the United Nations (1987):

"Humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs. […] Sustainable development is not a fixed state of harmony, but rather a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are made consistent with future as well as present needs." World Commission on Environment and Development, 1987.

From the preamble of "Agenda 21", the development and environmental policy action programme for the 21st century, which was decided by 172 states at the UN Conference for the Environment and Development in Rio de Janeiro (1992):

"However, integration of environment and development concerns [...] will lead to the fulfilment of basic needs, improved living standards for all, better protected and managed ecosystems and a safer, more prosperous future."

The concept of needs, for example, as expressed in the definition of sustainability offered by the Brundtland Commission (see Info 1) relates to needs that are essential for existence and survival rather than those of consumption that are linked to a certain degree of saturation.

"Time prosperity" and autonomy

Sustainable development significantly depends on the success of efforts to combat poverty in countries of the Global South. Because of this, the Council for Sustainable Development always asks the following question when dealing with the issue of how people can act in a more sustainable way: "What do we really need?" We are asking about the level of frugality and pragmatism in our lifestyle in the hope that the responses will lead to greater satisfaction, "time prosperity" and autonomy.

In poorer societies, it may even seem cynical to ask this question, and there is a risk of it being misunderstood. All the same, we took the step of working with partners on the Indian subcontinent to produce a shopping guide for sustainable consumption – the "sustainable shopping basket" – to suit needs there. Questions of religion and cultural identity played a major role in this. The Indian adaptation of the "sustainable shopping basket" focused on questions such as, "Which regional wealth-creation processes do we want to retain?" and "Which products and markets are so important to us that we should keep them?"

It is not only in industrialised countries but also in developing and newly industrialised nations that we must take steps towards sustainability. Many people might think this requirement sounds like a "dogma" or a "dictate". However, a look behind the scenes reveals many ideas and measures that are sensible and intelligent. I am thinking about initiatives for energy efficiency that allow for a lot of money to be saved, or community investments and innovative environmental technologies. Sometimes we are simply not brave enough to demand things and take bold steps. It is always easier to follow well-worn paths instead of trying unconventional things.

We are people blessed with the gift of reason and are capable of anticipating the effects of our own actions, playing them out in scenarios. In



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the age of the Internet and living in a "global village", scarcely anyone can still maintain that they do not know about the catastrophic effects our current lifestyle is causing. Of course, this primarily applies to managers in companies who factor this in to a certain extent and profit from it when they sign supply contracts to transfer their own responsibility for production conditions to southern economic areas with weak governance and inadequate control mechanisms, such as those relating to the rights of workers or environmental protection laws.

Markets and people

In my opinion, the character of business is to serve and we must remind business of this time and time again. If it does not serve the well-being of people, it loses its right to exist. No markets or the economy (not even the financial markets) can act by themselves; people, and the structures and processes they have created always stand behind them. This means that, no matter what our position and the hierarchical level on which we act, we are all personally responsible and are therefore accountable for our actions. However, we must also make sure that the political conditions are right for sustainable development.

In the globalised world, our actions have effects on all other regions of the world:

- The gulf between rich and poor worldwide as well as within developed or less developed societies threatens peaceful coexistence.
- Climate change and changes in ecosystems make societies more vulnerable.
- Population growth at the global level and ageing societies are presenting us with new questions relating to justice.
- Global wealth creation chains link questions of social justice and environmental protection between states and at the international level.
- The growing demand for foodstuffs impacts agricultural methods and production stages in agricultural companies and foodstuffs concerns, therefore also impacting the population and ecosystems right at the start of the delivery chain.
- Our lifestyles affect how we live together at home and in social networks that entwine the entire planet more and more densely with every generation.

Starting with ourselves

These challenges are a call for commitment, a call to action, lateral thinking and participation – sometimes even just by asking the right questions, listening and forming our own opinions instead of simply accepting statements made by others. The commitment to sustainability is all about starting with ourselves instead of waiting for "others" to move and change things. Anyone who makes changing their own lifestyle and their own way of thinking solely dependent on changes in the general conditions of the economy,



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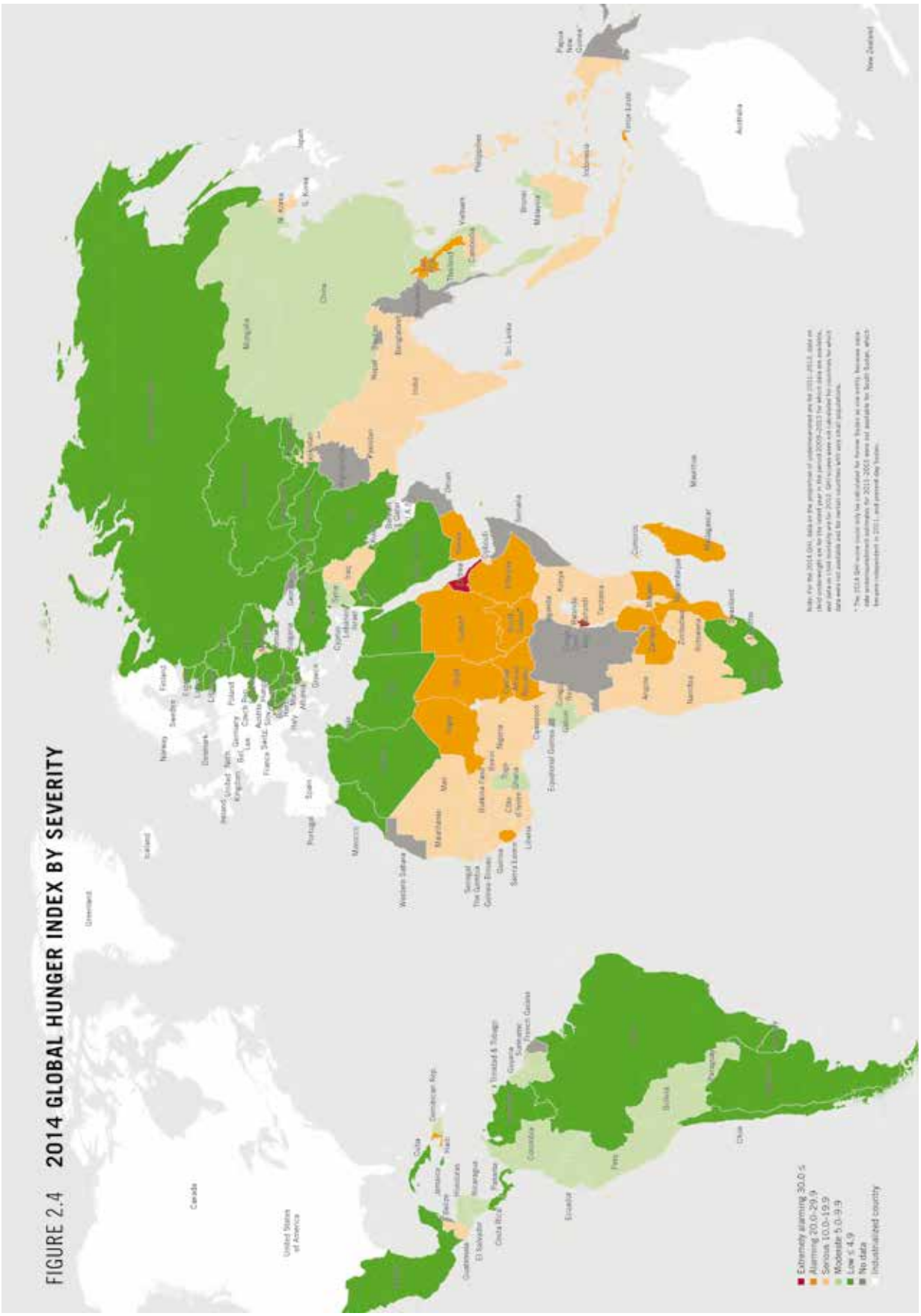
politics or society is adopting an apathetic and passive attitude that can never contribute to a solution.

Democracy thrives on participation, not "letting things happen". The reward is freedom, the right to self-determination and a life worth living. Our freedom is closely linked to our voluntary acceptance of values. Otherwise, we run the risk of destructive forces being unleashed. Figuratively speaking: A compass without a North will lose its orientation and lead us astray. Not only do we have freedom, we more importanly have a responsibility to shape our world and our future.

And we must build up a dynamic pressure at the same time! If we want to avoid becoming lackeys for the status quo, we must all challenge ourselves to act and react – as personally responsible beings, as religious people in relation to God and as social beings.

Links:

- www.nachhaltigkeitsrat.de
- www.bundesregierung.de/Webs/Breg/DE/Themen/Nachhaltigkeitsstrategie/_node.html



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INFO 2: KEY ASPECTS OF THE CONCEPT OF "SUSTAINABILITY"

- **Sustainability:** Intergenerational justice and upholding the natural foundations of life, fighting disease and protecting against catastrophes
- **Social aspects:** Intergenerational and global justice, satisfying basic needs and fighting poverty; equality of opportunity, participation and social cohesion instead of alienation and exploitation
- **Economy:** Competitiveness and innovative capability, improving the quality of life and social well-being
- **Ecology:** Climate and environmental protection, biodiversity, careful handling of natural resources

INFO 3: "SUSTAINABILITY" AS DISCUSSED IN POLITICS STANDS FOR:

- a vision of the relationship between people and nature, between individuals and society
- an international political programme of action
- a guiding principle for politics
- a potential political arena (department) of governments
- slogans for action and specific strategies

LEARN • UNDERSTAND • ACT

1. Ask critical questions about the term "ecological dictatorship". In what context is this term frequently used and by which actors? Against whom or what is the term directed?

2. Together, discuss the postulations of "thinking for ourselves", "thinking laterally" and "showing commitment" expressed by the author. Be sure to refer to specific everyday situations and give straightforward examples. What do you think makes it more difficult to apply these characteristics?

3. Find out about the areas of responsibility and the concerns addressed by the "Council for Sustainable Development". Research this online.

4. The consistent repetition of the question, "What do I really need?" is used by the author in the introduction as a way of bringing about a more sustainable lifestyle in consumption societies.



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a) Use this question to think about various situations from your everyday life.

b) In small groups, work out questions for finding out or even measuring: 1. the well-being; 2. the wealth in the form of "time prosperity"; and 3. the sense of autonomy people have in consumer societies. Consider individual ways of improving on these three values and making a frugal, pragmatic lifestyle more attractive. Discuss your ideas with the full group.

c) Be sure to take a critical look at the mechanisms of the "green" advertising industry and promotional messages for "sustainable" products by using specific case studies.

d) What opportunities are available to politicians and what are their obligations in encouraging citizens to lead a more frugal lifestyle and to make product advertising more transparent? Or do politicians follow quite different rules and interests than those posited by the Council for Sustainable Development? Discuss these two questions intensively.

5. Approaching the principles and objectives of the definition of sustainability provided by the Brundtland Commission would require a fundamental change in the global economy.

a) Discuss this with one another. What general conditions and fundamental ways of thinking would have to change? Research this online to gain an initial overview. What results do you come up with?

b) Can you name some effects that would change our everyday actions directly in this regard?

6. The author regards it as essential to link the journalistic approach of J. Friedrichs to "[not] wed yourself to any idea ..." with the goal of sustainability. Organise a discussion forum at your school or in your youth association on this matter.

a) Select a suitable slogan for the event with regard to the author's demand, e.g., "Controversial – non-partisan – green", and look for a place to hold the event.

b) Consider who should be on the list of speakers at your forum.

c) Design a poster for the event and send out invitations, including to the local press!
d) What is your agenda for the event? Look for suitable presenters. Perhaps you could get your event recorded on video. Obtain support from the *youthinkgreen* office.
e) Evaluate the event and publish your results.

7. Carry out a survey at your school under the title, "Our consumption – what do I really need?"

a) Design a survey questionnaire for this, which could contain the following categories – age, gender, town, clothing, flat/room, personal hygiene, mobility, foodstuffs, digital media, culture, attitude towards branded products and advertising, purchasing behaviour, criteria for selecting products, etc. For example, get advice from social science students or analyse the design of previous studies with similar questions.
b) Draw up a procedure for the survey. Perhaps an online survey with tools such as Survey Monkey, etc. would be suitable?
c) After the survey, draw up lists of results and evaluate them. What key statements can you draw from these lists? What conclusions can you draw? Discuss your evaluation with experts.
d) Publish your activities in detail in the school newspaper. You may receive letters from readers; answer them and invite your readers to participate in a discussion. Send the results to the youthinkgreen office.

8. Sustainable shopping baskets

a) Draw up an information sheet on the topic of "sustainable shopping baskets". What aspects can and must play a role in this?
b) Distribute it at your school and in your community (pedestrian areas, markets, outside shopping centres). Take the opportunity to exchange views.



DO WE HAVE A RIGHT TO A "GOOD LIFE"?

By Dr Thomas Fatheuer

A few years ago, two countries in South America, Bolivia and Ecuador, caused consternation: They enshrined the right to a "good life" – "buen vivir" in Spanish – in their constitutions. But what is this all about?

Bolivia and Ecuador are located in the Andes, and both countries contain parts of the Amazon rainforest. And the descendants of indigenous peoples – formerly known as Indios – make up a large part of the population of both countries. In Bolivia, they even form the majority. The philosophy of buen vivir – Sumak Kawsay in Quechua, the most widely spoken indigenous language and translated as "good life" or "good living together" in English – has its roots in the ayllu, the communities of indigenous life.

In 2008, Sumak Kawsay was anchored in the constitution of Ecuador as a state objective (in the Preamble and Article 3). Alberto Acosta, then-president of the Constitutional Assembly, is regarded as the pioneer of buen vivir. In 2009, the concept was also adopted into the Bolivian constitution under the name "suma qamaña" (in the Aymara language) (Section 1/Sub-section 1/Chapter 2/Article 8). How do such concepts, which



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are based on indigenous traditions, end up in modern constitutions? And is this more than just a crazy idea? Can a modern state actually guarantee a good life? To answer these questions, we must first take a look at the history of Ecuador and Bolivia.

A difficult inheritance and new beginnings

South America was conquered and subjugated by the colonial powers of Spain and Portugal in 1494. Indigenous cultures and languages were suppressed. Entire indigenous tribes died out as a result of violence and disease brought by the colonists from Europe. Even after Ecuador and Bolivia achieved formal independence in the mid-19th century, warfare, repression and violence remained the order of the day. From a Western perspective, these countries were regarded as poor and "underdeveloped" during the 20th century.

In the 1980s and 90s, the countries had to struggle with high rates of indebtedness, political unrest and inflation. In their efforts to achieve political and economic stability as well as greater prosperity, their governments were heavily influenced by instructions from international organisations, such as the International Monetary Fund (IMF). Social reforms fell by the wayside. Ownership and income were distributed extremely unequally amongst the population at the start of the millennium. Far-reaching social upheavals started with the electoral victories of Evo Morales in Bolivia (2006) and Rafael Correa in Ecuador (2007).

Both Morales and Correa broke with the neo-liberal policies of their predecessors. They significantly increased state revenues, especially from oil and gas exports, and financed social programmes for the poorest. During the "neo-liberal" era under the influence of the IMF, dismantling state aid was the order of the day, whereas now the state intervened more strongly in national development policies. The results speak for themselves. Compared to the time before the Morales government, the number of undernourished people in Bolivia has fallen by one-third.

Another primary success seen is the reduced poverty rate. According to UN reports, the number of people living in extreme poverty – those living on less than 1.25 US dollars per day – in Ecuador has declined from 19.4 per cent (2002) to 10.1 per cent (2011). No wonder both presidents have since been re-elected; even after many years in office, they continue to enjoy great popularity, especially amongst poorer population groups. The fact that Evo Morales' election in Bolivia was the first time an indigenous representative had ever been elected president is also of immense symbolic value.



Evo Morales © Valter Campanato/ABr.

Incorporating buen vivir into the constitutions of Ecuador and Bolivia underscores how the countries have broken with their colonial and neo-liberal past. It represents part of their attempt to find indigenous solutions to their problems and to pursue a path that calls on their age-old traditions instead of being directed exclusively by the instructions of international organisations or Western countries. Europe and the US are no longer regarded as models because people in Latin America have also seen the less attractive sides of the development models pursued by industrialised nations, which frequently entail the destruction of natural resources.

Buen Vivir – more than social policy

A further important innovation that took place alongside the incorporation of the principle of buen vivir in both countries' constitutions involved strengthening the rights of the indigenous population. Bolivia and Ecuador now call themselves plurinational states – states in which various population groups (must) live together with equal rights. Indigenous peoples now have the right to speak their own language and to be taught in this language in schools. They can also exercise their own traditions of jurisprudence as long as they do not infringe upon human rights in the process. Even land rights for indigenous peoples are guaranteed in the new constitutions.

According to the tradition of indigenous peoples, buen vivir places living together well in communities and with nature at the centre of attention. Buen vivir is not about the good life from an individual perspective, nor is it about living better and having more than other people; instead it is concerned with retaining or improving the quality of life in harmony with all other living things. Buen vivir calls on traditions, on a past that still affects the present. In addition, this "cosmovision" relates to an ideal status, not an actual, extant reality. However, now that buen vivir is anchored in law and is understood to mean, "living together in diversity and harmony with nature," – as is written in the Preamble of the Ecuadorian constitution – real changes are coming about as described.

OUR AUTHOR

Dr Thomas Fatheuer (b. 1953) is a social scientist, journalist and independent consultant. He has lived in Brazil for almost 20 years, and was the Jead of the Heinrich Böll Foundation office in Rio de Janeiro until 2010. His latest book is entitled, New Economy of Nature (Neue Ökonomie der Natur).



Recognising the rights of nature

Whilst Christian, Western tradition is characterised by the guiding philosophy of "making yourselves masters of the Earth", nature is honoured as a kind of mother in South America. The Pachamama is an all-powerful deity who gives life and nourishes the inhabitants of the Earth.



Pachamama-Statue © Carlos A. Barrio



The constitution of Ecuador expressly refers to Pachamama, who "reproduces and realises life" (Art. 72). Based on this impression of Pachamama, the principle that nature has rights has been anchored in the constitutions of Ecuador and Bolivia.

Although many people may think it absurd, this idea is upheld in many other cultures and has even entered the current debate in Europe. For example, it would specifically mean that the rights of residents would have to be considered in the planning of a major project, such as building a dam or a motorway. Even the right of nature to remain intact and animals' rights to life would have to be involved in the planning process. Indirectly, specific rights of nature have already been anchored in European legal systems, such as by prescribed goals of state environmental policies like the protection of endangered species and maintaining biodiversity. Civil society groups and organisations in the Western world, such as PETA, have conceded that animals possess their own dignity, which they believe must be upheld.

A brief reality check

Including buen vivir in the constitutions of Ecuador 2008 and Bolivia in 2009 has not transformed these countries into "paradise", nor was this to be expected. And despite major successes in combating poverty, these countries continue to be scourged by social and environmental conflicts. In terms of everyday policy, buen vivir competes with many other principles and projects issued by these governments. For example, construction of a road through the Amazon region in Bolivia led to violent protests by indigenous groups from the affected Tipnis region.

In Ecuador, the government has adopted the suggestion made by social movements not to extract crude oil from the Yasuni Park rainforest region. This decision was to be conditional upon appropriate compensation by the international community – half of the expected oil revenues. The benefit for the climate and ecosystems would have been significant, but despite stong international support, the amount demanded by the government was not raised, and the initiative failed.

Will Ecuador and Bolivia be able to find their own path that does not copy the model of industrialised nations, but nevertheless permits a "good life"? The principle of buen vivir does not offer any definitive answers to this question. On the contrary, discussion of this indigenous philosophy of life contributes to this question being raised once again. The break with the colonial past, the attempt to take new paths, valuing their own traditions – all these processes are fundamentally linked to the idea of a good life.

It is quite clear that the content of a constitution cannot be implemented from one day to the next. The constitutions of Ecuador and Bolivia are

explicitly understood to be "transitional constitutions", representing a kind of "road map" (quotation from Alberto Acosta) for change, rather than providing a description of social reality. And even if the governments of both countries do not always live up to the high ideals of buen vivir, indigenous groups and environmental organisations have been able to strengthen their negotiating position thanks to these new constitutions.

Buen Vivir – can it be implemented everywhere?

The developments in Ecuador and Bolivia are being followed attentively by many other countries worldwide. The idea of buen vivir has its finger on the pulse of a worldwide debate on how long growth can continue and whether the idea of development needs to be fundamentally reconsidered. After all, the dangers facing the climate, nature and humanity which are associated with economic growth in industrialised and newly industrialising countries have become disproportionate.In that regard, it is encouraging that approaches to solutions are not coming solely from the "rich North", but are also being instigated in countries such as Bolivia and Ecuador, from where they have spread into the international sphere.

At the World Social Forums held in 2009 and 2010 in Brazil, a call was made for the "good life", and buen vivir was discussed widely and internationally as an alternative principle. Buen vivir steers our attention towards the important recognition that the attitude of "always wanting more" is unsustainable. Instead, we need to adopt a new understanding of what a good life me-



INFO: CENTRAL ASPECTS OF THE PRINCIPLE OF BUEN VIVIR:

- Living well does not mean having more. The riches that are worth striving for are not material wealth, but the quality of our lives together.

- Buen vivir brings our relationship with nature to the fore. Living well also means living well in harmony with nature, maintaining habitats, not over-exploiting resources like forests and fish stocks, but protecting them instead.

- The principle of reciprocity or mutual aid is a central one, both in terms of the relationship between people and the relationship between people and nature. Instead of a strong hierarchy, a system of social classes or superiority and inferiority and the alienation and exclusion associated with this, relationships that are interactive and on an equal footing provide structure for human communities as well as mutually supportive relationship.

- Buen vivir counters the idea of linear development from A to B and the desire for continuous growth. Instead, proponents of buen vivir are pursuing the goal of creating and maintaining a harmonious state of affairs – an equilibrium between giving and taking.

ans. Buen vivir stirs up many questions that the former president of Germany, Horst Köhler, once formulated in his opening address to the "Future of the Modern" podium discussion:

- "How much individualism is good for us – and at what point does it flip and become destructive egoism?
- Which ethical guiding principles do science and business need – and who can impose them?
- What does progress mean – and what goal should it pursue?"

Buen vivir is not a new doctrine of salvation that aims to define everything that makes up a good life is. Each society and each nation must define this themselves, and above all it must strive for solidarity amongst people and for harmony with nature – that is the central message of buen vivir.



POLITICS IN PRACTICE: CREATING NEW WORLDS WITH "BUEN VIVIR"

By Alberto Acosta[1]

In 2008, the principle of "buen vivir" provided us with the opportunity to steer the country's social development in a new direction as part of the constitutional assembly in Ecuador. In the context of this search for a new social order, the opinions of the indigenous peoples of Abya Yala (what America was called prior to Hispanicisation) were able to flourish and blend in, sometimes even together with ideas that were critical of globalisation and growth. Writing buen vivir into the Ecuadorian constitution as a state objective represented our attempt to maintain the lifestyle of indigenous communities and integrate them into modern forms of society without attempting to idealise them in the process.

However, buen vivir is by no means a Latin American phenomenon, nor is it a mere figment of the politics of Andean countries at the start of the 21st century; instead it is part of the search that has been ongoing for thousands of years – seeking human lifestyles around the world that allow

1) Translation by Thomas Lozano as part of the PerMondo Initiative. PerMondo is supported by the Mondo Agit translation agency. Editorial revision: *youthinkgreen*.

for freedom and living in harmony with our fellow humans and with nature. Similar ideas for a good life are also apparent in the philosophy of Aristotle and other thinkers all over the world. From our perspective, what is special about the ideology of buen vivir is that it comes from groups living in isolation, meaning it was neither influenced by the major intellectual currents of global policy and global business nor by Western capitalism or the various embodiments of socialism.

Yet enshrining the philosophical convictions of the good life in the constitutions of Ecuador and Bolivia does not mean that "buen vivir" is also being put into practice there. In the current political debate, "buen vivir" continues to play a subordinate role, even to the extent of being muted altogether.

Nevertheless, its role as a model for helping us rethink dominant development theories and Western methods of progress persists, and it continues to provide us with alternatives to the modes of business and life as practised in industrialised nations. This is because the current global system promotes poor development that is heavily oriented towards accumulating material wealth; this system must be replaced by other, more complex attitudes towards wealth and poverty. Buen vivir encompasses a wide variety of philosophies for human development in and with nature; the idea of a life undergoing continuous construction and reproduction. Other core aspects of buen vivir are concerned with sharing resources and gifts and an openness towards other cultural influences and civilising progress.

However, a change in civilisation along the lines of buen vivir will not take place on its own. To do this, we need to adopt a socio-biocentric approach, on the basis of which we accept that nature has rights, and is no longer regarded as mere property. This is based on the understanding that all forms of life have equal value, though this does not mean that all are the same.

Anchoring and protecting the rights of nature requires a new definition of state citizenship based on a social and environmental foundation, and expands upon the Western understanding of justice that has prevailed so far.

OUR AUTHOR

Alberto Acosta (b. 1948): Ecuadorian economist and intellectual; Minister for Energy and Mining in 2007; President of the Constitutional Assembly in Ecuador in 2008; Presidential candidate of the Pachakutic Party in 2013; Professor at the Facultad Latinoamericana de Ciencias Sociales.



© Alberto Acosta



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1. "Buen vivir" (good living together) has been anchored in the state constitutions of Bolivia and Ecuador as a state objective.

a) What circumstances and conditions made this unusual occurrence possible?
b) What signals and innovations are based on the adoption of the principle of buen vivir into the constitution? Address these points.
c) Differentiate between the current political style of these two countries from that of a neo-liberal policy.
d) What differentiates "buen vivir" in the community from a good life from an individual perspective?
e) What are plurinational states?

2. In South America, nature is revered as a kind of mother.

a) What is "Pachamama"? Research this online.
b) Explain the conflicts involved in upholding the rights of nature that are anchored in South American constitutions, and provide examples. What is your opinion about this?
c) To what extent do vague points of reference to the principle of "buen vivir" exist in European legal systems? Should we leave it at that, or do we need a stronger legal basis for protecting nature? Carry out a pro/con discussion about this.

3. What has the principle of "buen vivir" achieved in these two Andean states? What competition does "buen vivir" face in current day-to-day politics?

4. Can such a principle also provide a valuable and realistic guiding principle, or even a practically oriented model, for other states or communities? If yes, under what circumstances?

5. "Buen vivir" – a new "cosmovision", or one that has long been known?

a) Discuss the central aspects of "buen vivir" in your group.
b) What ideas, suggestions and objectives of "buen vivir" could enrich your life and should form a greater part of our society?
c) Carefully re-read Alberto Acosta's conclusion. He calls for a "new state citizenship". What form could this take in order to protect the rights of nature more effectively? What changes would that cause in your everyday life? Write a position paper about this.



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6. "Nature has rights, too – not just us!" could be the title of your appeal. Publicising this issue of anchoring the rights of nature in law through an exhibition for the whole school might also be a goal worth pursuing.



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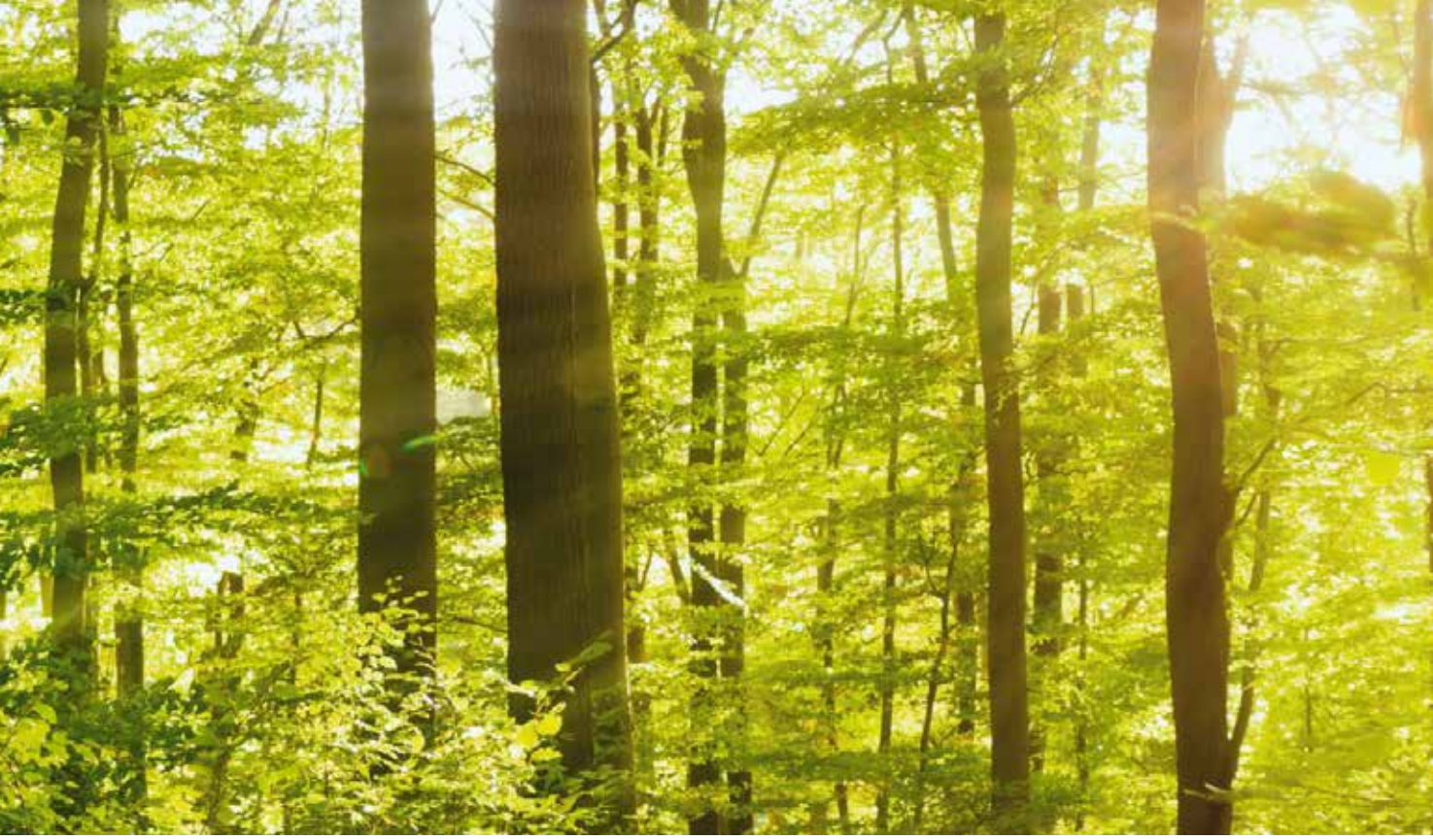
THE FOREST – A PERFECTLY COORDINATED TEAM

By Dr. Erwin Thoma

Trees have their very own language. By emitting scents and using different biochemical processes, they are able to warn one another about dangers like bark beetle infestations. They share nutrients fairly with their offspring and exchange information about the weather. I consider trees to be social beings that employ their strengths and knowledge for the benefit of their neighbouring trees, and maintain a partnership of peers through a mutual give-and-take in a way that should ideally be the case amongst the members of a school class, a well-practised football team or a village community.

Many students who move up through their school classes preparing for later life often hear the following warning from parents or teachers: "Work hard in school because, without good marks and a decent transcript, your chances of finding an apprenticeship or place at university will be much slimmer." The pressure of competition for good marks is intense. Teaching focuses almost exclusively on class projects and exams, parents pay for extra-curricular tuition, young people sacrifice a large part of their leisure time and neglect their friendships and hobbies. And all of this with the aim of succeeding in a school system that is geared towards uniformity and performance.

Is it really the best thing for our society for teachers to open educational doors to straight-A students? What paths and possibilities for development are students with average or poor results left with? Has anyone paid attention to the talents of



these young people, shown them appreciation and encouraged them? Isn't a student who is particularly keen to help, friendly and compassionate just as important to a class as a mathematics prodigy? Do the abilities of young people who have a big heart for plants, animals, music or painting attract any recognition in everyday school life?

The various talents of trees

At this point, I do not want to provide any answers. Instead I would prefer to give my readers an insight into the plant kingdom and the world of the forests. It may be that some of you will regard this thematic diversion as strange at first. However, if you take a closer look you will soon discover that the many different trees in the forest form a similar community to that of children in a school class.

If you like, trees are beings equipped with a wide variety of talents. Each type of tree can do something particularly well – something that is essential for all the others. For example, there are trees that can grow in even the dampest bog. Alders root and thrive in standing water and mud, where the roots of all other trees would rot away. As the years go by, alders pump away the moisture until other trees are able to use the dried-out bog as a habitat.



© Erwin Thoma

And larches and oaks are particularly resistant to storms. Their deep, strong roots mean they are able to withstand even the fiercest hurricanes. With their deep roots and high branches, they break the force of the wind, allowing weaker trees to withstand the storm unharmed. Spruce trees, on the other hand, have shallow roots and are easily blown over in storms. If they are surrounded in the forest by deep-rooted larches, they are able to live more securely and for longer.

In addition, there are trees that are so valuable and useful because their leaves create particularly nutritious top soil (humus), which provides plants and animals with a wealth of nutrients on the forest floor. This is why foresters also call the copper beech the "caring mother of the forest". Its valuable humus forms the "power snack" for all other woodland plants. And then there are trees like the Swiss stone pine that can survive even the iciest and coldest conditions. They form forests in the highest mountains, providing shelter for chamois to able to survive the bitterly harsh winter. Others, such as the pine, withstand droughts and periods of intense heat on the bare, stony gravel soils of south-facing slopes exposed to the sun.

"Pioneer plants"

If soil erosion from a natural catastrophe has destroyed the majority of the humus, nature helps itself using "pioneer plants". These are particularly fast-growing, frugal plants that adapt to extreme conditions, for example, birches, alders, rowan trees and willows. They are tasked with maintaining and preparing the soil before handing them on to other tree species. However, their particular speed and versatility in colonising such locations means that these pioneers usually only live for a short period. Those with the quickest start run out of steam first.

Listing the particular capabilities of trees can fill an entire book. However, even these few examples show that the particular qualities and abilities of individual species are unbelievably valuable for all others. In the forest, the idea that the alder, which dries out marshlands, is any more important than the fir tree that offers sufficient nutrients for all soils is not an obvious one. No. Without exception, they are all equally good, worth the same and of equal importance, without any ranking or weighting. All that matters is that each tree takes its place where it can make use of its abilities and provide a service to all the others – in the service of the forest as a whole. If you will, the forest is like a well-practised football team: Eleven goalkeepers would be just as unable to win a game as would eleven strikers. The skill of a good forester is thus to recognise the soil, the climate and all the requirements in the places where he or she is working. Then, he or she needs to select a team made up of the appropriate tree species to meet these requirements.

The trees have evolved to maintain good neighbourly cooperation and even friendships. This is the only way they have been able to form a stable living community over centuries. This is the only way they can survive heat and cold, drought and floods, lightning and hail. Friendships amongst trees may sound like a fairy tale or something unreal yet the latest scientific research shows that trees have astonishing abilities. For example, trees busily communicate amongst themselves. However, they do this in a language that we humans have not been able to hear before.

OUR AUTHOR

Dr Erwin Thoma (b. 1962): Austrian forester, journalist and manager of a wood construction company. He builds houses exclusively from wood – without glue, nails or chemicals. His book, "The Secret Language of Trees" (Die geheime Sprache der Bäume), is a best-seller.



© Jakob Hirsch



© Klaus Fahlbusch

The "Wood Wide Web"

The roots of most plants and trees are connected to one another by what are referred to as mycorrhizas, enormous underground networks of symbiotically intertwined roots and fungi. They can connect trees together in the forest over a distance of 30 metres, and the trees use this network to send important information using biochemical stimuli. For example, if a spruce tree is infested with dangerous bark beetles, it immediately informs its neighbouring trees so that they can generate defensive substances against the bark beetle before it strikes. This information is passed through the air as scent molecules – volatile organic compounds –as well as through the network of roots in the soil. As a result, trees invented the www (in this case: wood wide web) long before people did; it is a network they can use to communicate easily. Dangers are announced, and common survival is organised.

Biologists have now found ways to listen to trees using electrical devices, probes and sensors. The ultrasonic signals that are recorded can be converted into sound electronically, producing quite varied clicking and cracking noises. Biologists refer to this procedure as "sonification". They are decoding these noises and are able to hear, for example, when a pine tree is thirsty because the flow of water from the roots to the needles has been interrupted, which produces small cracking noises in the ultrasonic range.

Foresters and biologists have long known that trees that are transplanted from their original site to a new one suffer "transplantation shock". It takes them about eight months to be able to communicate with the trees in a strange environment. If the tree is transplanted back to its original location within the first two or three months, the exchange of information succeeds quickly because they have not yet forgotten their shared tree language during this time. This is comparable to the experience that people have in foreign countries when they do not understand the language and undergo "culture shock".

A perfectly laid table

Trees are social beings! This is demonstrated by the fact that take care of the young, upcoming trees that have sprouted from their own seeds: as long as young trees have not yet created their own offspring, meaning that none of their own children are growing amongst them, they attempt to grow as quickly as possible in competition with their neighbours. Nutrients are drawn from the soil as quickly as is feasible. However, as soon as offspring sprout from their own seeds, the old tree begins to restrict its absorption of nutrients in order to share the well-laid table with its children, so to speak. All these



© Erwin Thoma

examples are only a small section of the life of trees. Although there is also a merciless competition for sunlight, water and nutrients in the plant kingdom, plants ultimately count much more on cooperation and working together, which benefits all of them.

The forest's trees form a community in which there is a division of labour and a perfectly circular economy. Neither rubbish nor waste is produced. Isn't this an ingenious and sustainable system nature has invented compared to our current disposable society? Even when it comes to maintaining a world in which the next generation will be able to live worthwhile lives, the trees of the forest also show us a principle that is truly appropriate for their grandchildren.

Forests as sources of healing

Furthermore, trees contain many remedies that can be used for helping people in many situations. For example, lime blossom tea helps to combat colds; it has an anti-inflammatory, calming and expectorant effect. Larch sap, a yellowish-brown liquid with the consistency of honey, is a tried and true remedy that is used in skin creams and lotions, for example, because it promotes circulation, disinfects and heals wounds, alleviates pain and has a warming effect. Larch sap ointment also helps with rheumatic ailments and stimulates the body's immune system. The natural healing trees provide represents a valuable and helpful supplement to conventional, mainstream medicine for many people today.

Trees are a treasure trove that need only be uncovered. It is well worth taking a walk in the woods and spending time under a tree, observing it carefully, sensing it. If you embrace a tree, kiss the earth and laugh every day, you will find yourself living in a world with greater trust, love and gratefulness. If you place your trust in trees, they will support you. And, as a renewable raw material we can use for our homes, it is worthwhile using wood to a greater and greater extent in our lives instead of using polluting plastics.



© Gregor Sieböck

INFO

Being a tree, as is stated in the film "The Secret of the Trees" by Luc Jaquet means "living without moving". Instead, trees allow their seeds to remain dormant in the soil for years until the moment comes when they can sprout again.

Human beings have existed in this world for about five million years. Trees, on the other hand, have been living on the Earth for more than 350 million years. We should learn from the wisdom and survival skills of these plants so that we too can find mutual appreciation and well-being in society. In schools, for example, we should recognise the different talents and individual skills of students, encourage reflection and empathy and foster mutual exchanges with one another. In preparing for the complex requirements of life, this approach would certainly be better than simply learning by rote in order to get good grades.



© Fred Kobsted

Words from the wise man: Tatanga Mani

"Do you know that trees talk? Well, they do.

They talk to each other,
and they'll talk to you,
if you will listen.

Trouble is, white people
don't listen.

They never listened
to the Indians,
and so I don't suppose
they'll listen to the other
voices in nature.

But I have learned a lot from trees:
sometimes about the weather,
sometimes about animals,
sometimes about the Great Spirit."

Tatanga Mani lived from 1871 to 1967, and was a member of the Indian Stoney tribe in Canada.



© Klaus Fahlbusch

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1. According to the author, trees are social beings.

a) What does he mean by this? Clarify this statement by providing examples. Explain the most important differences between plants and social creatures like animals and human beings.

b) To what extent is the comparison between a forest community and a well-practised football team appropriate? To what extent is it not?

c) What role does the information about the author's conception of the best possible way for parents to educate their children play in these comparisons?

2. In various situations, the author explains how the interactions that take place between trees function in the "social community" of the forest.

a) What arguments does he cite to support his assumptions, and which methods does he use for collecting proof?

b) If trees and the forest community are so greatly concerned with cooperation, as stated in the text, why is there any need for people to work as foresters? Form your own initial opinions about this, conduct online research or ask a forestry office in your local area.

3. "Trees are a treasure trove that need only be uncovered" is another quotation from the text.

a) What gifts, experience or wisdom are hidden in this treasure trove?

b) What paths can we take to uncover this trove and use the treasures sustainably to benefit our health? Clarify your statements by citing specific examples from everyday life.

c) What other benefits do people gain from trees aside from their immediate use as renewable raw materials (wood)?

4. What suggestions and points should citizens and institutions, especially schools, pick up and take to heart from the readiness to cooperate and the communicative behaviour of trees?

5. Role play: "The tree – my friend."

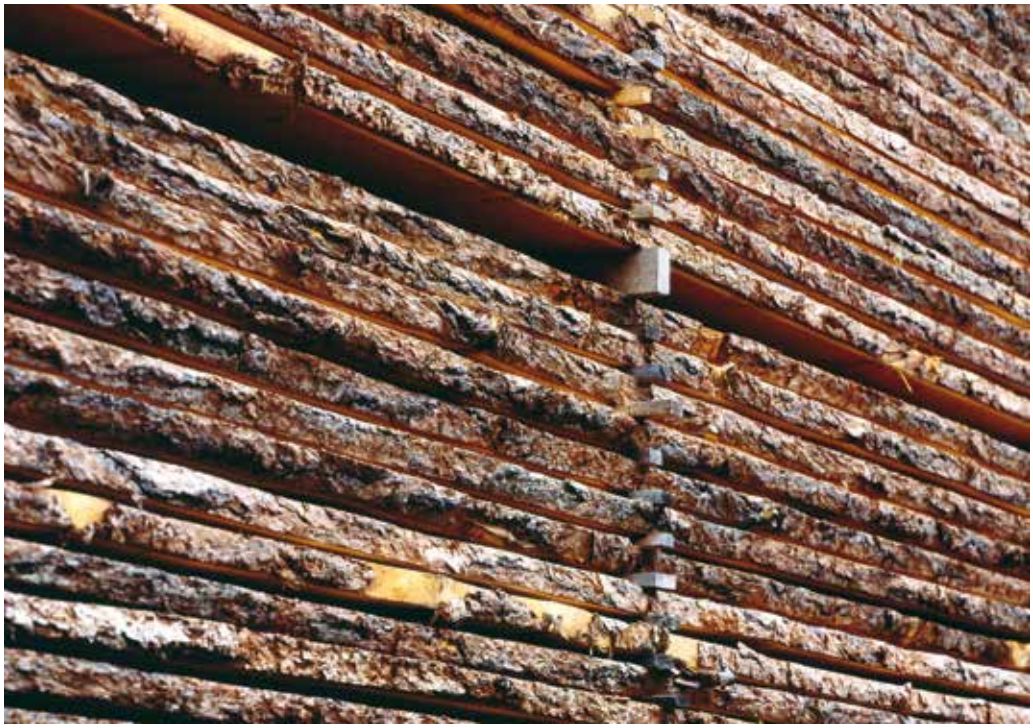
"The many different trees in the forest form a similar community to that of children in a school class," says Thoma. His book, The Secret Language of Trees (Die geheime Sprache der Bäume), provides with valuable ideas, suggestions and insights for role playing the scenario of "the tree – my friend". Once you have read it, you will find it easier to imagine yourself in the role of the "cooling maple", the "imaginative birch", the "motherly beech", the "mighty oak", the "cooperative spruce", etc.

All of these trees provide an important contribution to the natural community, natural medicines and the diverse ways in which they can be used. Presenting their habitats, functions and characters through acting or with a short animated video might represent an attractive challenge for you.

6. "Dear Tree..."

In Melbourne, Australia, 70,000 trees were recently provided with a registration number and their own email address. This allows the municipal forestry department to monitor the health of the trees more effectively – and respond particularly quickly to messages from citizens concerning possible damage to the plants, some of which are well over 100 years old. Many inhabitants even send digital thank you notes and love letters to the trees, which are answered – by the creative employees of the forestry department, of course.

a) Conduct more research about this project. Is this simply a media trick, or is there more behind the idea?
b) Assess the campaign – do these kinds of campaigns promote a relationship with nature and encourage people's interest in climate protection?
c) Collect ideas to strengthen people's awareness of the value of the forest and the abilities of trees even more within your immediate social group. Write a poem or even organise a poetry slam with a forest theme at your school.



© Erwin Thoma



LIVING FOR THE FOREST

Interview with forester Norbert Schmelz

Pictures: © Norbert Schmelz

Norbert Schmelz (b. 1961) explains why foresters are not loners, and why their work always requires them to think long-term. He is a forester in the Stemwede forestry district of the East Westphalia-Lippe regional forestry office, and is employed by the Wald und Holz NRW forestry agency.

***youthinkgreen*:** Mr Schmelz, what appealed to you about becoming a forester? Were there any particular reasons for your decision?

Schmelz: In my youth, I enjoyed playing outside and working in the fresh air. I was fortunate enough that a caretaker in our neighbourhood who was a trained carpenter and also owned a wood taught me about gardening, plants, wood, trees and even machinery and technology. This mixture prompted my interest in becoming a forester. After finishing school, I was able to acquire important skills ranging from logging to planting through a one-year forestry internship. Things got really interesting when I began formally studying forestry. My favourite memory is of my first plant identification exercises: Suddenly, everything you'd see had its own name.

youthinkgreen: Without doubt, your perspective on the forest has changed significantly over this time...

Schmelz: Yes, but it is not just the theoretical acquisition of knowledge about soil properties and climatic conditions that leads you to view the forest through different eyes. External circumstances and unforeseen events also played a central role in my case. When I started my course in 1986, we



used to place fresh wild garlic leaves on the bread rolls we had brought and eat them for breakfast out in the forest. After the nuclear catastrophe in Chernobyl happened in April 1986, we preferred to leave the wild garlic leaves alone.

youthinkgreen: What are the main tasks that occupy you day in, day out?

Schmelz: The forest I work in belongs to many forest owners, some of whom only own one hectare, and this may be spread over many forest plots. My task is to provide the forest owners with advice and assistance. Some of them want to know what type of trees they should plant next. Others need help with logging, whilst yet more want to make sure they get a good price for their wood. In all cases, I provide recommendations and indicate the pros and cons. In the end, however, the forest owners decide for themselves about the work that goes on in their forest. Often, I am asked to organise and carry out the logging as well as selling the wood.

youthinkgreen: What specific questions do forest owners ask you?

Schmelz: The main question is always how the forest should develop in future. Where is thinning out required? Where should we be starting to think about the next forest generation, and what species of tree should we plant? Spruce trees have problems if there is less than 700 mm of rainfall, so we jointly analyse whether different tree species, such as beech, European larch or Douglas firs can be planted, since they can better withstand the conditions. In that case, the forest owners have done everything to enable their descendants to manage the forest well. All these questions must be decided on in the present, but they have long-term effects. That is what makes working together in and with the forest so exciting.



Douglas tree trunks © Jürgen Wittler



Learning something new every day

youthinkgreen: What emotional connection do you have with the forests in which you work?

Schmelz: In the forest, I always have the feeling that I am in the right place. This is my job, I know what I am doing, but all the same I learn something new every day. Walking through the forest on a sunny day, looking at the spring



Problem: Bark beetle © Jürgen Wittler

blossoms to the right and left of the path and listening to the birds – it is a wonderful calling. I have particular cause to think about the increasing catastrophes affecting the forest, such as natural events like powerful storms or significant infestations of bark beetles, which are causing immense damage and changes to the forest. It certainly makes me very sad when a great deal of work has been invested in forest management during past several years and suddenly all the trees have been blown down or died off.

youthinkgreen: As a forester, you are also tasked with protecting the forest against interference by unauthorised people or by careless visitors to the forest. What conflict situations do you often encounter?

Schmelz: I can give you an example: Last autumn, I met a mushroom picker who had a huge pile of freshly picked mushrooms in front of him. He was busy sorting out the edible mushrooms in his collection using a book as reference. However, the majority were inedible, as he found out for himself unfortunately. During our conversation, I discovered that there were five other family members also working through the forest and also collecting all the fungi first without knowing which of them could be eaten. It was not easy for me to explain to the gatherer that fungi should only be picked specifically, and only for his own domestic consumption. He saw the forest as an inexhaustible reservoir, and did not know anything about the negative consequences of his actions.

youthinkgreen: So how can respectable behaviour in the forest be communicated and promoted effectively?

Schmelz: In my experience, most people only treat the forest without respect if they do not know any better. But of course, it is also a question of the right attitude. Many people, including students, do not appreciate that the forest is a "habitat", instead thinking of it as a general area to be exploited and where you can do what you wish. We can clarify this through direct, specific conversation on the spot. Most people understand when I explain what is and is not allowed in an objective way, and if they appreciate the reason behind the rules.

INFO

Even in the forest, there are "house rules" that must be followed by people so that all forms of life will be able to live together in the greatest possible harmony. What are the most important basic points here? You're bound to know them already. You can read about them, for example, in the woodland guide produced by the Reutlingen district, or on forestry office websites (search for "conduct in the forest").

youthinkgreen: How do you manage to get children and young people interested in and enthusiastic about the importance of the forest and your work?

Schmelz: One of my most important tasks is to guide school classes or groups of adults through the forest to teach them about the diversity



and the secrets of the habitat. However, very few children spend time in the forest nowadays. As a result, I focus my forest tours on experiencing the forest and I attempt to engage all of their senses. The children can smell the woodruff and garlic mustard. Wood sorrel tastes sour. It is easy to differentiate between oak and beech by touching the bark. It is even possible to experience a great deal by walking barefoot across the forest floor.

When the children are back home in their beds at night and can still remember the forest and feel it, then it was a good experience. This is how they get to know the forest as a place where there is a great deal to experience, but where they are only guests and must respect other plants and animals. If they can appreciate the forest, then they are also ready to play a role in its protection. Nurseries and schools can use the forest particularly well as a place of teaching, and indeed in every season.

Sustainability and climate protection in the forest

youthinkgreen: Public forest management organisations are continuously cutting jobs. What consequences do you fear will result, and what do you want politicians to do about it?

Schmelz: Set up properly, a public forestry management organisation must be capable of protecting the forest and coping with the variety of social requirements. To do this, however, it is necessary to have a clear political commitment to



this public task and for the forestry management organisations to be adequately provided for. It is particularly important for forest owners with small holdings that there be a competent forester available locally who offers their services at acceptable prices.

youthinkgreen: There are signs that our forests are already responding to global warming. How can forests be defended against climate change?

Schmelz: At present, we can only guess how our forests and tree species will react to global warming. As a result, I try to persuade forest owners not to rely on just one tree species, but to plant different species if possible to be able to effectively cope with local growing conditions. This can lend the forest a high degree of flexibility in the face of future climate changes.



© Peter Wicke

youthinkgreen: How important is sustainability for forest management nowadays?

Schmelz: 20 years ago, harvested timber was often left lying in the forest because there was no market for it. But today we must be careful not to remove too much biomass from the forest because high prices for fossil fuels has led to increased demand for firewood from our forests. Some firewood users even buy woodland as a financial investment and a stock of firewood. Each forest owner needs to ask themselves the following key questions: How much wood can I use from my forest? Should the thinner branches from the tree crown remain in the forest after thinning? Or can I convert them into wood chips for generating energy without removing too many nutrients from the forest?

All of these questions are highly pertinent at the moment because there is great demand for forest wood as a raw material. The 300-year-old principle of sustainability used in forest management has been and remains a very good guide.

RULES IN THE FOREST

© com,ma Werbeberatung / Umweltamt Bielefeld

"In the forest, every moment is a bit nicer. Help to keep it that way!"



Always remain **with your feed and your bike on the paths.** Off-side the roads the animal – and plant world will be considerably damaged.



The growing plants here are an important part of the forest's ecosystem. **Please do not collect or damage them.**



Unattended **dogs** can frighten animals and damage plants. Please take them **only for a walk on the paths.**



When you go for a walk with your dog, take special bags with you to **remove your dog's droppings.**



Please do **picnicking and camping only in designated areas** to avoid disturbance.



Lightening a fire of all kind is forbidden due to the danger of a bushfire. Having a **barbecue** is **only** allowed **in designated areas.**



Also visitors coming after you appreciate a clean forest. Therefore **do not leave any waste or rubbish** behind.



Mutual thoughtfulness when **cycling and hiking** are necessary for a **recreational stay.** Please remain fair!



Horse-riding is **only permitted** on the **designated paths** as well as on **indicated paths-ways** in maps.



The **driving of vehicles** of any kinds is only allowed for authorized people **on paved routes.**



Enjoy the sounds of the forest and give this opportunity to other people by **avoiding noises and loud music.**



Respect the nighttime peace in the forest. Noises of all kinds disturb the animals especially at night time.



PRACTICAL EDUCATION: TEACHING AND LEARNING PATHWAYS IN THE FOREST

"Do not experience the forest through reason, but learn to understand through experience"

By Josef Gebbe

Pictures: © Noller Schlucht

In 1986, the Noller Schlucht Learning Centre (Lernstandort Noller Schlucht) was established in a former hikers' cabin by the Osnabrück Association for Promoting Regional Learning (Osnabrücker Verein zur Förderung des Regionalen Lernens) in a former hikers' guesthouse. This is located on the southern slope of the Teutoburg Forest near Dissen in the middle of the Terra Vita nature reserve and geopark. The environmental education centre aims to provide children and young people with as active and responsible access to the natural and cultural features of the region and its resources as possible. This includes sustainable environmental protection, climate protection, species diversity conservation as well as intercultural and global learning in line with Education for Sustainable Development (ESD). Faced with rapid social change, the centre aims to once again enable "original encounters" with nature and increase motivation for learning.



© Bundesarchiv/Jörg Kolbe

1. Topic: Value of the forest

Is a forest simply ten thousand cords of wood?
Or is it a verdant delight for all mankind?
Bertholt Brecht

On the economic value of the forest

Standing before a beautiful oak, the forester estimates that its trunk is one metre in diameter and nine metres tall. It would produce furniture wood of the finest quality. He can charge 400 euros per solid cubic metre. The crown wood can be used as firewood, and would command a price of 960 euros. Less the costs of labour required to fell the tree, Müller earns a total of 3,260 euros. That is the market value of the oak.

And… Incidentally, the oak attracts more species than any other tree. The Middle Spotted Woodpecker, for example, finds almost all of its insect food exclusively under oak bark. Oaks are also well adapted to their location, which makes them more tolerant to temperature fluctuations than many other trees. That is important for a stable forest ecosystem in times of climate change. It is clear that the forest is worth more than the timber in the trees. But just how highly should this added value be estimated?

And… Each year, one tree produces three billion litres of oxygen and about 4,000 kilogrammes of organic matter. It filters up to 7,000 kilogrammes of dust and 70 cubic metres of water.

Or... Moss feels nice, as any child knows. However, very few people know that this green carpeting also serves as a nutrient filter and water reservoir. And what is the price of this natural service? How much would we be prepared to pay for it?

Of trees, folk only know how much
they cost, not what they're worth!
Berthold Brecht





Learning through discovery

Students investigate a forest plot in order to describe its value later. Within a delimited plot of forest (50 m x 50 m), groups of students take it in turns to accomplish three tasks:

- The students investigate the soil to make a statement about the “quality” of the soil. The pH value (acid content) of the soil is measured using an indicator fluid, and the lime content of the soil can be established using diluted nitric acid. By removing a soil sample and subjecting it to the finger test, it is possible to say something about the clay content. The soil profile can be investigated using the geological drill driven up to one metre into the ground.

- As the second component, possibilities for investigating the soil fauna are described on worksheets. Attention should be directed to the smallest living beings in the soil – they represent an essential network for processing fallen leaves in



the forest. Shaking screens or "insect vacuums" are used to collect and identify animals from the soil. Searching takes place in the upper soil layers, under fallen leaves or on tree stumps. Individual species are identified alive under the microscope.

- Mapping the forest floor is the third aspect of investigating the woodland. The students learn how to work with corresponding identification sources. Above all they learn to look – at the small differences in blossoms, leaves and stems.

Following the outdoor and laboratory work, the students gather important parameters for evaluating their forest plot. The subsequent discussion reveals interesting insights into the question, "What is the 'true' value of the forest?"



2. Topic: The forest habitat and species diversity



Believe me, you will find more lessons in the woods than in books.
Trees and stones will teach you what you cannot learn from masters.
Bernhard von Clairvaux

2.1. Early blooming plants in the Teutoburg Forest

The Teutoburg Forest is delightful in spring, with a particularly high-quality show of blossoms that draws visitors. The corydalis cava blooms on the ridgeline of the Teutoburg Forest. Along with other early blooming plants, the corydalis forms impressive, highly scented carpets of flowers, and reveals all the important features for effective and successful plant growth in just a short amount of time.



EXAMPLE:
What do we do in spring?

Students are introduced to this unique world on their doorstep whilst learning about the important principles of germination, growth and the spreading of seeds and fruits as the basis for our existence – plants – at the same time. The students also discover a dozen early blooming forest plants in the area where they live, rather than simply the tulips, hyacinths and snowdrops they see in garden centres:



- This introduction starts at the learning centre by gathering preliminary information about plant growth and knowledge of determining features. The following questions are discussed: What is an early blooming plant? What conditions are important? Then, in small groups, they walk into the forest. They take with them reference material specific to regional identification and additional tools to investigate early blooming plants.
- During the tour around the learning centre, the students find some ten or twelve different early blooming plants. A special action is carried out for each of these, relating to the particular early blooming plant or representing one of its special features. For example, the students dig up a lesser celandine (replacing it afterwards!) and investigate its underground storage organs – an important feature for early blooming plants. They find small nodes in which starch is stored.
- At the end of their forest excursion, the students will have learned about the lesser celandine, the chrysosplenium, coltsfoot, wild garlic, dog's mercury or the corydalis, and will associate a special feature with the plant.
- In the afternoon, the findings from the morning session are dealt with in more detail at special stations: For example, a starch reading is taken by the comparing different underground organs with the potato or fruits like apples.

2.2. Tracking animals in the forest

Which animals live in our forests? Animal films and holiday experiences in other countries mean that many students have become increasingly alienated from what happens in the animal kingdom in their own country.



EXAMPLE:

We look for a wealth of tracks left by forest animals on our doorstep. These include traces of feeding and droppings (excrement) from various animals, burrows in the forest or hollowed-out trees.

In preparation, a small exhibition is set up, featuring details from the forest with the goal of developing a "search picture" by the students looking at tracks and traces left by animals in the forest: boxes containing different droppings, cones with different teeth marks or feathers. Students can leave footprints (of deer and wild boar) in a box of wood to find out what they should be searching for in the forest.
The students walk through delimited forest plots in small groups. Animal tracks – deer beds, cones gnawed off pine trees, various burrows – are observed, collected, measured or even photographed. Each



group finds a wealth of different signs of animal life, which are then investigated in greater detail. In a shared session at the end, all the students present their results, which they have sorted according to animal species, and record their findings for everyone to see.

3. Topic: The soil under our feet

Soil – "isn't that just dirt?"

The soil under our feet is a universe unto itself. More living beings are contained in a handful of soil than there are people on the Earth. Soils feed us, soils filter our water, soils are the basis for all our activities. Nevertheless, soil in general is only considered an environmental medium worth protecting to a limited extent.

The objective of this action day is to experience soil in a different way for a change:

- On the way to the investigation area, the students walk across a disused quarry. In this quarry, the students can see what is under their feet: a mountain of limestone with horizontal and sloping lines (deposits) and a narrow layer of soil at its top edge where they will later carry out their investigations.

- We visit three sites on the slope of the Teutoburg Forest for this purpose: first, at the height of the ridgeway; second, halfway up the hillside; and third, in the valley. This is where the students carry out soil studies and compare the results with one another. The students should investigate the soil in order to make a statement about the "quality" of the soil. For this task, the learning centre provides working materials for a simple soil study.





- In further steps, indicator plants are identified using identification sheets, and their distribution at the various points is noted. Collecting animals forms the fauna part of their investigation. The animals are taken into the laboratory alive and investigated with binoculars. The students learn that the soil is a multi-layered and complicated causal network.

- A hole is excavated about 80 centimetres deep to examine the soil horizons, whilst the pH value (acid content) of the soil is measured with an indicator fluid in the various soil layers; diluted nitric acid can be used for measuring the lime content of the soil. After the soil has been removed and a finger test is carried out, for example, students are able to assess the clay content.

- The geological drill driven one metre deep into the earth makes allows us to investigate the soil profile in addition to or as an alternative to digging a hole, down to a depth of one metre.

4. Topic: Sustainability in the forest habitat

To fell a large tree
is hardly the job of half an hour.
For it to grow to impressive size
it takes as much as a century!
Eugen Roth



© Diderot71

EXAMPLE: Bark beetles and acid rain

During the course of our environmental training activity, the students learn about different topics of woodland ecology and forest management, with the specific objective of felling a spruce. Many questions arise in the forest:

• There we find the cultivated monoculture that is the coniferous/spruce forest, with its noticeably reduced variety and often a recognisably ordered structure of planting (the trees grow in lines). The difference between the features of deciduous and coniferous forests is discussed, and, in the coniferous forest in particular, attention is drawn towards the space required by young and old trees.



• The meeting point with the forester and forest manager in the forest is an old dead tree. Here, the importance of dead wood in the forest is shown directly by the intensive signs of larvae activity in the wood, their users and follow-on users (such as the spotted woodpecker). This makes clear that an interconnected food chain is formed.

• More information about the topic of forest management is provided by the forester and the forest manager. The students learn details about the bark beetle and how they are combated in the forest using pheromone traps; they receive information about damage to the forest caused by acid rain, and the forest manager explains not only the function of his protective clothing but also the forestry implements – especially his chainsaw.

• Following that, a spruce in the forest is professionally felled, de-limbed, measured and processed. The students themselves then help to strip the bark from the tree using the scraper knife. In the spirit of sustainability, the students then plant a new tree appropriate for the location, and each child is given a small disc of the tree cut from the felled stem by the forest manager.







Making the principle of sustainability in the forest clear through example – this is done taking the example of a tree felling.

5. Topic: Forest and wood

Would you have thought that …

- in Germany, a total of 120 million cubic metres of timber grows every year? That corresponds to a cube of wood with its sides about 11.56 metres long every second.

- trees absorb about 1.9 tonnes of CO_2 in order to create one tonne of wood, and they store 500 kilogrammes of carbon?

Wood teaching project

This "Forest/Wood" teaching unit confronts the students with an aspect that they may not appear to be very familiar with at first, although intensive questioning will reveal that the tendency is actually in the opposite direction.



6. Topic: Orientation with GPS

Students follow the tracks of "the ground" and the landscape around them. The objective of this activity is to acquire basic skills in using GPS, GIS, remote sensing/aerial photo evaluation and examining geodata with the PC. These technologies are used for recording, processing and presenting geodata; however, they are supplemented by practical terrain work with the geological drill and measurements on the ground.

OUR AUTHOR

Josef Gebbe (b. 1959), graduate biologist, has worked at the Noller Schlucht Learning Centre for environmental education for the past 20 years; promoter of education in sustainable development in Lower Saxony; teacher training lecturer at Osnabrück University for the past ten years; managing director of the Osnabrück Association for the Promotion of Regional Learning (Osnabrücker Verein zur Förderung des Regionalen Lernens e.V.).



This set of activities encourages interdisciplinary and complex examination of topics like forest species, tree species, forest animals, soil compositions, woodland plants, use of timber, threats facing the forest, etc.

The topic of wood is divided into three main blocks: forest experience and tree felling, sawmill work and wood processing/manufacture of work pieces.

Under the guidance of the Noller Schlucht master carpenter, the students build a bench from a sawn larch trunk. Sawing, sanding, measuring the backboards and bolting everything together make up specific work areas, with the end result being a bench for the school premises with active involvement by the students.

There are many possibilities for teaching with the help of PC work: Topics such as soil change in the landscape, land use and resource consumption or covering the soil can be addressed graphically with the students. Linking this to topics such as urban/forest development or investigating the use of solar panels in the students' local area are practical topics for investigation.



7. Topic: Planting a climate forest

"What does climate change have to do with me?" This is the question the students use to reflect on what they know about the topic of "climate change".

A school film by SCHUBS Lüneburg produced as part of the "Climate Alarm Clock" project is used to illustrate various problematic aspects of CO_2 emissions:

- nutrition and consumption (where does our food come from?)
- meat consumption (what is problematic about this?)
- saving electricity every day (energy detective in the class/school)
- specific mobility

The theoretical morning session is rounded off by planting a tree in the afternoon. Taking the topic of mobility, a practical connection should be established between transport and CO_2 emissions, and CO_2 storage in trees.



Being impatient about the little things will bring even major projects to ruin.
Konfuzius

1. SAMPLE ACTIVITY: Road traffic on your doorstep

Traffic is measured in both directions on the regional highway for half an hour (differentiation according to small cars, luxury cars and trucks). Next, calculations are carried out on the basis of the following questions:

1. How many cars drive here every year?
2. How much CO_2 is emitted per vehicle type, and how much in total per year?
3. How many trees would have to be planted to compensate for this?

2. SAMPLE ACTIVITY: The CO_2 in our trees

In the forest, trees are tested to find out about their CO_2 storage.
The film "The man who planted trees" (Der Mann der Bäume pflanzte) is used to establish a connection to the subsequent practical tree planting activity with the forester. The students work in groups to plant about 200 to 250 young trees on a site.



INFO: JOSEF GEBBE OF THE NOLLER SCHLUCHT LEARNING CENTRE IS IN FAVOUR OF A "FOREST LICENCE".

His demands and wishes:

- Attentiveness: In the forest, respectful behaviour is called for. We are entering the place where forest creatures live!
- If possible, the time spent in the forest should be 1.5–2 hours to allow the atmosphere of the forest to "seep in".

Perception in the forest:

- The senses – hearing, seeing, smelling, possibly tasting and tactile perception – should be discussed.
- With eyes closed, spend at least two minutes listening for noises.
- Feel around in the fallen leaves of deciduous forests and the needles shed in coniferous forests for animals there.
- Turn the various stems of herbs between your fingers and thumb (round, square and triangular stems) to detect and identify which is which and where they grow.
- Rub at least two plant leaves between your fingers and thumb and smell them (wild garlic in spring, garlic mustard in summer, etc.) and be able to identify the plant..

Knowledge of the forest:

- Learn or deepen your knowledge of new conditions in the forest ecosystem (be able to indicate the relationship between different creatures by taking one example, such as the alder and the leaf beetle, the stinging nettle and the butterfly caterpillar or the arum and the flies for pollination, etc.).
- Be able to name plants with red, white, blue and yellow blossoms at least.
- Be able to tell at least four forest tree species apart (ability to identify their specific leaves, bark, fruits and the overall tree structure).
- Be able to tell at least four woodland plants apart (know how blossoms and leaves differ from one another as well as something particular about each plant).
- Be able to tell at least four forest animal species apart, and know something about their way of life.über ihre Lebensweise wissen.

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ENVIRONMENTAL GUARDIANS VERSUS ENTREPRENEURS

Interview with Dr Fritz Vorholz
By Isabelle Tisson



Dr Fritz Vorholz is one of the most well-known journalists to have written intensively on the topic of energy and climate change. Since 1988, he has been writing for the economics department of weekly newspaper DIE ZEIT. He has long been concerned with the question of whether economists can be reconciled with environmentalists, and how conflicts of interest could be avoided. He has come to regard this as a mere pipe dream. Vorholz believes that solutions must chiefly be initiated by responsible politicians with a global view. In the interview, he explains why there is a need for instruments to guide conduct, such as regulations, sanctions and financial incentives.

***youthinkgreen*:** Dr Vorholz, you are intensively involved with interactions between the environment and business. To sum it up in one sentence: What accounts for the tense relationship between these two areas?

Dr Vorholz: A company causes damage but does not have to take responsibility for it. That is the economic core of the issue of the environment. In the past, steam locomotives and their chimneys did not just belch forth fumes, but also occasionally glowing sparks. Sometimes, these would set fields alight. Nevertheless, the railway company usually did not have to pay for the damage in the event that farmers lost their harvest. So the damage was not included in the attributable party's economic calculations. Economists call that a negative external effect.

***youthinkgreen*:** And are there positive economic effects on the environment as well?

Dr Vorholz: Yes, of course, such as the pollination work done by bees. A bee-keeper keeps bees because they produce honey that he can sell. But the bees also pollinate the neighbouring farmer's cherry trees at the same time. The farmer generally does not have to pay anything for this despite the fact that not a single cherry would ripen on his trees if the bees were not there. This means that the farmer profits from the bee-keeper without having to pay anything for it.





Power station Scholven (Gelsenkirchen) © Sebastian Schlüter

Environmental protection is "not witchcraft"

youthinkgreen: How can the negative effects be minimised then?

Dr Vorholz: Nowadays, of course, the negative effects are much more extensive than the steam locomotive phenomenon I mentioned: These include particulate matter in cities, slurry in the groundwater, blighted landscapes and the extermination of entire species. It would be good if these factors were included in the responsible parties' economic calculations. This is done using bans and mandatory requirements, for example. Environmental policy has already experienced some success with this.

A look back: When I was young, you could not swim in the River Rhine without risking your health. And drying washing outdoors was not a good idea either because there was so much soot in the air that shirts would get dirty on the line. Politics has successfully combated these problems. It was simply forbidden for soot and other pollutants to be emitted. Anyone who continued to do so was penalised. Harmful activities can also be taxed, or the law can be designed so the party responsible is liable for the damage. Reducing air and water pollution is not witchcraft and neither is dealing with waste in a way that at the very least does not endanger people's health.

youthinkgreen: If it's as simple as you describe, why do politicians often fail to deal with serious environmental problems?

Dr Vorholz: Politics faces the challenge of guarding against environmental damage that is not yet visible or indeed even measurable. And resource and climate protection can no longer be dealt with using national or exclusively technical means alone.

We need an international social consensus – and this can generally not be achieved without conflicts over resource allocation. Here's an example: Per capita emissions of carbon dioxide, which is harmful to the climate, will not rise much further in many wealthy countries. As a result, many people think that industrialised nations are already on a sustainable path. In fact, however, it is necessary to ask who is responsible for the emissions created when internationally traded goods are manufactured. This is because globalisation has led to a situation where many environmental problems have merely been shifted somewhere else.

Chemical industry on the Rhine © A. Savin



youthinkgreen: I didn't fully understand that.

Dr Vorholz: The Institute for Economic Research (ifo) in Munich calculated that Germany's environmental footprint is approximately 80 million tonnes of CO_2 greater than the quantity of CO_2 emitted into the atmosphere directly from German territory. This calculation accounted for the fact that goods imported by Germany of course also leave a CO_2 footprint in the countries where they are manufactured, and this should actually be allocated to German consumption.

And each year, the think tank Global Footprint Network calculates how many natural resources the Earth has available on an ongoing basis, including wood, water, food, fish and fertile soil – and how much the planet's growing population is consuming. The result is clear: We are living beyond our means. We would need more than one Earth to satisfy our current demands on a permanent basis. Our civilisation has no future if we continue this way.

Drawing more radical conclusions

youthinkgreen: Do you also live outside the limits nature imposes on us?

Dr Vorholz: Yes, I do. My home is too large and there are too many shirts in my wardrobe. I travel too much and I certainly still eat too much meat. But I'm now trying to reduce my meat consumption, cycle to work and take fewer journeys by aeroplane. But one thing is clear to me: If everyone on the planet were to live as I do, its resources and products would very quickly be exhausted – and I mean all of them: from crude oil to bread. The fact that I still do not draw any radical conclusions in spite of this is something that I myself regard as unsettling. You probably do as well, don't you?

youthinkgreen: Yes, and I ask myself, "Why are we – both as individuals and civil society – so slow to react?"

Dr Vorholz: There are so many of us that individuals can easily think, "I can't save the environment – even if I change my behaviour. After all, how many others will do the same as I do?" This allows us to rationalise not actually making any changes that involve doing without. Economists talk about the free-rider attitude. In spite of our knowledge of the negative consequences that are nearly out of control, we continue to do things that are terrible for the environment. In order for this to change, we need politicians who think globally and take responsibility – and we need a whole arsenal of instruments to guide our behaviour: regulations, sanctions, financial incentives, liability law and much more.

youthinkgreen: What pioneering role can the eocnomy play in protecting the environment?

Dr Vorholz: Not too much of one. Companies want to earn money – a legitimate aim! But behaving in a more environmentally friendly way is generally initially associated with reductions in profits. As a result, the economy is against environmental laws in principle and pushes back against them – in some cases vehemently. Consequently, almost all environmental regulations must be imposed in the face of resistance from the business community. This talk of reconciling environmentalism with economics is something I regard as a pipe dream.

OUR AUTHOR

Isabelle Tisson (b. 1994) studied English and geography as teacher training. She was a Climate Ambassador for the first *youthinkgreen* project and is active in the Osnabrück group, where she initiated the "Gift Swap" project; after her school-leaving exams, she worked as an intern at the *youthinkgreen* office in Berlin.



"Free" means that everyone can develop unhindered according to their ability…!



© Gerhard Mester

I draw the following conclusion from this: Politics must set the framework and business must deal with that creatively, using it to generate commercial ideas. The incandescent bulb was followed by the energy-saving bulb, which in turn was replaced by LEDs. LEDs are the result of government regulations, environmental awareness, research and entrepreneurial creativity.

And there's another thing: 40 years ago at university, I learned that gross domestic product (GDP) is not an appropriate indicator of wealth. We consider ourselves richer than we are because we do not take account of the collateral damage to natural resources caused by our economic activities.

Resistance against setbacks

***youthinkgreen*:** Can you think of a principle for an economic system that is capable of being implemented and would be more appropriate to our environmental requirements?

Dr Vorholz: In such a system, growth ought not to be the ultimate goal of economic activity. However, I do not see any signs whatsoever of something like this being put into practice. The problem is that as soon as economies cease to grow, social systems collapse and the poverty rate rises. As a result, one of the greatest challenges is to make societies resistant to growth setbacks. I am aware that this is easier said than done.

youthinkgreen: As a business journalist, what continues to give you cause to hope in spite of all this experience and these insights?

Dr Vorholz: Time and time again we see really good initiatives in business, such as the carbon disclosure project. This is an association of financial investors who gather data about the CO_2 emissions and climate risks that major companies listed on the stock market are exposed to. Potential investors can use this data to decide which company they want to invest in. This is based on the growing understanding that phenomena like climate change can also lead to significant economic catastrophes and company failures. This is putting significant pressure on companies to change. On the one hand, this is good, but on the other, innovations in this area take a long time to amount to anything – and they cannot take the place of political action.

25 years ago



Today



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1. The author talks about the interactions between the environment and business. In this context, he talks about negative and positive external effects.

a) In your own words, describe the examples presented here.
b) In small groups, work out more examples for this.

2. Bearers of responsibility

a) Name and explain the options politicians have for guarding against or rectifying environmental harm so that the negative effects are at least minimised.
b) Analyse which factors and current developments are influencing political decision-makers in this regard.
c) What responsibility do you believe those who cause environmental damage should bear? In what ways can citizens and politicians hold them more accountable for this responsibility?

3. The author argues that our civilisation has no future in this form because we are living beyond the planet's natural limits.

a) Discuss the journalist's statement. What results did you come up with?
b) What is meant by the free-rider attitude in this regard?
c) What contributions and suggestions for improvement can you provide to shape your future?

4. "Growth ought not to be the ultimate goal of economic activity."

a) Explain this statement by Vorholz. Be sure to also refer to the texts in Topic 4.1, and conduct research online. Discuss your research material with one another.
b) What do you think of the carbon disclosure project? How do the media report on this? What similar climate protection projects by major companies are you aware of?
c) How could dialogue be strengthened between entrepreneurs and environmental protection activists to enable improved cooperation between these two professional groups as well as change perspectives? What do you think stands in the way of this "reconciliation" between economists and environmentalists?
d) What role do you think the media and financial journalists like Dr Fritz Vorholz should play in this? What task faces politicians, and what must citizens do?

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5. "No future (worth living) without societal upheaval?!"

a) Organise a podium discussion at your school on this topic.
b) Conduct a survey into this topic within your local area. Develop suitable questions for this together.

WHY TRADITIONAL MEDIA HAVE TROUBLE WITH REPORTS ABOUT "SUSTAINABILITY"

By Eva Mahnke

Staycations instead of flying abroad? Spare time instead of a shopping trip? Regional economy instead of agribusiness? The topics associated with the guiding principle of "sustainability" are multi-faceted, and the key questions cannot always be shoehorned into a black and white argument. As a result, the traditional, mass-market media has trouble reporting on it. They often only cover major events and their reporting is rather superficial. Detailed information about many topics can only be found in specialist magazines and online portals. And important aspects of sustainability that would be useful for balanced reporting within the economics section of a newspaper are left to fall by the wayside. Why is this the case and what can be done about it? Some theories.

1. Sustainability topics are complex...

Here's an example: Transport is responsible for a significant portion of global carbon dioxide emissions. One thing is clear: Urgent action is required to stop climate change. Many governments are doing this by relying on biofuels, which are diesel or petrol manufactured from wheat, rapeseed or palm oil. The idea behind it is that plants absorb CO_2 as they grow, which is then released when they are burned and removed from the atmosphere again during the next growth cycle. According to the promises made by manufacturers, this makes driving climate-neutral and sustainable.

It sounds good, doesn't it? But be careful! A media report that stops at this point would disregard some really important questions: Does the Earth have enough agricultural land to satisfy the thirst for fuel by what is now a billion cars worldwide (and the numbers are growing)? What do the investors who are scouring the world for new agricultural land to produce biofuel have to do with the rise in food prices? Is the fuel really climate-neutral if it indirectly causes destruction of the rainforest in order to obtain new land to cultivate? Which alternative principles – some of which may be much better suited – are available for greater climate protection in the transport sector? And do we really need to be as mobile as we seem to think?

EXAMPLE:

"Why does Joy have to go hungry?" is a question posed by an article written by Anita Blasberg and Marian Blasberg in the newspaper DIE ZEIT. The answer to this is also linked to biofuel. The authors visited Brazilian maize farmers, stock exchange traders in Switzerland and a scientist in Rome.
Link: www.zeit.de/2013/42/hunger-unterernaehrung-dossier

2. Sustainability issues require extensive knowledge and excellent research...

It is a fact that a journalist must conduct very good research – and in several directions at once – to provide readers, viewers or listeners with guidance as to whether biofuel is a good and perhaps even essential solution for climate-friendly transport. This is because there are always three areas involved in sustainability: the environment, the economy and the social sphere. And it is necessary to find actors (i.e. experts, those affected, politicians, companies, etc.) in all three areas and learn how to ask them the right questions.

INFO 1

- ENVIRONMENT

Are the plants used for biofuel being cultivated in an environmentally friendly way or by monocultures with massive applications of fertilisers and pesticides? What is the carbon footprint of biofuel?

- ECONOMY

What is the economic importance of biofuel? What actors are pursuing which interests here?

How expensive is biofuel if you also include so-called external costs in the calculations (for the use of water, the environmental pollution caused by pesticides and fertilisers, etc.)?

- SOCIAL SPHERE

What are the social effects of growing crops for biofuel? Does it create any new jobs? Does it destroy traditional agricultural structures? Why is car use continuing to increase in the world? What requirements does the car satisfy?

© Daniel Schwen



© Analogue Kid



It is quite a demanding task to shine a light on these three dimensions of an issue in equal measure. As a result, it is easy for journalists to forget one aspect or another and to present the topic in a one-sided way. "Sustainability does not fit in with media categories," says experienced environmental journalist Joachim Wille. "There are only a few journalists who look at all aspects." Often, the necessary preliminary knowledge is lacking, as is adequate continuing education.

3. Sustainability topics are littered with many traps ...

And that is not all: In order to write a balanced report, journalists should not just take a look at the situation on the ground and talk to those affected and the people involved. They must also work their way through scientific papers, understand statistics, get opinions from the most important actors, weigh up the arguments against one another, conduct discussions with experts, work through a jungle of studies by different interest groups, all the while not allowing themselves to be taken in by one-sided representations. All this takes time, stamina and endurance.

Recommended reading: *Have I missed anything? The medien-doktor.de project has developed ten criteria that can be used for assessing the quality of a report. The project team at the Technical University of Dortmund regularly evaluates reports in German media. A treasure trove of both successful environmental journalism and negative examples! Link: www.medien-doktor.de/umwelt*

4. Often, journalists cannot do what they want...

Particularly with regards to research – the most important basis of a balanced report – it is often the case that journalists are lacking the time or the funds necessary. "It is increasingly rare that journalists have the opportunity to investigate a topic in sufficient detail, to examine how and by whom the studies they are quoting are being financed," says Fritz Lietsch from the Sustainable Business Forum ("Forum Nachhaltig Wirtschaften"), expressing his criticism. The reason: Editorial offices are understaffed, all-rounders are working on topics that actually require the attention of specialised journalists, independent journalists are not paid sufficiently for their work, and the time pressure to submit articles is very intense.

EXAMPLE CLIMATE CHANGE

"The increasing importance of the Internet, the consolidation of the media and falling incomes have resulted in a drop in the number of professional journalists. Scientific understanding of the complex phenomenon of climate change is growing, but many journalists who should be explaining climate change do not receive any support in acquiring this knowledge in order to pass it on to the public."
Beth Parke, Head of the Society of Environmental Journalists, and Dave Poulson, Deputy Director of the Knight Center for Environmental Journalism at Michigan State University

5. Sustainability issues often do not fit in with the logic of mass media...



© Frits Ahlefeldt

Many sustainability issues are not adequately dealt with in the media. All too frequently, the state of the environment does not deteriorate in one single great event but in a process taking years, decades or – as in the case of climate change – centuries. Since 1970, for example, the diversity of species on Earth has fallen by a dramatic 30 per cent. Nevertheless, the topic barely features in public reporting. In the language of the media, it does not have any "news value". There are no shocking images, significant events or unambiguously guilty parties. "Sustainability topics are […] not easy to explain – and this means they contradict the media's requirements for simplicity," says Kira Crome, specialist journalist and former spokesperson for the Council for Sustainable Development. Making clear what the loss of species diversity means for the planet, who the guilty parties are and how the process can be slowed requires space, time and interested readers.

Tip: *In many reports, Geo International shows what species diversity means*
Link: www.geo.de/GEO/natur/oekologie/tag_der_artenvielfalt/

6. ...and topics must "sell" themselves.

In addition, the media are subject to economic constraints. Journalism costs money, and good journalism costs a lot of money. "The media are profit-driven," says Fritz Lietsch. Topics are selected, he believes, principally from an economic standpoint. Media owners often criticise publishing houses for not covering specific issues like sustainability despite the fact that they are highly relevant for society. "This is because, from their perspective, sustainability is not a big enough seller," says Lietsch. "The media pay too much attention to quotas, which means they make programmes that they describe themselves as being for idiots." Non-political public interest topics (such as the fate of individual people, reports on catastrophes, criminality, celebrity at-home stories, etc.) are often unfortunately much easier to sell than sustainability issues are. Even the so-called quality media are affected by the tendency to move down market.

OUR AUTHOR

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Conclusion: What does this all mean for young journalists?

Friedrich Hagedorn, Head of the Grimme media agency, thinks, "To date, no silver bullet has been found to link sustainable expectations and mass-media reality. Sustainability as such is difficult to talk about in classic publication formats since it has no media face. However, new multimedia opportunities are opening up on the Internet for specific, communicational storytelling about sustainable issues without necessarily mentioning the term sustainability, although without having to hide it either."

There is no silver bullet for the sorely needed communication of sustainability issues, but it is still possible to do a lot for good journalism in this area.

- Step by step: Acquiring knowledge

Whether it involves scientific explanations, economic connections, social impacts or political machinations – those who know a lot will find it easier to recognise important issues, ask the right questions and differentiate real solutions from false ones. Open up the world for yourself step by step – then you can pass on your knowledge.

Tipp: *The "Green Journalism" portal provides an extensive list of links for the topic of sustainability.*

- Explaining complex topics clearly

Attempt to talk about difficult issues as simply as possible. Exciting stories, interesting case studies and surprising connections can prove helpful, as can reports and portraits about people who put a face on these issues as well as stories about specific locations that illustrate in detail how global interconnections have local effects. "Feelings are explicitly allowed and required," says Torsten Schäfer, Professor of journalism in Darmstadt, "particularly in shorter formats, such as reports, features or background." The "storytelling" method is a promising approach in this regard (see the article by Felix Simon on alternative living concepts in Topic 4.3 or the self-experiment by Alisa Reimer in Topic 1).

Follow the money! In a report that makes complex issues understandable, DIE ZEIT journalist Felix Rohrbeck reveals how the fossil fuel industry is betting that politicians will not do anything to prevent climate change and will continue to allow them to burn oil, gas and coal.

Link: www.zeit.de/2014/08/carbon-bubble-rohstoff-blase

- Reporting on solutions and successes

Positive examples are more motivational than horror scenarios. As a result, do not just report on environmental pollution, the consequences of climate change, horrendous stories and threats. Be sure to also explain what solutions clever people have found, what individuals can do and the successes that have already been achieved. And report on what motivates people to fight for a fair and sustainable world, and what visions they are pursuing.

Excessive power in the hands of electricity corporations? A teacher and a country doctor in the Black Forest have proved that things do not have to remain this way. After a ten-year struggle, the "Schonau electricity rebels" took over the electricity grid in their town and founded a successful and environmentally friendly electricity company (see the report about this in this book in Topic 4.2).

- Skilfully using the advantages of specific media formats

In newspapers and magazines, it is possible to explain difficult relationships in detail and enrich the reports with clear graphics and charts. Film reports can be used to transport the audience to the people and the places the story focuses on. An atmospheric radio feature is particularly well suited to triggering emotional responses. The ways of packaging sustainability topics are as varied as the topics themselves. Each medium has its own particular advantages, which can be utilised skilfully.



ECONOMY CRISIS!! Mountains of rubbish are growing more slowly © Gerhard Mester

The report by the WDR, a German broadcasting organisation, entitled, "Hidden costs – green electricity is cheaper than conventional electricity" ("Versteckte Kosten – Ökostrom ist günstiger als konventioneller Strom"), shows how a cartoon can be turned into an informative TV feature, enabling the audience to understand complex interconnected issues in a light-hearted manner.

Link: www.3sat.de/mediathek/?mode=play&obj=42236



Source: ZDF

30 BILLION !!! **Hidden costs** Green energy is cheaper than conventional energy: If one transfers the hidden costs of conventional energies to the energy price, these add up to ten per cent per kilowatt hour, says Swantje Küchler.

INFO 2: INTERNET – ADVANTAGES IN COMMUNICATING SUSTAINABILITY TOPICS:

- Open: With a bit of knowledge, you can start your own page/blog.

- Fast: The Internet allows us to respond to events spontaneously.

- Networked: You can use a link to guide visitors to original documents, data sources, exciting pages and further information.

- Interactive: Readers and listeners can respond directly to posts and conduct discussions with one another.

- Cross-media: Film, audio, video, text, graphics, map material, animation: The Internet allows us to bring media formats together.

Sources:

Crome, Kira: "Es grünt so grün", Fachjournalist 1/2012, p. 13-17.

www.fachjournalist.de/PDF-Dateien/2012/05/FJ_1_2012-Nachhaltigkeitsthemen-in-den-Medien.pdf

Lietsch, Fritz: in: "Dürfen Journalisten Aktivisten sein? Eine Debatte zwischen Fritz Lietsch und Ulrich Brenner", www.nachhaltigwirtschaften.net, article dated 17/12/2013.

Schäfer, Torsten: "Nachhaltigkeitsthemen journalistisch neu erzählen – ein erster Überblick", in: http://gruener-journalismus.de/telling-sustainability-wie-sich-nachhaltigkeit-neu-erzaehlen-laesst/, article dated 04/05/2014.

Links:

Flagship projects for journalistic reporting on the topics of climate change and sustainability

- http://zeozwei.taz.de
- www.enorm-magazin.de
- http://insideclimatenews.org
- www.dw.de/globalideas
- www.klimaretter.info
- http://earthjournalism.net/stories
- www.futurzwei.org
- http://amazonie.arte.tv/de/

INFO 3: QUALITY CRITERIA FOR ENVIRONMENTAL JOURNALISM

1. No exaggeration or trivialisation
Risks and opportunities are neither exaggerated nor minimised.

2. Validations and evidence
Studies, facts and figures about environmental topics are represented so that their significance ("evidence") becomes clear.

3. Experts, transparency of sources, conflicts of interest
The sources for factual assertions and estimates are named, dependencies and interests are made clear, and key statements are backed up by at least two sources.

4. Pros and cons
The main relevant standpoints are represented appropriately.

5. No press release
The information content and presentation of the article go significantly beyond that of a press release/press material.

6. Novelty
The article makes clear whether it is a newly occurred or newly discovered environmental problem, an innovative environmental technology or a novel suggestion for a solution/regulation, etc., or whether this information has existed for some time already.

7. Solution horizon and options for action/no green-washing
The article states methods for solving or avoiding an environmental problem to the extent that this is possible and appropriate.

8. Spatial dimensions (local – regional – global)
The spatial extent of an environmental problem is represented, as is the connection between local, regional and global perspectives.

9. Time dimensions (sustainability)
The extent of an environmental problem or phenomenon over time is represented.

10. Context/costs
Political, social, cultural or economic aspects of an environmental topic are included, going beyond the aspects of natural sciences, health and technology.

General criteria:

1. Topic selection
The topic is current or the article covers a topic that is relevant or original/unusual regardless of current events.

2. Communication
Complex environmental connections are made comprehensible.

3. Accuracy of facts
The article reflects the key data and facts correctly.

Source: www.medien-doktor.de/umwelt/bewertungen/die-kriterien

LEARN • UNDERSTAND • ACT

1. Communicating sustainable development correctly:

a) Name the three dimensions of sustainable development.
b) According to which aspects does the author categorise and assess the communication of sustainability topics in the media?
c) What does that mean for balanced reporting – what must a journalist bear in mind? Explain by citing simple examples.

2. How do sustainability topics fit in with the logic of mass media?

a) What particular difficulties do journalists face?
b) Clarify the problem with regard to the topic of species diversity as well.
c) Name additional environmental issues you can use to explain this special aspect.
d) What contribution could interested readers make to increase the news value of important sustainability topics and announce their interest in them?



© NOZ Medien

3. The author talks about a kind of silver bullet for journalists, although it is one that must first be found.

a) Name the aspects of good journalism the author lists. Analyse them intensively.
b) Understand that the Internet is an opportunity to communicate sustainability topics. Why?

4. "Your opinion is important to us."

a) Form small groups and consider which sustainability topic you absolutely ought to communicate in your school or community. Collect reasons and content relating to the topic.
b) Present your results to the entire group. Discuss these jointly and select topics. What literature and medium (print, online, podcast, video, etc.) would you like to base this on?
c) Now start using the slogan and get active (see also the journalist writing workshop "Green Storytelling" in Topic 1). You will find people are very interested!

5. Read through the environmental journalist quality criteria that the Medien-Doktor project has developed (see Info 3).

a) Discuss this in small groups and attempt to understand it using the article stated as an example from DIE ZEIT, "Why does Joy have to go hungry?".
b) Read negative examples on the Medien-Doktor project website.
c) Look for further reports on sustainability topics in daily newspapers, magazines, by listening to the radio or browsing online, and analyse these on the basis of the criteria stated.
d) Invite journalists who are reporting on sustainability topics to visit you and discuss with them the economic constraints in the media business, the tendency to pander to popular tastes and your own requirements for good reporting.
e) Form small groups and discuss the question of the extent to which sustainability reporting is and must be different from that used in other topics. Or are the quality criteria in fact universal because environmental journalism and sustainability cut across all aspects of the media?

6. In Section 5, the author talks about the "logic of the mass media" and "news values". What precisely does she mean by this? This is where you start your own research into the following questions:

a) What social functions do the media have in a democracy?
b) Which selection mechanism do journalists use for choosing news and topics from the bandwidth of events? What different theories are there about this in media studies?
c) Which different news values have been identified by communication research?
d) Following your own research, discuss the statement, "The media construct reality instead of reflecting it."

SCHOOL SUBJECT OF "SAVING THE WORLD" – OR: IS IT ACTUALLY POSSIBLE TO LEARN SUSTAINABILITY?

By Dr Marianne Dehne



To Save Everything, Click Here is the title of a contemporary book. However, word has since got round that saving the world is not quite so easy or effortlessly possible, unfortunately. Instead of a single click, we have to turn our entire life upside down. But first we must be prepared to do so. Where and how can we learn what is important and correct? How can we involve as many people as possible?

An obvious step would be to include the topic of "sustainability" in the timetable of non-vocational schools. After all, we do spend time learning about religion, philosophy and ethics. Why shouldn't schools also cover the topic of sustainability? Just as different religions and ideologies, philosophical approaches and more or less abstract ethical questions are investigated and discussed, we could also use the subject of sustainability to discuss the history of this term, its unfortunate vagueness, various theories, current developments and areas of activity. We should know all about the Brundtland Report and the magic two-degree limit. But where would that leave us?

It is not a matter of general cultural education, nor is it about cramming in last-minute discussions before the school year ends and failing to ever deal with it adequately – as is unfortunately the case. It is about laying the foundation for living together today and in the future, about the effects of our actions, our concept of humanity and our entire lifestyle.

Sustainability as a package of questions

"Sustainability" is referred to as an interdisciplinary topic. It touches on all areas of our lives, which means it should also be integrated into all subjects and all places of learning – from nursery schools to senior citizens' academies – and not just as an ancillary knowledge package, but as a basic subject of debate. Like a magnet according to which all the small iron filings align themselves. This might be more obvious in some subjects than in others. But it is relevant to all. If we assume that teaching is provided in schools, vocational academies and universities, in environmental associations, churches, musical groups, adult education colleges and associations so that we will be able to understand this world and survive in it, then sustainability should be part of any agenda by all means.

And what precisely should be on the agenda? What specifically do we need to behave so that we do not live at the expense of tomorrow or that of any other location, and we keep our eyes on the target of achieving a good life for all? What will help us to live sustainably in our private and later in our professional lives, what support would we wish our younger siblings to receive, and what education do we hope future politicians and bankers will receive? What do we want to learn, and what can actually be learned?

Three cornerstones are stated here in order to stimulate debate. Just like in a first-aid course, we can orientate ourselves using the letter "W" as in "Saving the World". Ultimately, it is indeed an emergency first-aid procedure. We do not have much time left to stop the destruction of resources and climate change.

1. WHO and values:

It is of primary importance that we help people develop their personality and values. Of course, this is best done by starting at an early age. It is highly important to know how securely, steadfastly and openly we are situated in this world if we intend to participate in shaping it. It is a matter of empathy and solidarity, about developing a sense of justice and responsibility. Studies have shown that the capacity of empathy – putting oneself in another person's shoes (such as a small farmer in Africa) and feeling compassion with their situation – can actually be taught, even in adulthood.

Furthermore, it is about self-confidence. We will only become committed if we believe that our conduct will make a difference, i.e. if we assume a level of "self-effectiveness". Only then will we avoid getting tangled up in simplistic black and white world views and demanding simple answers or even searching for scapegoats. Success stories in this area can also be communicated as part of the learning process. Further key social skills that can be strengthened through good experiences are the ability to work together (cooperation) on solving problems and conflicts and the ability to participate in shaping our own environment.

2. WHAT and knowledge:

There is no doubt that we need a whole series of data about the effects and interactions of social, political, cultural, scientific and financial aspects. Of course, we can never learn everything, and the diverse interconnections can be quite impressive and even depressing. Nevertheless, basic knowledge about the systematic connectivity on this planet is an essential tool. And this cannot be packaged into a single school subject. Ideally, theoretical information will always be supported by practical feedback. We can cooperate with learning centres operating outside schools or universities or visit a company, protected natural biotope or political meeting.

3. HOW and pathways:

What do we do with this knowledge? What freedom to act do I, we and others have? How can we work together to take action, convince others and thereby act as multipliers? This question is about working out what our opportunities for

OUR AUTHOR



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action are – opportunities for action that I have as a consumer, a citizen, a friend and a family member. For example, in what areas can I play a part by changing or reducing my consumption? What approaches are there, and what are the pros and cons of each? It is important that we not become unsettled by complexities, contradictions, resistance and conflicts of interest. We can make significant progress with a series of solid "rules of thumb" and a sound inner compass.

Working out strategies

One example that opened my own eyes regarding what education for sustainable development can and should do: The Michael Otto Foundation for Environmental Protection *(Michael-Otto-Stiftung für Umweltschutz)* established the "Aqua Agents" training programme for primary school children in Hamburg, which deals with the foundation of our existence: water. One task concerns the future of a swimming lake or wetland habitat. In several letters to the mayor of the city, representatives of different interests describe their perspective:

"Dear Madam Mayor," writes the owner of a café accordingly, *"My café by the lake is very popular and is bursting with people during the summer. I would like to expand it and set up another location on the adjacent lakeside property. This would enable us to create more jobs and more tourists would come to our town, who would then spend more money in the area. Please allow me to buy this property."*

In addition, a second letter is written by the neighbours of the café, stating:

"Dear Madam Mayor, It is already really noisy in summer and there is always rubbish lying around everywhere. We ourselves cannot swim in the lake any more because the area is full of tourists and swimming is not permitted elsewhere for conservation reasons. We do not want the café to get any bigger."

A third letter comes from conservationists:

"Dear Madam Mayor, The lakeside property that the café owner wants to buy is a habitat for plants and animals, some of which are only found here and are necessary for an intact environment.



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There are already too few unspoilt places near the lake where nature is able to recover from the effects of all the tourists and residents who swim and use boats."

The children now have to appoint a mayor, hold a council meeting and search for a solution together. There is no ready-made solution to be sussed out here; the children are entirely free to negotiate and reach their own decisions and compromises.

Self-discipline in spite of group pressure

However, "Nothing good happens unless you do it," said Erich Kästner. Even if the abilities, values, knowledge and opportunities for action are in place – sustainable action in everyday life will not take off by itself. This means there are other "W questions": "WHY me?!" And, "WHEN, now?!" In the end, it is not about learning about sustainability, but about putting sustainability into practice. What we know and (actually) want "merely" has to be put into practice. Consistently.



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Against all the collective pressure from outside ("All my classmates wear these jeans"), against convenience ("You know, it's quicker to fly from Frankfurt to Berlin"), against any desire for low prices ("If I buy this T-shirt for three euros, I can also afford the cinema ticket and the app"), against any inner rationalisation ("Well I've been so good and brought the bottles to the glass recycling container, now I can reward myself with a trip to the Seychelles").

Moving from values and knowledge to intention and action, time and time again, is certainly the most difficult thing about the "sustainability course". To a certain extent, this point certainly also depends on personality: How pronounced is my solidarity, how well do I succeed in liberating myself from group pressure? But even then, it remains a challenge.

Possible solutions could be:

1. Not questioning certain things at all, or regarding them as given.

2. Practising new codes of behaviour, creating new routines. After all, no matter how well established our old routines are, once they have been replaced by new ones the new routines will certainly carry us through our everyday life.

3. Looking for companions in arms – we surround ourselves with people who think the same way that we do, and in whose presence we find it easier to adopt a specific environmentally sustainable behaviour.

4. Creating contexts: If climate protection is an important aspect in a school, it is "really embarrassing" to be driven around by your parents in a huge car.

5. Creating other reward and incentive systems – for yourself and for others. Developing a culture of recognition that appreciates sustainable actions.

6. Understanding yourself as a hero or heroine in a fairy tale: Like a fairy tale hero, we break free from customary codes of behaviour; we must make our way in the world and validate our values and viability. There are helper figures and people who would wish us harm or present us with temptation; there are "magical" objects that make tasks easier for us.

7. But time and again, do not resent the learning process and excuse yourself for setbacks, or simply take things in a more relaxed way. Go through life guided by values but relatively free from ideology, and without losing the ability to enjoy life and your friends. Have fun, see the

whole thing as a positive challenge and a kind of game, task or mission despite the urgency of global problems, and enjoy participating as an agent for good.

"Deus ex machina"

In the case of emergency first-aid treatment, at some point the emergency doctor would take over the further task of saving the planet or our environment. In theatre studies, this is referred to as a *deus ex machina* character who suddenly intervenes in the drama: a "god out of the machine", a higher being who returns everything to order. However, presumably only very few people would expect (a) god to intervene. Either because people do not believe in (a) god, or because they assume that (a) god would expect us to sort things out ourselves – with his help; after all, we have been charged with "caring for creation", and we have actually been given all the capabilities required to do so.

We will not be able to convince the universe to make all of our wishes for saving the world come true solely with the power of positive thought alone. However, when these thoughts truly become words and deeds, a positive and constructive way of thinking does represent the key – trusting that everyone who learns about sustainability and puts it into practice will be able to pull together and get the job done. Another interesting book title is The World is Big and Salvation Lurks Around the Corner (Die Welt ist groß und Rettung lauert überall) Let's also take part in this salvation!



© Christoph Rauscher

As farming is responsible for around one-fifth of the greenhouse gases worldwide, you can also reduce your CO_2 emissions by considering what you eat.

Clean or replace the filters in your heating or air conditioning systems.
Cleaning a dirty air filter can prevent 160 kg of CO_2 per year.

Use less warm water.
Warm water costs a lot of energy. You can reduce warm water usage by installing a saver shower head (160 kg CO_2/year) and by washing clothes in cold or warm water rather than hot water (225 kg/year).

Cover your hot water boiler with an insulating cover.
You can save 450 kg of CO_2 per year with this simple action – and a further 250 kg if the thermostat is set to no higher than 50 °C.

Plant a tree.
A single tree absorbs one tonne of CO_2 over its lifetime. The shade that one tree offers can reduce your air conditioning costs by 10 to 15 %.

Only run the dishwasher when it is really full and use the energy save button.
You avoid 45 kg of CO_2 per year.

Buy fresh instead of frozen foods.
Frozen food requires ten times the amount of energy during is production.

Change to green energy.
In many areas, it is possible to change to a form of energy that comes from clean, renewable sources (wind and sun).

If possible, buy organically farmed produce.
Organic soils store CO_2 to a much higher degree than conventional agricultural soils. If all our corn and soy beans were farmed organically, the level of CO_2 released into our atmosphere would be 260 million t lower!

Eat less meat.
Besides CO_2, methane is the second gas that is significantly responsible for the greenhouse effect. The source of methane is predominantly cattle. The grass digested in their multiple stomachs produces methane. The cattle constantly breathe out this methane.

Avoid elaborately packaged products.
You can avoid 545 kg of CO_2 by reducing your waste by 10 %.

Insulate your house and weather proof it.
If you insulate your walls and ceilings properly, you can save 25 per cent of your heating costs and 900 kg of CO_2 per year. Air sealing and using door and window seals can prevent a further 770 kg.

Make sure you recycle as much as possible.
You can avoid 1100 kg CO_2 a year if you recycle half of your household waste.

Use the drying line instead of the tumble dryer.
If you air-dry your washing for six months of the year, you can avoid 320 kg of CO_2.

Turn your thermostat down by 2 °C in the winter and up by 2 °C in the summer and install a programmable thermostat.
Almost half of our domestic energy is used for heating and cooling. Using this simple setting, you could avoid approx. 1,000 kg of CO_2 per year. Programmable thermostats automatically regulate heating and air conditioning down at night and up in the morning. You can save energy costs in double figures.

Support local, seasonal farmers' markets.
These markets reduce the energy requirements for growing and transporting of foods by one-fifth.

© C. Liedtke, M. J. Welfens et. al. (2008): Klima und Ozeane (KLIO), Didaktisches Modul der Bildungsinitiative Mut zur Nachhaltigkeit, Forum für Verantwortung, ASKO-EUROPA-Stiftung, Europäische Akademie Otzenhausen, Wuppertal Institut, S. 195; graphical representation VisLab Wuppertal Institut.

LEARN • UNDERSTAND • ACT

1. "Sustainability" is referred to as an interdisciplinary topic and a guiding model that includes many complex questions (see text).

a) Read the first and second text sections again, and list the key questions and topics that – according to the author – are linked with sustainability.
b) Present these different topic aspects in a graphical structure as well – for example, using a mind map.
c) Which question do you think is the most important one and why?

2. Marianne Dehne argues that it would not take much effort to introduce sustainability as a school subject. But instead of this, it should be communicated as part of all teaching subjects, at all educational institutions and all places of public teaching, as a result of which people will be able to deal with it in a practically oriented way at all times throughout their lives. Discuss the author's attitude, first in small groups and then in the large group. Orientate yourselves according to the following key questions:

a) In which school subjects have you been provided with knowledge about sustainability topics or discussed sustainability issues? Which of the questions stated in the text have not been adequately addressed so far?
b) Do you know where sustainability teaching is offered in your immediate area?
c) Where and how have you been able to gather practical experience about a more sustainable lifestyle?
d) What additional learning and experiential opportunities for sustainable development topics would you like to have and who should provide them?



3. According to the author, in order to save the world we all need a first-aid course, both collectively and as individuals – a kind of agenda for sustainable living and learning. This course consists of three cornerstones

a) List these cornerstones of "Saving the World", and write down keywords of their content as a way of collecting information.
b) Summarise your results in a group chart.
c) Together, discuss and clarify what the key statements and terms collected are by citing small examples from everyday life. For example, discuss what the author means by "solid rules of thumb" and a "sound inner compass" and apply these to your own life.

4. The author takes a specific example for the future of a wetland habitat and a political decision to be taken as a means of clarifying the conflicts of interest involved in the question of what sustainable development can mean for citizens in different positions.

a) Explain the conflicts of interest that the mayor is faced with in the case study.
b) Do you know of any current disputes in your community that are based on conflicts of interest involving sustainability? Conduct research in your local media about this. Discuss this dispute in small groups or as a role playing scenario in an imaginary council meeting, as indicated in the text.

5. For many people there is a discrepancy (contradiction) between their knowledge of sustainable action and the way they actually put this into practice in everyday life.

a) What is behind this discrepancy or what reinforces it?
b) What possible solutions does the author provide for minimising these discrepancies between knowledge and action in terms of sustainability?
c) Clarify these everyday conflicts of knowledge and conscience in personal conversations in groups of two. Work together to find innovative solutions that supplement the suggestions made by the author.
d) The author advises "freedom from ideology" alongside all your intensive efforts. What is she aiming for, and what might she mean by this?

6. Marianne Dehne's closing appeal is, "Let's also take part in this salvation!" Discuss this challenge with the full group and indicate your personal attitude to it in the form of a drawing, comic or series of photographs. Publish it on your online blog or in the school newspaper, and send it to the *youthinkgreen* office in Berlin as well: info@youthinkgreen.org



3.2. KRISE: CRISIS: GLO
THE DESTRUCTION O

Introduction

Crisis phenomena, whether economic, social, political or environmental in nature, are and have been present at all times. However, in the age of globalisation, our 21st-century societies are being confronted by crises on a new level of frequency and severity – crises that appear to be enmeshed in one another in complex interactions, and which are no longer confined to national or regional borders. One crisis appears to follow hard on the heels of the previous one, and seems to trigger the next or redouble the effect of previous crises. Economist Prof Dennis J. Snower regards these as the consequences of unresolved "orphan problems" – a category in which he places climate change, overfishing, financial crises, overgrazing, international terrorism and global deforestation, amongst others. According to Snower, no country regards itself as truly responsible for these problems despite the fact that they have catastrophic global effects.

306 CLIMATE CHANGE! "Fiddlesticks! Don't believe everything just because it is written somewhere!!" – KEEP IT UP!



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BAL WARMING AND
F KEY ECOSYSTEMS

In this section we focus on climate and environmental crises, even though it goes without saying that these can by no means be thought about in isolation from global food crises, financial market and economic crises, epidemics or political crises. When scientists explain their latest insights into complex natural phenomena, most people consider these explanations to be overburdened by theory, dry and wearisome. However, our conversation with Prof. Dr. Schellnhuber, who researches the consequences of climate change, was quite different. He compared climate change to an exciting crime story, explained why it is sometimes "over-dramatised" and described specific possibilities for citizens take part in the "happy ending" instead of bringing about even more extreme weather events.

We then considered the interactions between anthropogenic global warming and the processes of destruction in various ecosystems. Dr Thomas Fatheuer has lived in Brazil for decades, where he has witnessed by necessity how the tropical rainforest continues to be cut down in spite of many protective measures imposed by the government. It is not only the indigenous population and species diversity of Brazil that are suffering, but is something that will affect all the citizens of Latin America and the global population in the medium term. This is because the rainforest plays a key role in the regional and global climate. The unbridled felling of forests is something that is happening in many rural areas on other continents as well in order to obtain firewood, for example. In her article, Dr Auma Obama describes the causes and consequences of deforestation in Kenya in East Africa, and indicates possible solutions that could provide long-term countermeasures to the resulting catastrophes.

The Berlin-based Global Peace Service charity (Weltfriedendienst e.V.) plays a global role in fighting against privatisation, pollution and the drying out of sources of drinking water. Taking the example of a small village community in Argentina's salt flats, Katrin Steinitz describes how people there are defending themselves against the illegal activities of major companies with the necessary international support.

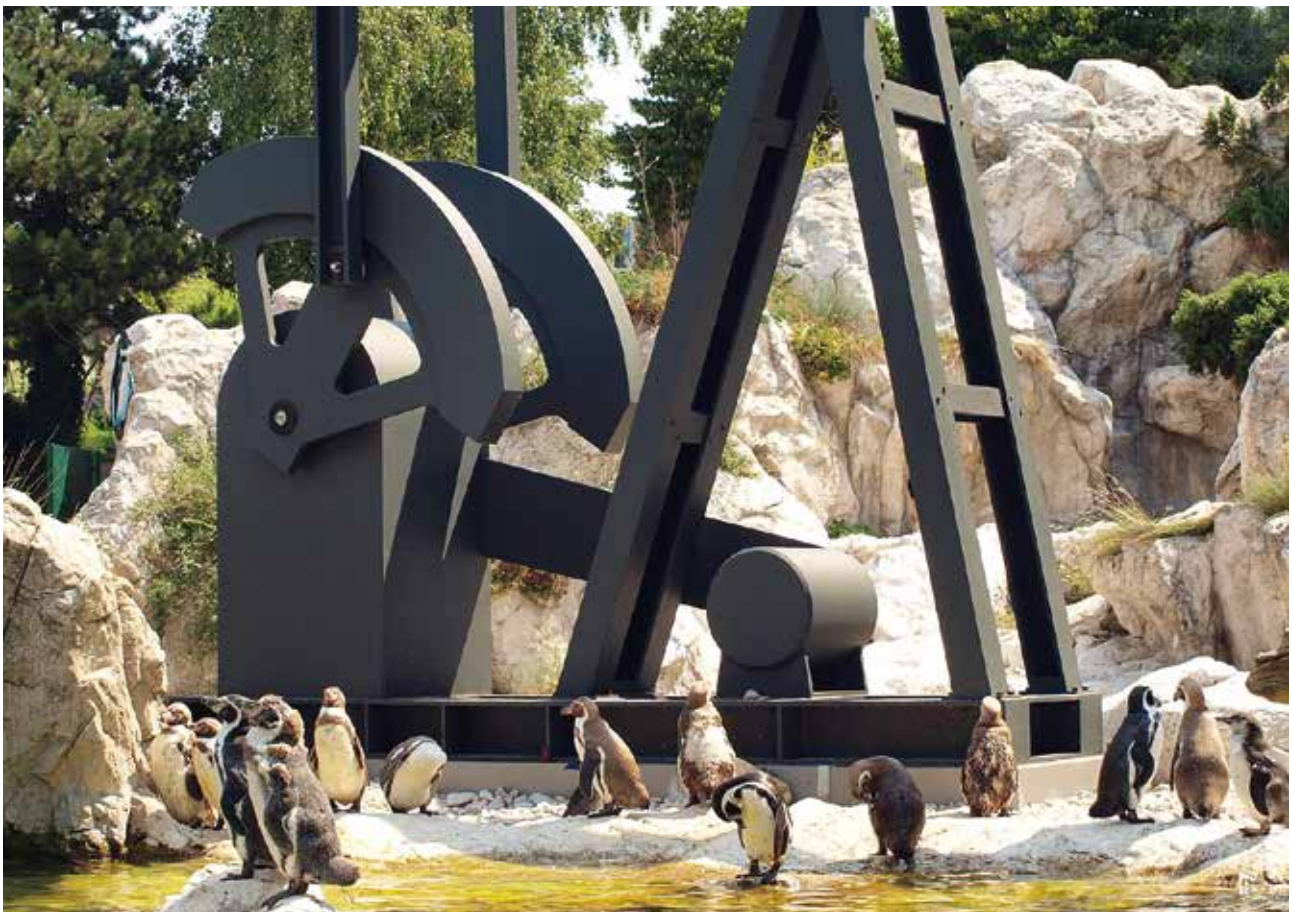
Source of life: The ocean and Arctic

Ulrike Sinzel has taken a closer look at the topic of coral death in various ways. In many conversations with scientists, the author discovered the complex processes that are increasingly endangering the life of marine creatures in our oceans, and why this will throw the entire food chain into disarray. In her brief literary story, we first read about a fateful encounter between Marek and Elena. Both decide to dive into a secret underwater cave on their own initiative, where they hope to find a mineral that will stop the acidification of the ocean. In her article, "Why the ocean is slowly but surely becoming acid", Sinzel explains the true backgrounds that inspired her to write the story.

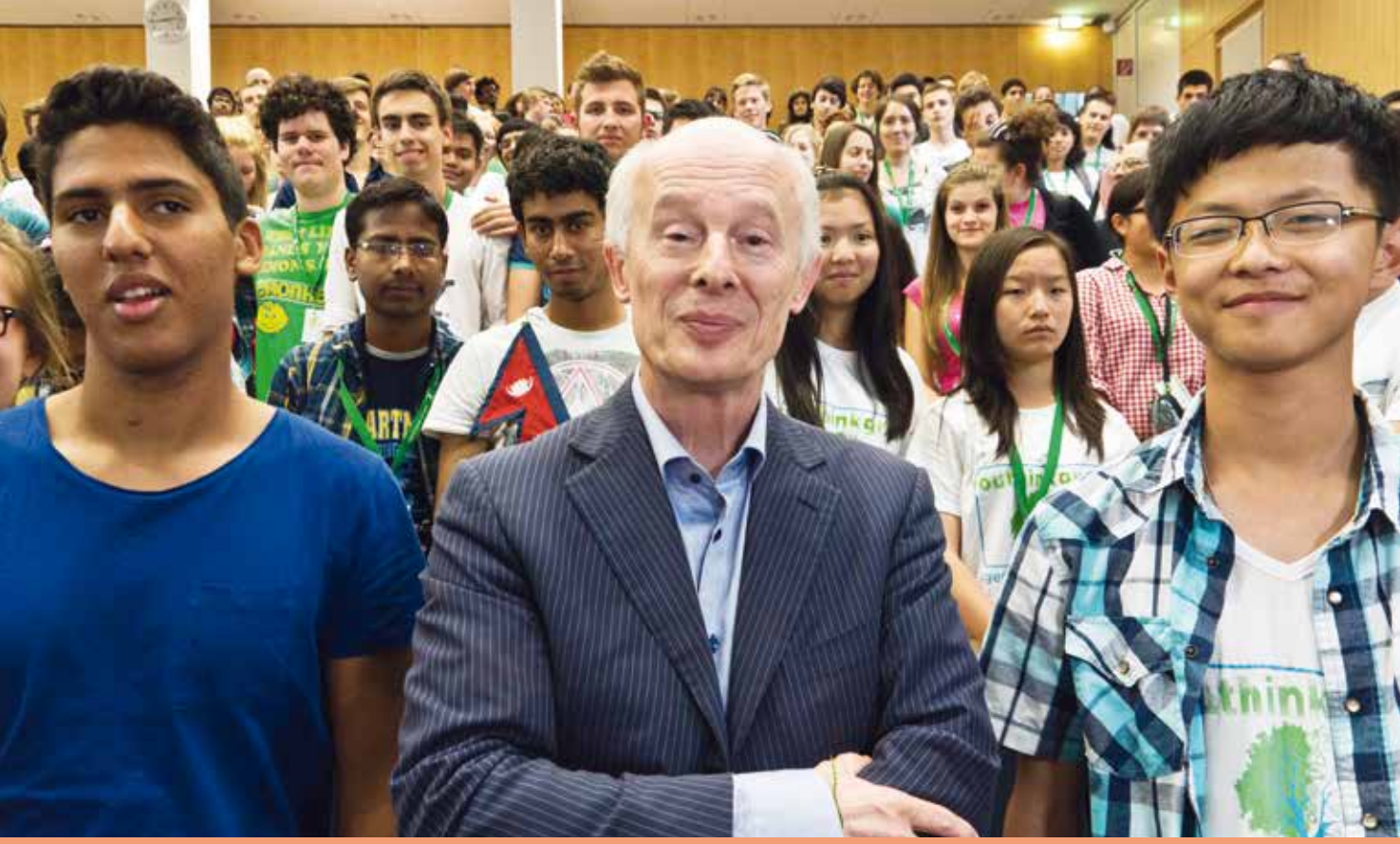
We then turn to the topic of the particular vulnerability of icy landscapes in the polar regions. In an interview with us, expedition leader and adventurer Arved Fuchs talks about his journeys on foot and on the high seas, and describes how his perspectives on climate change and nature

have changed over time. His observations and estimates as a "contemporary witness" of global warming make it patently clear that if the ice melts and sea levels rise, the lives of many animals and people will be threatened, not only in the Arctic but worldwide.

However, the authors and our interview partners in this topic area do not just want to give a clear warning, they are also sending out a wake-up call. Scientists and committed citizens are revealing themselves to be "anxious optimists" who are appealing to our moral values, our awareness of responsibility, our reason and our creativity. They make suggestions for a rethink and as a way of ensuring protection. The time is late, but not yet too late to commit ourselves to finally changing course in the race against climate change.



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"MORE THAN HOT AIR"

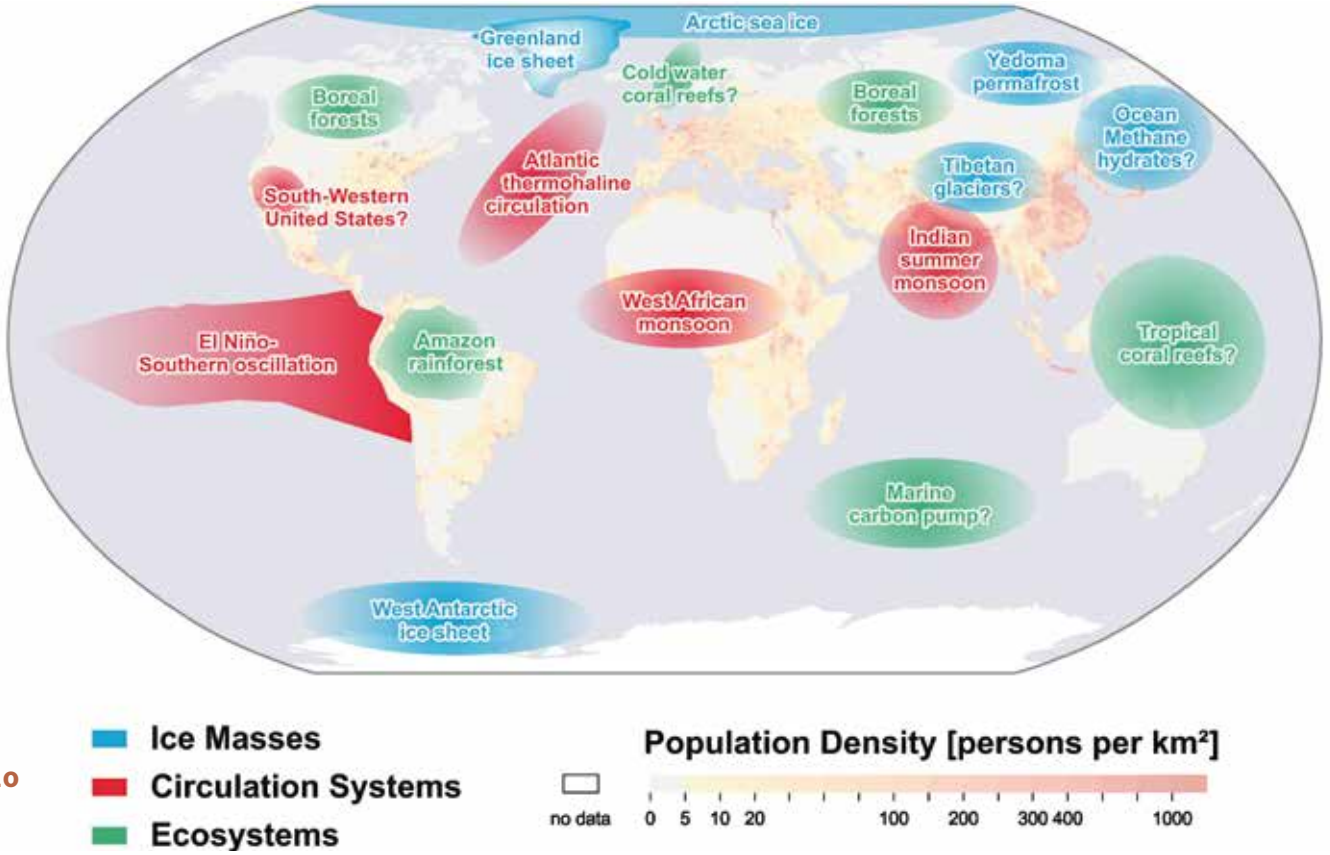
An interview with climate consequences researcher Prof Dr Schellnhuber

Can the world still be saved? The results and forecasts by scientists do not provide much cause for hope with regard to the accelerating pace of climate change. For decades, Prof. Dr. Schellnhuber, Director of the Potsdam Institute for Climate Impact Research (Potsdam-Institut für Klimafolgenforschung [PIK]) has been warning of the consequences of global warming, and calling on politicians, entrepreneurs and citizens to change course at last and establish a carbon-free global economy. In an interview with youthinkgreen he talks not only about the risks of climate change, but also reveals quite specific pathways for how we can still win the race against climate change. *By Karoline Kmieciak & Ariane Missuweit*

***youthinkgreen*:** Prof Dr Schellnhuber, we are experiencing heatwaves and floods more and more frequently, for example, Typhoon Haiyan left a swathe of devastation across the Philippines. And the melting of the glaciers in the Arctic and Antarctic is likely at record levels. When will global warming finally get out of control?

Prof Schellnhuber: Although it is not possible to predict the exact moment when we will lose control with 100-per-cent accuracy, there is a clear and demonstrable trend in this direction that has been caused by human beings. We scientists are even more concerned about the entire planetary machinery rather than simply extreme weather

Tipping elements of the ecosystem



Schematic mapping of tipping elements of the Earth system and population density.
Source: PIK after Lenton,Held, Kriegler et al. (2008)

events, such as heatwaves or torrential rain. This consists of melting ice sheets (those on Greenland, in the western and eastern Antarctic, Tibetan glaciers, etc.), changing systems of currents in the atmosphere and the oceans (Atlantic thermohaline circulation, Indian monsoon, West African monsoon) as well as key ecosystems, such as the Great Barrier Reef or the Amazon rainforest. If the Earth were a body, these tipping elements could be considered the vital organs. We do not know when one of these organs will cease to function, but when it happens we will have to expect dramatic consequences. And continuing along this metaphor, if one kidney fails, that does not necessarily mean the patient will die – but it can set off a dangerous chain reaction. As a result, preventative measures and treatments are called for.

***youthinkgreen*:** For decades now, you have been investigating this concept of tipping elements and studying how our way of life is stressing key elements of the climate system beyond critical limits, as a result of which certain processes in the overall structure are "tipping" and may no longer be able to function. What are the latest scientific insights in research into tipping elements?

Prof Schellnhuber: We can now make better and better predictions using simulations dealing with the risks, i.e. what increase in temperature going forward will cause the complex processes in climate and ecosystems to change dramatically. The critical limit for the Greenland ice sheet to melt is a global warming of about 1.6 degrees Celsius. With the West Antarctic ice sheet, we may have even more time, while the Amazon rainforest will probably require a rise in temperature of four degrees. This risk map can also be imagined in a simplified form as a "temperature road": There are red warning signs along this road,

and they become more closely spaced together beyond the two degree limit. As a result, the political goal of limiting global warming to two degrees is enormously important.

Probability of failure

youthinkgreen: During the flight to the Rio Conference in 2012, you talked with young people from *youthinkgreen*, and the question of whether the world can still be saved arose. Your answer was: "I don't think so." Do you still hold that view?

Prof Schellnhuber: That was probably because of the thin air (he says with a smile). Well, that's less of a scientific forecast as it is my own socio-normative standpoint. I place the probability of failure as very high so that we see the dangers and experience the pressure to act. All of us need to change the modes of behaviour we are used to, and this goes for industry and its lobbyists just as much as it does for politicians and us as citizens. The question of whether we can succeed in saving the world is something that I regard as less relevant than the question of what I personally can do about it. Let's take an interesting analogy from the world of sport: As a football player, I don't take the field for the deciding match already thinking I am going to lose. Even if I am not the favourite and the odds are against me, I do everything I can to win in the end. And the battle against climate change is not, for example, Brazil vs. Germany, but more like Cyprus vs. Argentina. And even Cyprus wins once in a hundred years, you know.



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youthinkgreen: And who is this mighty opponent in the battle against climate change, if we may briefly continue with your comparison to the World Cup final?

Prof Schellnhuber: I would like to take a slightly different approach to that and give two answers. The classic answer is of course the huge industry based on burning fossil fuels – the fossil energy source system. However, the Industrial Revolution was a blessing for humanity because without the use of coal and oil there would presumably be no modern technology today, no modern medicine and our standard of living would be lower. However, this system has become so

OUR AUTHORS



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Ariane Missuweit (b. 1985) completed a degree in social sciences and works as an independent journalist. She has been working for *youthinkgreen* since 2014, was involved in the conception and editorial work on the "Tree of Hope" book, and has managed the "Changing Consumption" project since 2015.

huge and self-sustaining that it keeps spinning automatically, even though the side effects are becoming more and more dangerous and it is quite clear that we are heading for a crash. Scientists call this "path dependency", meaning that, in principle, the opponent is your own success story. And this means the second opponent has also been identified: It is a part of ourselves – all of us with our desire for convenience and our craving for pleasure. We respond predominantly to direct stimuli and threats. Presumably, we can control this in everyday life, but plotting a new course as a society is the great challenge of our time.

youthinkgreen: Specifically with regard to industry and the energy sector, you as a scientist have been calling for the new approach of a zero-carbon global economy to be adopted for a long time. How much progress have we made?

Prof Schellnhuber: I must say that the transformation in the energy system is taking place faster than I originally thought. In a current strategy paper, the largest Swiss private bank, UBS, is assuming that the classic energy generators, such as E-ON, RWE and the like, will have disappeared within twenty years. By then, batteries will be so cheap that anyone will be able to store and use solar energy. I believe that this transformation was ultimately caused by unforeseen events, such as the nuclear catastrophe in Fukushima, which lent momentum to the new energy policy in Germany in a tragic way. Of course, we need visionaries, planners and pioneers thinking more long-term in order to put these changes into effect, whether with regard to global warming, the environment, health or other aspects. Many technologies for sustainable energy supply have long been competitive. Take onshore wind energy as an example. Here, the costs of generating electricity are already lower than those of burning coal. It is quite clear that in twenty, thirty or forty years, our old energy system will no longer exist in this form.

Climate change as a crime story

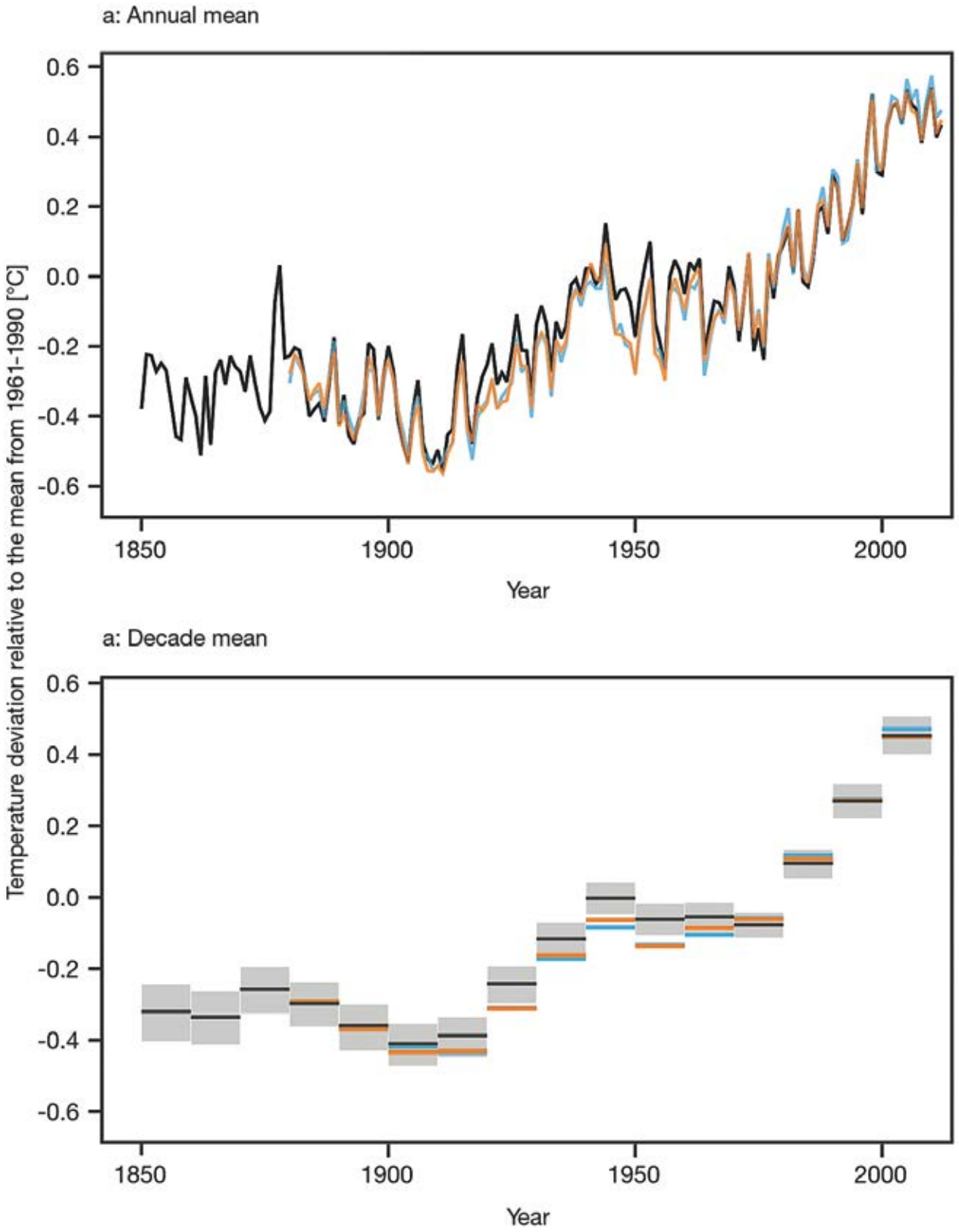
youthinkgreen: Are we hearing a little optimism here?

Prof Schellnhuber: In any event, it is interesting how the competition against climate change will turn out because our coal-fired power stations will of course continue to be used for a further twenty or thirty years, and gas-fired power stations presumably even longer. The emissions they will create might themselves be sufficient to push us beyond the two-degree mark. And though we might well have achieved the transformation of our energy system by the year 2050, climate change will come about under its own dynamics that we can no longer prevent. In the figurative sense, we can call the climate history of this millennium a crime story, but we are not sitting comfortably in front of our TV sets and watching it and we cannot switch it off when we feel like it. We are part of this process and if we do not bear the consequences of our actions or failure to act, our descendants certainly will. And that is something that gives me sleepless nights.

youthinkgreen: What specifically can we do as citizens to demand the exclusive use of renewable energies in the economy?

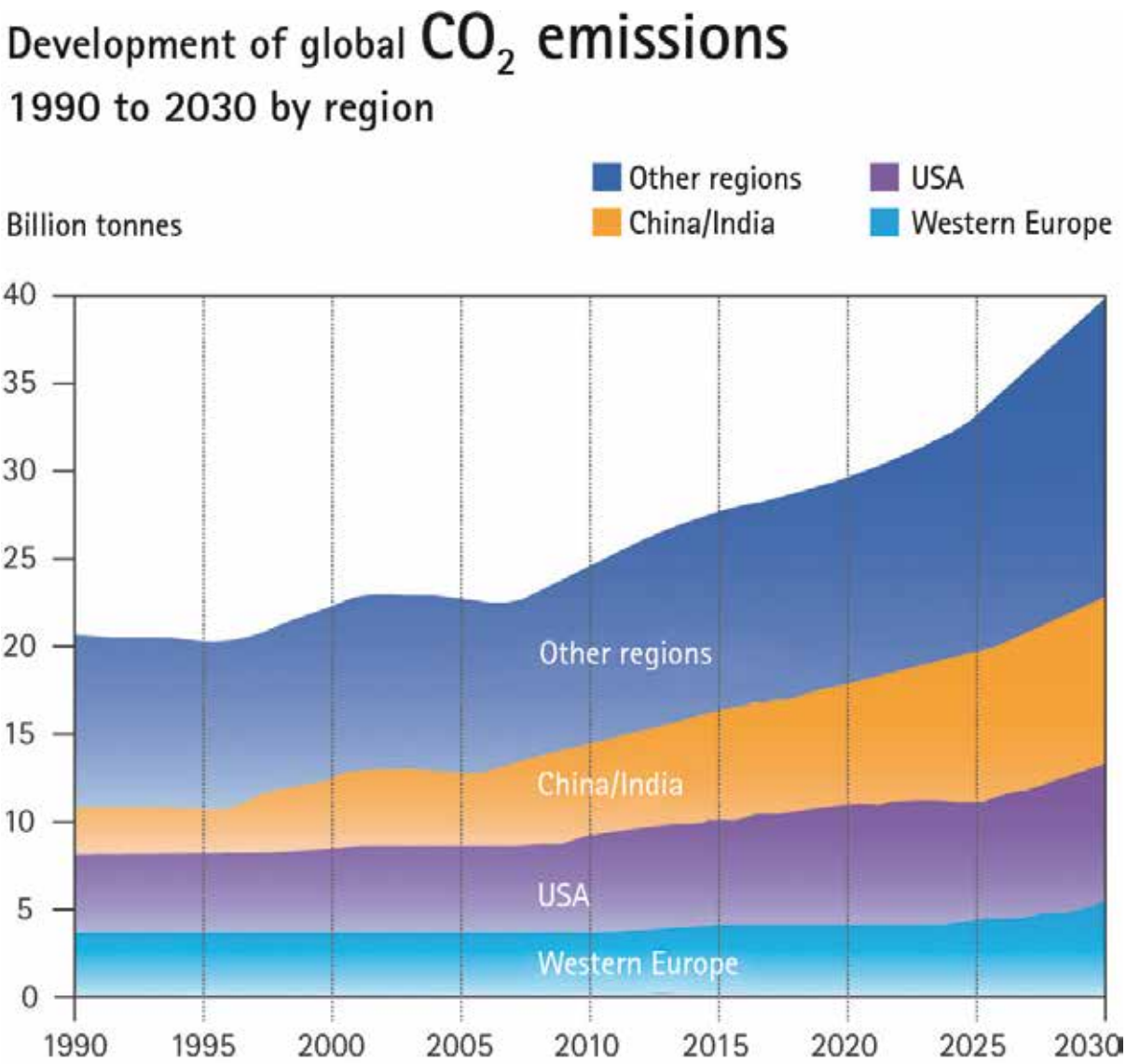
Prof Schellnhuber: In my opinion, the key lies in the hands of every individual as consumers and voters. We should try a range of different types of civil resistance against climate change. "Climate Protection as a World Citizen Movement" will incidentally be the title of the new report that we have just prepared for the German Advisory Council on Global Change (Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderungen [WBGU]). In it, we deal with various social initiatives. I find the approach of divestment particularly interesting, involving as it does the demand for a cessation of lending and investments in fossil fuels.

For example, the civil society climate protection organisation 350.org has organised worldwide divestment campaigns against the mineral oil, coal and natural gas industries. It is possible to see a



Observed development of the global surface temperature between 1850 and 2012 from three different data series. (a) Annual mean values, (b) Decadal mean values. The diagram shows anomalies relative to the mean of 1961-1990. Source: IPCC, 2013b

global movement involving citizens who are demanding not only that their communities cease investing in "fossil-fuel companies", but even their universities, including Harvard and Stanford, as well as their banks and pension funds. Each of us with a bank account can or must ask where our money is being used: in a business of the past that is making a significant contribution to destroying our world, or in a business of the future that intends to keep our world safe. Whether as a student, a taxpayer or a pensioner, each of us can join in this movement and demand that companies are held to account. Let us assume my city issues a call for tenders for building a new library. In that case, we as citizens can check and make sure that the companies applying meet



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sustainability standards. In this regard, the worst option would be to think: "I am only a tiny cog in the machine. I cannot do anything."On the contrary, we, the cogs, are what move the entire apparatus.

Opening your mouth

youthinkgreen: Let's turn now to those who control and guide this apparatus, i.e. our society. As German Chancellor Angela Merkel wanted you to do, you really get on politicians' nerves frequently. What does that mean specifically?

Prof Schellnhuber: One example that I would like to provide is the CO_2 budget report we drew up with the WBGU in 2009, shortly before the climate summit in Copenhagen. The starting point in this case was the consideration that humanity only has a certain amount of carbon credit available until global warming exceeds the two-degree limit. Our demand was for this global credit to be distributed fairly amongst all people so that every individual was granted the same share of the entire CO_2 credit. Some climate diplomats responded in shock, whilst others found our suggestion annoying. And the new WBGU report, which focuses on the civil movement, will no doubt not be very welcome by some bureaucrats either. The divestment strategy that has already been mentioned is indeed awkward, but it could develop an enormous force of effect. My experience is that ideas such as divestment generally need ten years to be implemented. First, they are mocked, then ignored and at some point people start to change their actions.

youthinkgreen: We young people are experiencing frustration and anger above all else following the nth unsuccessful climate conference. What feelings do you experience after such conferences?

Prof Schellnhuber: I return from these conferences with mixed feelings, primarily with a great deal of sorrow. The nights spent in Copenhagen were unbelievably depressing, and many of my friends found them to be crushing. And of course I too feel anger, for example, regarding the conduct of some major industrial countries. Unfortunately, as time goes on you gain a certain distance from these conferences. I am sure the real transformation will come from somewhere else. In this regard, I make the following appeal: We citizens must come up with our own ideas and make our own plans independently of bureaucratic institutions. The future is too valuable to be left in the hands of politicians alone.

youthinkgreen: What alternatives in the area of mobility and energy supply do you use in your everyday life in order to reduce your environmental footprint?

Prof Schellnhuber: I have to fly a great deal in my job, so I regret that my environmental footprint is quite large. In our everyday life, my family and I use an electric car, which enables us to drive in a climate-neutral way because our car is "refuelled" exclusively with green electricity. I firmly believe that electric cars will come into widespread use in the long term. It is obvious that we – the privileged classes – must set trends and be pioneers in our mobility and consumption behaviour.

youthinkgreen: Climate debates are now focusing on questions of global equity on the one hand and intergeneration justice on the other. How would you sum up this point?

Prof. Schellnhuber: I once spoke about the "dictatorship of the now"[1] in an interview. It is a deeply immoral manner of conduct for us to consume our treasures of the past – namely fossil fuels – at such breakneck speed whilst passing on all the follow-on costs to future generations. On the other hand, who among us nowadays plans to plant ten oak trees, which will be fully grown in one hundred years, providing shade and helping protect the climate? In the past, this was quite normal. In this regard, I think the current system is not only a market failure, but also a moral failure of our society to a certain extent.

1) Reference: www.spiegel.de/spiegel/print/d-77531589.html



***youthinkgreen*:** However, to a large extent we young people have also been brought up with this self-destructive way of thinking and acting, or at least are heavily characterised by it. How can we change and also get older people to accept their responsibilities at the same time?

Prof Schellnhuber: Initially, I found it very disconcerting that young people, who are most heavily affected by an historically unique amorality, apparently fail to grasp these problems or simply ignore them. You should all be totally furious, you ought not to distance yourselves! It is simply not right that your generation and future generations are left to cope with a future of dwindling resources and even greater risks and side effects. Of course, at the age of 16 or 18, your heads are full of ideas, and not primarily ideas about environmental protection. But unless you get involved, there will not be any future worth fighting for. So, get on people's nerves wherever you can, in any way possible. This can be done with charm, aggression, stubbornness or humour. In this regard, I hope that you will be angry, amusing and passionate, and that you will get on the nerves of politicians and other decision-makers to an even greater extent than I can in my position.





The Greenland ice sheet and its thickness in meters ©Allstrak

Temperature limits of the tipping elements	
Tipping element	*Critical temperature limit*
Arctic sea ice	0,5–2 °C
Greenland ice sheet	3 °C
West Antarctic ice sheet	5–8 °C
Boreal forests	3–5 °C
Amazon rainforest	3–4 °C
Sahara/Sahel West African monsoon	3–5 °C
Thermohaline Atlantic circulation	3–5 °C

LEARN • UNDERSTAND • ACT

1. Prof Dr Schellnhuber regards the so-called tipping elements, the supra-regional components of the global climate system, as vital organs of the Earth's body.

a) What happens if such a tipping element is toppled? In your research, refer to Figure X (Tipping elements. Achilles heels in the global system, PIK). Discuss the possible effects of each tipping element in the group.

b) To what extent does the comparison made by Prof Dr Schellnhuber apply and represent a significant help in understanding the complex global climate system? How does he justify his comparison?

2. IIn the interview, Prof Dr Schellnhuber talks about a "temperature road". What does he mean by that?

a) What might a "temperature road" look like as mentioned in the text? Sketch a temperature road with the warning signs mentioned in the text (see Table Y). It might look like a thermometer whose colour changes, for example, or you could design a poster – be creative!

b) How can it be that the critical temperature limit for the Amazon rainforest is different from that of the Greenland ice sheet? Discuss in the group.

c) Why is the political goal of keeping global warming to two degrees so important?

3. Why is it more important to Prof Dr Schellnhuber that we as people change our own behaviour rather than answering the question of whether the world can still be saved at all? Take a look at the text!

a) "We, the cogs, move the entire apparatus" – what is meant by this? And what can citizens do in their everyday lives to act and consume sustainably?

b) Prof. Dr. Schellnhuber speaks about every individual, be they students or pensioners, being able to demand companies be held to account. What examples are stated? What examples can you think of yourself?

c) Do you think that "the privileged classes" in society should play a pioneering role when it comes to mobility and consumption behaviour? Discuss in small groups!

4. The competition against climate change is completely open. We – the people – are part of the process. Describe the main reasons for this "crime story" as Schellnhuber calls it.

5. For Prof Schellnhuber, changing our own conduct (convenience, craving for pleasure, etc.) is more important than answering the question of whether the world can still be saved at all. What possible reasons and experience form the basis for his statement?

6. "Climate Protection as a World Citizen Movement" is the title of the current report by the WBGU.

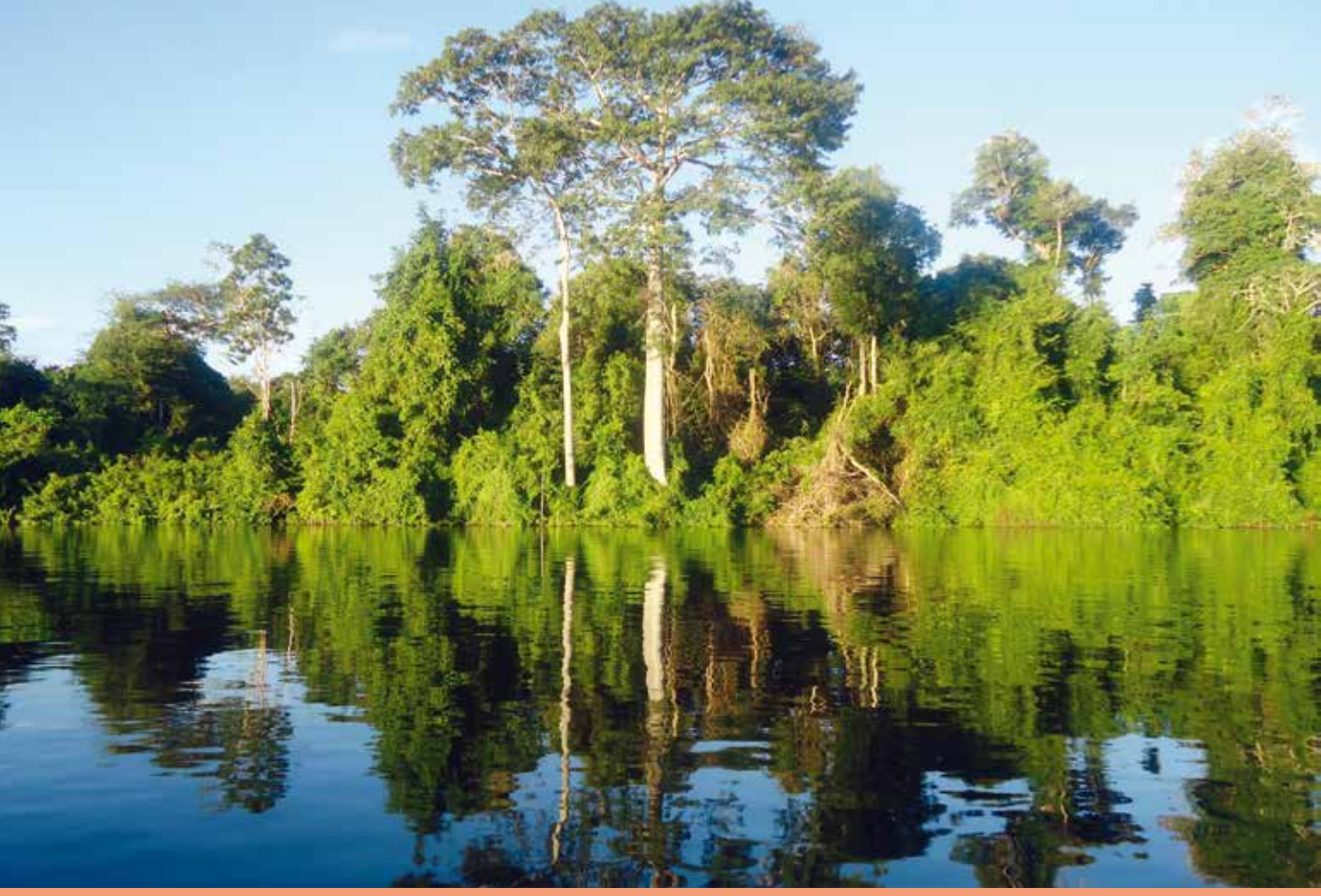
a) What examples of social initiatives does it address? Explain them.
b) Your opinion is called for: Conduct research into divestment campaigns against fossil fuels. Describe their strategy and objectives.
c) Assess the success of these campaigns.

7. Schellnhuber addresses young people personally in the concluding part of the interview in particular.

a) Discuss his expectations and his appeals in small groups.
b) Which "cogs" could you form in our civil society?
c) Present your results to the class and work out a short manifesto together in which all of your views are expressed.



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THE AMAZON RAINFOREST – A LIFESAVER IN DIRE NEED

Dr Thomas Fatheuer

"All of this will disappear," says Antonia Melo sadly, with a quiet, hesitant voice. She is looking at the beautiful river landscape of the Xingu – close to her home town of Altamira in northern Brazil. In front of her is a scattering of islands; only experienced boaters are able to navigate through the water here. The Xingu is impassable to large ships. This has protected the region against widespread destruction up to now. Small settlements are scattered amidst the dense rainforest. Only a few people live here: Small farmers and indigenous people cultivate the land for their own requirements, and they use the river and the forest. They learned from a young age to live with and in nature.

"All of this will disappear." This pessimistic statement by the retired teacher and environmental activist has come true in the meantime. A dam is now being built on the Xingu, one of the most important tributaries of the Amazon, to



© Ruy Sposati

generate electrical power. Belo Monte – beautiful mountain – is the name of the third largest dam in the world. Its maximum power is more than 11,000 megawatts – an atomic power plant can only achieve about 1,400 megawatts. One of the largest construction sites in the world now stands in the middle of the ancient forest; the process involves moving more soil and rock than in the construction of the Panama Canal. In spite of many national and international protests as well as widespread resistance by indigenous peoples living in the region who were worried about the future of the river that feeds them, the government is pushing forward with the mega project.

More than 10,000 workers from all over the world have turned the small, sleepy town of Altamira into chaos in the meantime. But Belo Monte is only the start: The government wants to build seven dams on another Amazon tributary, the Tapajos. The region's inhabitants cannot possibly consume that amount of electricity. Long power lines involving significant energy losses will carry the electricity to the city of São Paulo, which is located more than 2,000 kilometres away, or will be used for smelting aluminium, a process that uses enormous quantities of electricity.

The forest is giving way to cattle

It is not only dams that are threatening the rainforest. The greatest danger actually comes from cattle. Or, more accurately, from the people who are cutting down the rainforest in order to create grazing land for cattle. Brazil is now the largest exporter of beef in the world. 172 million hectares are used as grazing land for cattle, corresponding to 70 per cent of the country's agricultural land. In Brazil, there are more cattle than people: according to the statistics, there are 211 million of them, a number topped only by India. The number of cattle has grown continuously over the past 20 years, with most of this growth taking place in the Amazon region. More than two-thirds of the rainforest area that has been felled is now used for cattle pastures, as can clearly be seen on satellite images. The images also show that it is predominantly major property owners who are responsible for destroying the rainforest.

Mato Grosso means dense forest, and is the name of a federal state in Brazil in which part of the Amazon rainforest is – or was – located. This is because large stretches of it are now soy bean fields. Since 2005, Brazil has been the number one exporter of soy beans, followed by Argentina and the US. Mato Grosso even became the most important soy bean region in the country. Soy is actually an Asian plant, and was predominantly used for making vegetable oil. However, the majority of production is now used worldwide as animal feed. Soy beans are exported as cattle feed and are fed to animals. Every year, the EU imports about 25 million tonnes of soy in the form of beans and meal. And the majority of the soy is genetically modified. Cultivating genetically modified crops

OUR AUTHOR

Dr Thomas Fatheuer (b. 1953) is a social scientist, journalist and independent consultant. He has lived in Brazil for almost 20 years, and until 2010 was the head of the Heinrich Böll Foundation's office in Rio de Janeiro. His latest book is entitled, New Economy of Nature (Neue Ökonomie der Natur).





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is prohibited in Germany, but not their import and use as animal feed. The majority of genetically modified soy cultivated in Brazil therefore ends up in the feed troughs of cattle, pigs and chickens. And animal products do not have to be labelled, meaning that the use of GM soy is not transparent for consumers. The "soy boom" in Brazil went hand in hand with the "chicken boom". An unbelievable 5.6 billion chickens are slaughtered every year in Brazil. The country is now the second largest producer of chicken meat in the world, bested only by the US. As a result, it is the worldwide growth in meat consumption that is increasing pressure for the rainforest to be converted into agricultural land.

New protected areas and laws

The news is not all bad, however. Although large areas of the Brazilian forest region have been felled (about 755,703 km²; by way of comparison: Germany is 357,168 km² in size), about-two thirds is still intact to date. And, the importance of the rainforest is appreciated to an increasing extent in Brazil nowadays, both by politicians and



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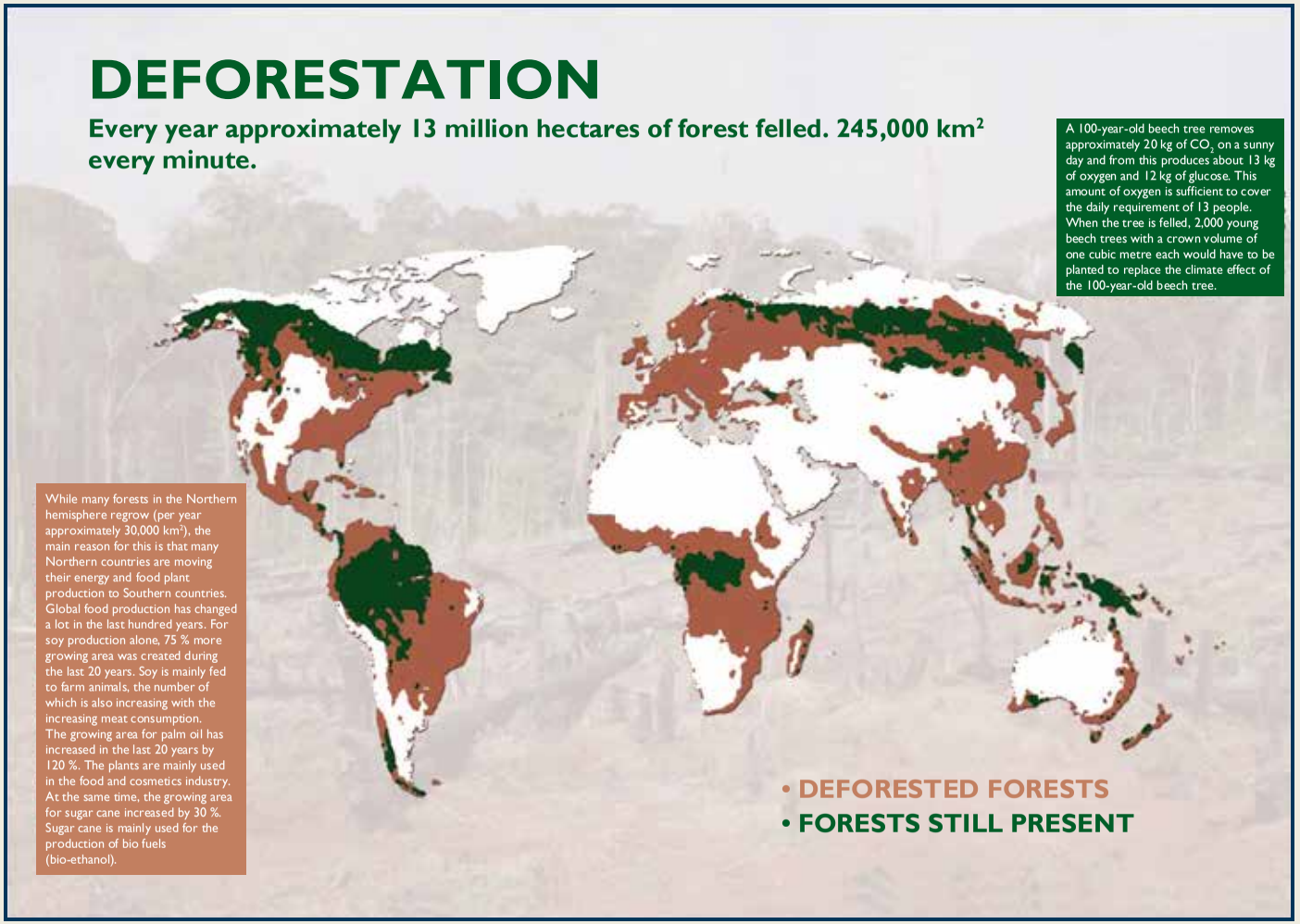
citizens. The rainforest not only holds the highest levels of biodiversity in the world, it is also the home and living space for indigenous peoples and plays a crucial role in the regional and global climate. Scientists have shown that the rainfall in São Paulo, the largest city in South America, depends on cloud formation in the rainforest. Destruction of the rainforest means that Brazil is the leading country contributing to the warming of the climate. As a result, numerous international environmental organisations as well as associations of indigenous peoples and the inhabitants of Amazonia are actively committed to keeping the rainforest intact. And they are achieving successes. For example, Greenpeace succeeded in agreeing what was described as a soy moratorium for the Brazilian Amazon region in 2006: The association of soy farmers in the country, which represents the major landowners of Brazil, undertook not to create any new soy fields in the rainforest region. However, following several extensions, this only initially applies until May 2016.

In addition, the Brazilian government has moved against deforestation. After rates of deforestation reached shocking proportions in 2004, the government imposed new protected areas. 43.9 per cent of Amazonia is subject to protection, about half of this as indigenous territories. The government also strengthened monitoring to prevent illegal logging. This action was concentrated on the municipalities (local administrative units) with the highest rates of deforestation. The deforestation rates declined drastically as a result. Since 2009, annual deforestation rates have been significantly less than 10,000 square kilometres. However, it is not yet possible to sound the all clear, unfortunately. In 2012, a new forest law was passed under which the strict environmental regulations (landowners in Amazonia are only allowed to fell 20 per cent of their forest area) were once again relaxed, following which rates of deforestation increased by 28 per cent again in 2013. 5,843 square kilometres were destroyed, representing about one-third of the area of Wales. This means no country in the world is destroying as much forest as Brazil is. And the latest figures show that deforestation is growing further. The battle for the rainforest has not yet been settled.

© Agência Brasil/José Cruz



DEFORESTATION



Map: Replica. Original map: © Greenpeace
Text sources: WWF (2011). "Die Wälder der Welt. Ein Zustandsbericht". / Bertrand. GoodPlanet Foundation (2013). Die Erde von Oben. Frederking & Thaler. Scheub & Kuschel (2012). "Beschissatlas. Zahlen und Fakten zu Ungerechtigkeiten in Wirtschaft, Gesellschaft und Umwelt". Accessed on 22.07.2013

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LEARN • UNDERSTAND • ACT

1. More than half the total area of all tropical rainforest is in the region of the Amazon basin.

a) Describe the habitat of the "tropical rainforest" in detail. Research this online. Exciting stories and background information (in German, English and four other languages) can be found here: www.regenwald.org/regenwaldreport, www.abenteuer-regenwald.de (for younger students). You can take a digital journey to the Amazon rainforest with Arte: amazonie.arte.tv

b) Discuss its multi-faceted importance with one another.

2. The Belo Monte dam is the third largest in the world.

a) Scrutinise its positive and negative effects for the region.

b) How do you assess the worries expressed by environmental activist Antonia Melo? What is it likely to mean for the ethnic groups if they have to leave their homes?

3. What "enemies" and threats are facing the rainforest? Why are large areas being felled? Talk about the situation. To do this, be sure to conduct research online as well to find other reasons that are not mentioned in the text.

→



4. According to the author, the "soy boom" in Brazil also ushered in the "chicken boom".
How are soy cultivation and meat production linked? Consider the history of soy bean cultivation with regard to global trade, the causes and consequences. What results did you come up with?

5. The power and impotence of the state:

a) Discuss the various measures that were taken by the Brazilian government to counteract the rapid and unrestricted destruction of the rainforest.
b) How do you judge their prospects for success? What are the greatest obstacles?
c) Consider once again why there is urgent need for action – from a national and international standpoint. Consider environmental and social factors in this.
d) Find out by researching online what the international community has already done to support Brazil in saving the rainforest. Which environmental organisations have undertaken to protect the rainforest? What options do the particular international actors have for exerting influence, providing incentive systems and applying pressure?

6. Today there are frequently various calls to protect the tropical rainforest.

a) Work together to create an appeal to protect the tropical rainforest in the form of a poster or an information sheet. What other ideas do you have for action?
b) First, write down the reasons and objectives of your campaign in a collective list.
c) Discuss your (possible) personal contributions as citizens and the political responsibility of industrial countries to protect the tropical rainforest. Also consider your diet and your consumption behaviour.
d) Work together to write a list of demands addressed to the parties responsible, consumers, politicians and representatives of business, taking account of the various justified interests.

© www.aerdt.de/ aerdt gif gastronomietechnik





Village inhabitants marvel at the mixer of the microbiogas plant © Sauti Kuu Foundation

HOPING FOR RAIN

By Dr Auma Obama

In western Kenya, most people live off of small-scale agriculture, but the rain has almost ceased there. As a result, revenues from agriculture have fallen: Hunger, want and poverty are rampant. There appears to be no way out of the situation. Buy why do the rains stay away? And what can the people on the ground do to break the vicious circle?

The air is sticky, oppressive and humid. A strong wind is blowing, stirring up and carrying away everything that stands in its way. Dust clouds blow everywhere. Black clouds form at a fast pace. The sun disappears and the sky clouds over. You can smell the rain, a mixture of earth and water. Hope springs forth.

On the road, you can see that everyone is hurrying to get to their destination. Many of them start to gather in the cereals laid out to dry in the yard, whilst others bring in clothes from the washing line. They corral their chickens into the hutch and close the windows of their coops huts firmly. Everyone knows the temperamental tropical rain. It does not announce itself with a few drops. It comes suddenly and with full force – a downpour of huge droplets that immediately soak you to the skin and close in your vision as if you were holding a wet cloth in front of your face.

The rain clouds gather overhead

In spite of the excitement and the hectic rush, everyone is looking forward to the rain. They are truly longing for it to fall. The dry season has been long, and the town's water sources are

completely dry. As a result, everyone is looking up to the sky and hoping. The country is hilly and you can clearly see that rain is falling strongly in the far-off town of Siaya. People wait patiently. But it does not rain! The dark clouds pass over Nyangoma without issuing even a single drop of rain. This scene has been repeated for several years now. In Nyangoma, a small, sleepy town in western Kenya where most people live off of small-scale farming, it has almost ceased to rain. There is less rain each season, leading to reduced earnings from agriculture.

Most families cook with wood because they do not have any other option. They live in simple mud huts, sometimes without electricity or running water. As an oven, they use a pot placed on a simple plate made of clay and stone. The smoke given off fills the houses with fumes and causes serious eye and respiratory diseases. To access firewood, the people fell many trees in the immediate vicinity. Where there used to be woodland, there is now a barren, dry land. The area in the region covered by trees now only amounts to just under two per cent. And that is why it hardly ever rains any more. However, people on the land are entirely dependent on wood. By chopping down the trees, the families end up in a vicious circle that casts them further and further into despair.

OUR AUTHOR

Dr Auma Obama (b. 1960) studied in Germany, and she writes and speaks globally about sustainability topics. She is the Chair of the Sauti Kuu Foundation – powerful voices of our future generation.

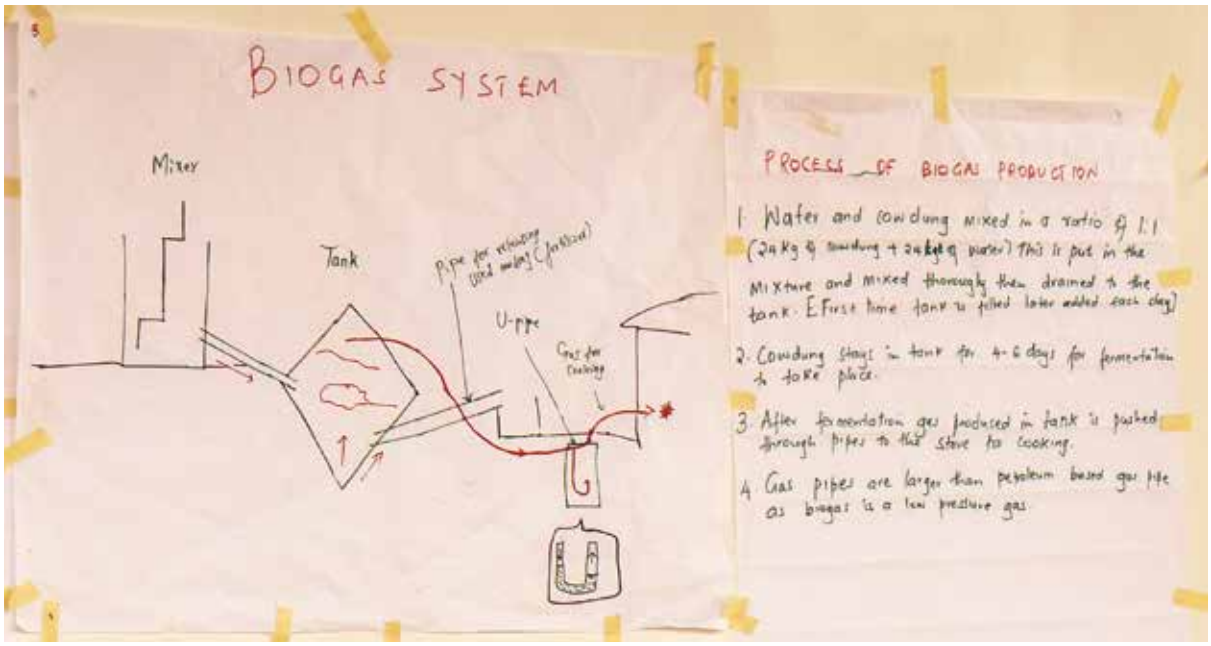


PRACTICAL EDUCATION: HELPING PEOPLE HELP THEMSELVES IN KENYA

Setting the course for a better future with young people

We at the Sauti Kuu Foundation are attempting to work in western Kenya with the resources that are available to the region and the people there. However, felling trees is a mistaken approach that does not offer a way out of poverty, but merely exacerbates the situation. We are all suffering from this situation, because we are also dependent on the rainwater although we already practise water management and collect and store rainwater.

This is why we have been looking for a solution. Our first thought was that there must be something other than wood that people can use for cooking.



© Sauti Kuu Foundation

On our search for alternatives, we benefited from a partnership with Rehau, a German company that specialises in processing plastics and polymers in the areas of water management, energy efficiency and renewable energies. It is particularly important for the company to establish close relations between its employees and young people in the project, and to share its expertise with them. "Instead of simply donating money, we wanted to develop sustainable solutions together with the young people and project leaders on the ground," says Ingo von Ramdohr, head of the International Business Development BUILDING Department in Erlangen. Offering "help to help themselves" is also in line with our motto for Sauti Kuu. Thus, in 2012, the close cooperation with Rehau gave rise to a pilot project with the objective of stopping the felling of trees.

We developed, built and monitored a micro-biogas plant that is operated using cow dung. The resulting gas means there is no need to burn firewood any more. However, the plant does not just prevent the felling of trees, it also has a second positive consequence: The time consuming task of gathering firewood became superfluous, meaning that children had more time to go to school. Cooking meals has become easier overall. Franziska Enzmann, an intern at Rehau, visited us in Kenya for three months to implement the project. Franziska is studying life science enginee-

INFO: THE SAUTI KUU FOUNDATION

Sauti Kuu is Swahili and means "powerful voices". The Foundation seeks to give disadvantaged children and young people a voice and an opportunity to unlock their potential. This is done through practical training, motivation and support. The Foundation is based on the principle of "helping to help yourself", so that young generations in Kenya can take control of their own fate: www.sautikuufoundation.org

ring at Erlangen-Nuremberg University. In spite of some initial difficulties, she enjoyed installing the biogas plants very much. “I am pleased that I was able to contribute to this great pilot project,” says Franziska. “Helping Kenyan families who were having a really hard time finding a simple and environmentally friendly way of cooking – that makes it worthwhile!”

Good results

Cooperation between Franziska and our young people functioned well in spite of the language barriers. The young people largely organised themselves, and were able to expand their knowledge with each start-up of another plant, and put this knowledge it into practice. Four micro-biogas plants have now been installed in Kogelo.

As soon as these biogas plants in the pilot project have been functioning for a reasonable length of time, we intend to expand the programme and make these systems available to many families. We are confident that burning firewood in Alego Nyangoma will then be entirely unnecessary. As part of the next step, we will plant trees and attempt to reforest the region so that the rains will come back to Nyangoma during the rainy season instead of leaving it in drought.

Recommended reading:
Ways out of the hunger crisis: Findings of the World Agriculture Report and its suggestions for tomorrow's agriculture.www.weltagrarbericht.de









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LEARN • UNDERSTAND • ACT

1. The inhabitants of Siaya in western Kenya face a threat to their existence.

a) Describe the vicious circle of the apparently inescapable trap facing people, animals and nature in this area.

b) Portray a vicious spiral including the reasons and consequences of this fatal living situation with the procedures they involve.

2. Find information and ask questions about the work and objectives of the Sauti Kuu Foundation. To do this, conduct research online and using the sources provided in the Appendix.

3. Installing a micro-biogas plant has significantly alleviated the situation in Siaya.

a) Describe the innovative pilot project and research how a biogas plant functions.

b) To what extent has this broken the vicious circle?

c) Explain the activities of the young people on the ground who are involved in this project.

d) Discuss the further objectives of the Foundation in this region amongst yourselves. What results did you come up with?

e) Can you find similar projects in other regions and developing countries? Conduct research about this online and compare these projects with the project in Kenya.

4. Franziska, an intern at Rehau, gained a lot of experience during her work in Kenya.

a) Discuss this in detail in small groups. Make a list of your results and present them to the main group.

b) What particular value and incentive can experience of this kind have for the ongoing lives of young people? What changes could this bring about?

c) Are you interested in a foreign placement or voluntary service? Well-known sponsorship programmes are the easiest way to do this. Examples in Germany include weltwärts, kulturweit, ASA, European Voluntary Service. Conduct research into the topic of "pathways abroad", e.g., here: www.daad.de or www.rausvonzuhaus.de. Both pages also offer information for foreigners who would like to come to Germany. Which of the options interests you personally the most? Plan your foreign placement well in advance (at least one year)!

→

5. "Help to help yourself" should be the title of your future project.

a) a) Discuss amongst yourselves whether you have enough resources to start your own "help to help yourself" project in the team. What information do you need for this? Work together to develop a specific project idea with targets and potential supporters as well as plan of action to put your idea into effect step by step.

b) Alternatively, consider whether you would prefer to provide long-term support to an existing project with your ideas and skills. Search for cooperation partners and draw up a list of resources (time, skills, money?) that you can offer.

c) Maybe you could provide momentum to motivate the school management, parents and student representation to take part in its own long-term "help to help yourself" project involving the entire school community? The young people in your future partner country are waiting for your help, and this will no doubt result in intercultural friendships. In addition, you will acquire important skills for your future career through your commitment. And without doubt, you will have fun doing it! You can promote school partnerships via the Educational Exchange Service (Pädagogischer Austauschdienst): www.kmk-pad.org/programme/alle-programme.html





Process of biogas production
- The mixer (Cow dung and water)
- The underground tank (gas production by fermentation)
- Node of the distribution system (including waste as fertilizer, gas supply to the houses)
- The new cooking place with the gas supply

© Sauti Kuu Foundation



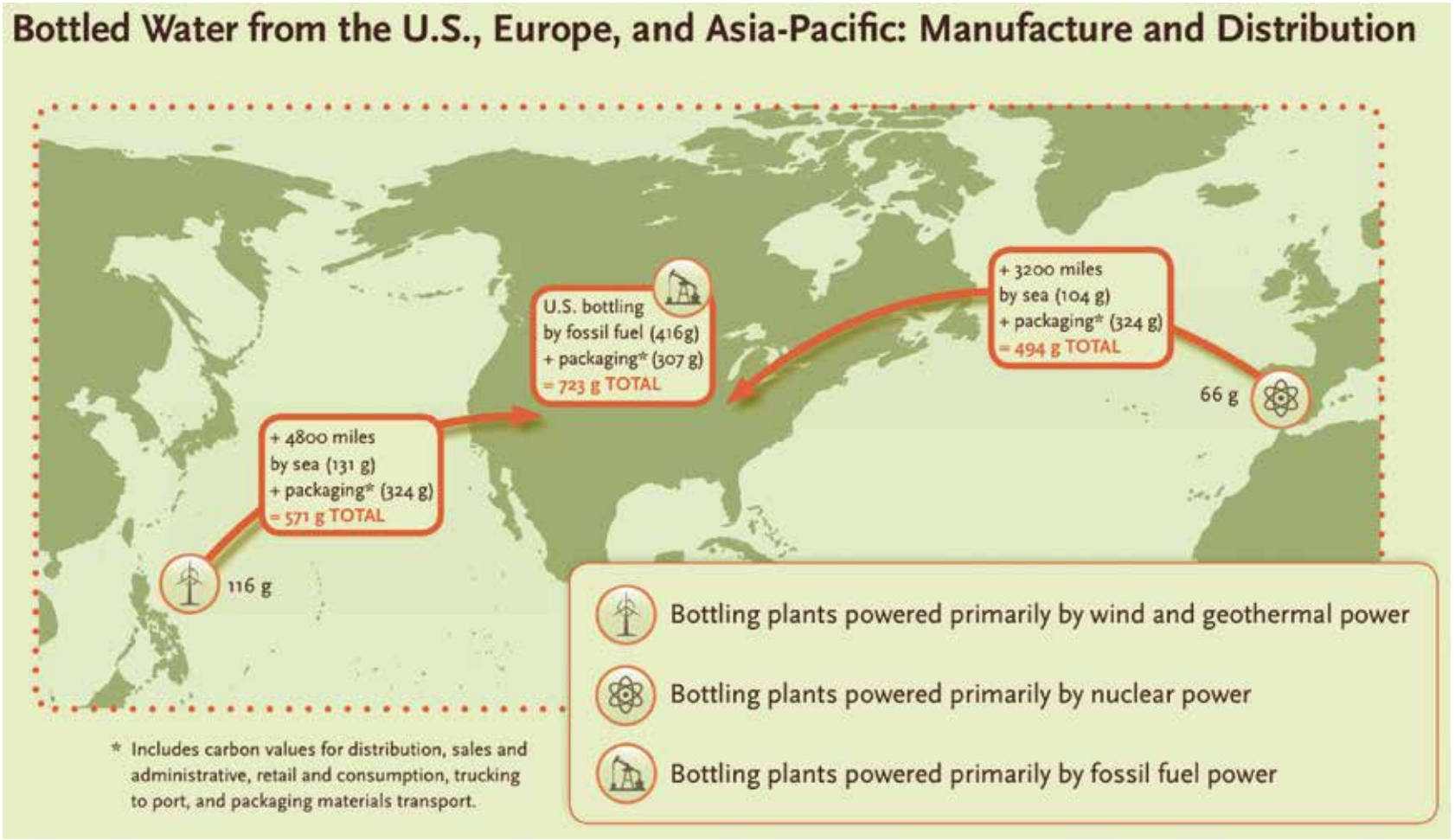


WATER IS LIFE – WELTFRIEDENSDIENST E. V. (THE GLOBAL PEACE SERVICE CHARITY) IS FIGHTING AGAINST WATER THEFT

By Katrin Steinitz

The right to access to clean water has been written into the United Nations Universal Declaration of Human Rights since 2010. However, there will be a long and difficult struggle before this right can be put into practice. The Berlin-based Global Peace Service charity (Weltfriedensdienst e.V.) is fighting alongside its project partners in Latin America, Africa and Asia to combat the privatisation of land and water sources as well as against industrial pollution of drinking water, which threatens the existence of millions of people – mostly families and small farmers in rural regions.

Clean drinking water and basic sanitary provisions are not only human rights; they are also a feature of human dignity and a cornerstone of sustainable development. This is what was expressed in Resolution 64/292 of the General Assembly of the United Nations in 2009. In many parts of the world, however, the principle that "water is a human right" continues to be a desire instead of a reality. According to the UN resolution, almost 800 million people have no access to clean drinking water. In addition, some 2.6 billion people live without any basic sanitary provision. The World Health Organisation estimates that some eight million people die of diseases every year that are linked to contaminated drinking water or poor sanitation. Most



© Dr. Edgar E. Blanco

of these victims live in African countries south of the Sahara.

The problem of poor drinking water provision is exacerbated by international conglomerates, such as Nestlé and Veolia, Coca-Cola and Pepsi, which are attempting to privatise global water resources for commercial use. It is particularly in countries with weak and corrupt governments that private major investors with lots of money and influence find it easy to purchase land titles according to modern land law, thereby replacing the traditional rights of local people, which have not been set down in writing. And, in most cases, once companies have rented the land, they control the regional drinking water resources.

Virtual water

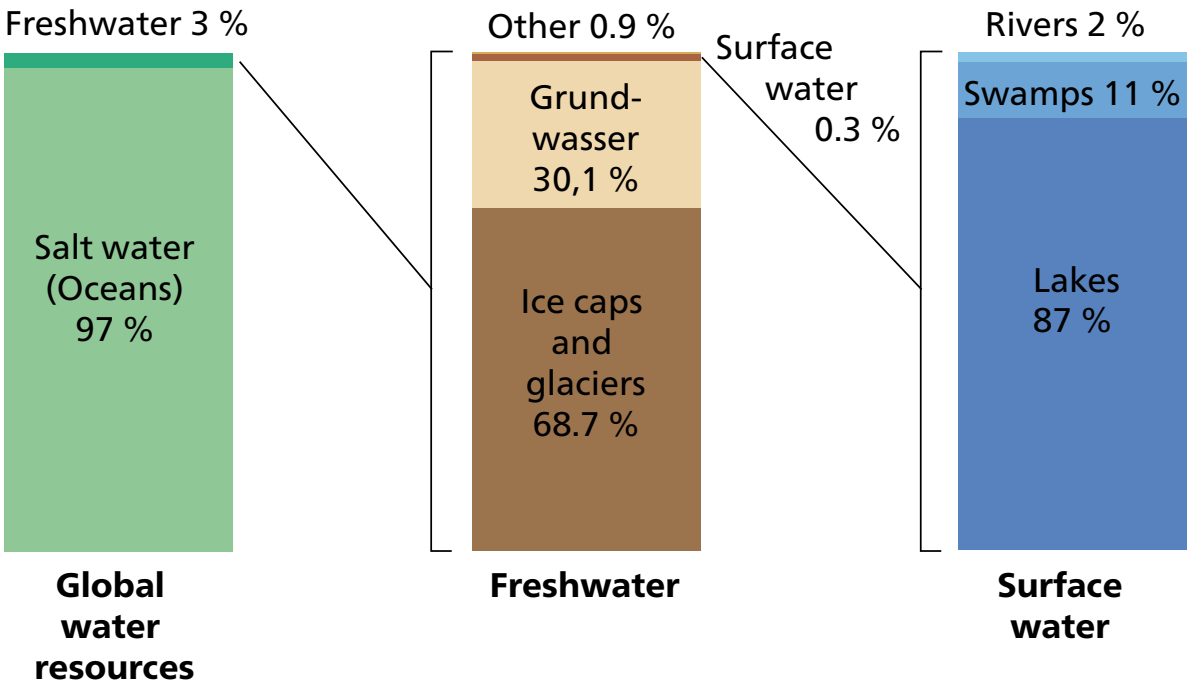
Water from rivers and groundwater aquifers are used by companies to irrigate their large farms, plantations and pastureland in hot, dry regions of Africa, Latin America and Asia. It is particularly in tropical regions exposed to seasonal or annual deficits that these forms of industrial agriculture unavoidably lead to higher water consumption than the ecosystem can provide. As a result, groundwater levels drop, lakes become increasingly salty and rivers dry out. The export of agricultural products like soy beans, oleaginous fruits, vegetables, fruit, coffee and ornamental plants also represents a virtual export of the water consumed during cultivation from the region where the crops are grown. As a result, Germany imports on average about 1,500 litres of water per person, per day.

In addition, water resources are polluted by the use of fertilisers and pesticides, by industrial waste discharged into rivers and by mining. The population in countries without functioning democratic oversight is often exposed to exploitation and pollution of their water resources, which are essential to life, and frequently no protection is available. In most of these countries, there are neither political laws to provide protection against water pollution nor are there rules for how much water is allowed to be used when and by whom. Alternatively, compliance with laws is not monitored. Even if the causal relationships and responsibilities are difficult to untangle, overall, the increasing privatisation of water means that many people are being denied their human right to water.



© Jonathan McIntosh

Water distribution on the earth





Aral Sea: Drought and salinisation of the soil due to the water requirements of the irrigation field

Case study in Argentina: Defending the water that is still left

Walter Alencay lives with his family in the salt flat of Salinas Grandes in northern Argentina. They live off cattle breeding and farming as well as the cautious extraction of salt. However, one day the world's largest accessible deposit of lithium was discovered in the large salt lakes of the Jujuy region. Lithium is required for manufacturing mobile phones and batteries for hybrid and electric cars, for example. Mitsubishi, Toyota and other companies from Japan, South Korea, Canada and Australia want to extract lithium from the region where water is scarce, and are starting to do so. This has far-reaching consequences for Walter's family and the indigenous population groups that live there.



Children in Jujuy © Marianocecowski

"Everything started one evening six years ago," says Walter. "As usual, I was feeling really tired after work. The salt harvest is just as strenuous today as it used to be, because we do not use any machines so we can avoid damaging the sensitive salt crust. My wife was just putting our two children to bed when I heard sounds of crying. I went to the scullery. There, my younger daughter was crying and saying that she had brushed her teeth thoroughly. My wife asked her to open her mouth and showed me dark marks on the little one's teeth. In the meantime, my older daughter was trying in vain to brush a dark stain off one of her front teeth. So it wasn't dirt – but what was it? This question haunted me long after calm had returned to the house. I had to find out what was going on."

Walter asked his neighbours – they also reported puzzling dental damage. People wondered whether their children's health was at risk. Walter contacted the council of indigenous peoples in the mining province of Jujuy (COAJ). He knows the people who work there; they come from indigenous communities themselves and he can trust them. The council took Walter's concerns very seriously, and asked the University of Jujuy to analyse the water. The investigation was financed by funding from a project the COAJ is carrying out jointly with the Global Peace Service charity in Berlin. The results came back a few months later: The scientists found high concentrations of extremely toxic minerals in the drinking water, such as arsenic, presumably residues from earlier mining activities.

Dishonest promises, illegal activities

By now, Walter was carefully monitoring all the reports about mining activities in Jujuy. And what he heard and read made him even more worried. He found out about boreholes that a foreign company was drilling in its salt lake, and the press was reporting about lithium being found in this lake. However, drilling trial boreholes, never mind mining activities, without an environmental compatibility test and prior consultation with the affected indigenous communities is illegal. Walter had learned that during a training course organised by the COAJ for community representatives. He informed all the affected communities. Together, they established a round table and discussed what possibilities they had for exerting influence and what legal measures might be taken.

"We asked ourselves why some communities did not come," remembers Walter. *"Only later did we find out that the US company Lithium Americas Corp (LAC) had conducted separate negotiations with these communities."* The company had secured itself the rights to use the soil, roads and water in the long term. The communities were given compensation payments and promises, such as a training programme for community members,

joint environmental monitoring and support for local development. *"Compared to the profits expected by the company, they had been bought off with a pittance,"* thinks Walter. He is not surprised that LAC is announcing on its website that the lithium deposits in the salt flat are some of the most favourable in the world.

drinking water. The community representatives decided to defend themselves against lithium extraction. They say, *"You can't eat batteries. We would like to retain the salt, our culture and the method of production that we have adopted from our ancestors. And we want to safeguard the water. The salt flat is our mother. This is where we live, and this is where our ancestors lived. If the salt flat is harmed, we will all be harmed."*

OUR AUTHOR

Katrin Steinitz (b. 1957) works in the office of the Global Peace Service charity in Berlin, and is principally involved in communicating with members, partners and donors. She also co-initiated the Berlin school project work4peace. www.wfd.de/work4peace



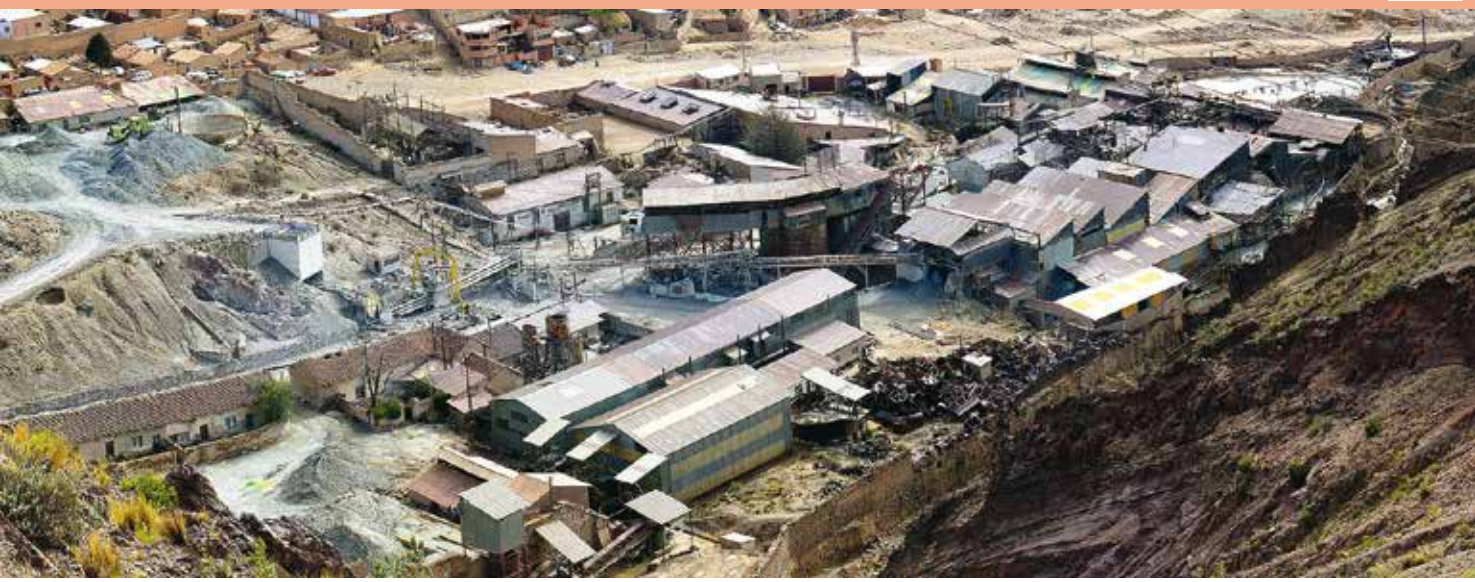
"You can't eat batteries"

Walter and the communities involved in the round table did not want to take part in these transactions. Instead, they attempted to find out what the long-term consequences of lithium extraction would be. A report commissioned by the council for indigenous peoples confirmed their worst fears. Lithium extraction consumes a great deal of water. It destroys the salt surface and there is a risk of salinification of the

Alicia Chalabe, a lawyer specialising in mining and soil law, represented the communities of Salinas Grandes in the case against the provincial government of Jujuy, which was heard by the National Supreme Court of Argentina. Walter and his fellow campaigners based their case on the Argentinian constitution and Paragraph 169 of the ILO Convention of the United Nations. Both documents set out that indigenous commu-

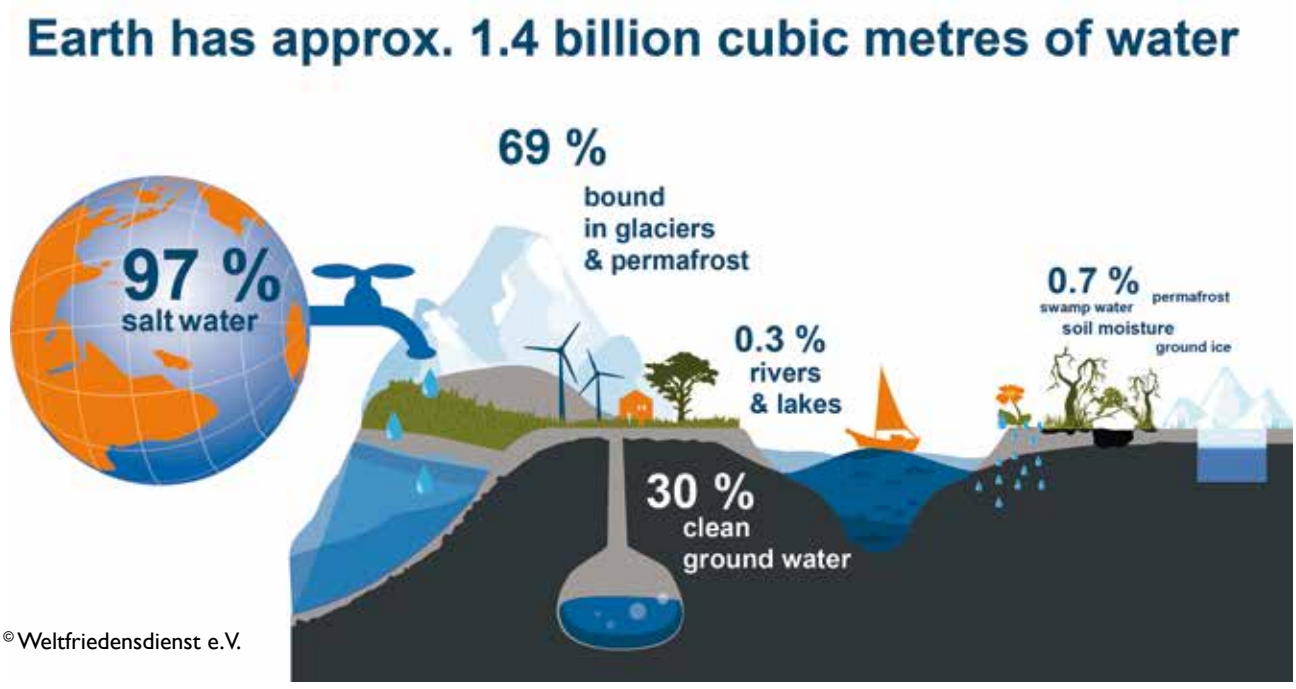


Mine and salt lake from the bird's perspective



Lithium mine in Bolivia © Martin St-Amant

nities should be consulted in advance regarding all activities relating to their territory and must approve the plans. Following numerous rounds of negotiation, the National Supreme Court refused to hear the case on the grounds that it had no jurisdiction. Nevertheless, Walter and the lawyer did not give up, instead appealing to the Inter-American Court of Human Rights. The case has been pending there ever since. Up to the present day, no further lithium company has showed its face on the salt flat – a success for resistance! The members of the round table and Walter will continue: *"Drinking water is scarce for us at the salt lakes – we live in a semi-desert. We are fighting against companies wasting and contaminating our water by extracting minerals. In our culture, water is a resource that must be respected in order to survive. That was the case 10,000 years ago when our ancestors settled here, and it still applies today and will continue to do so in the future."*



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INFO 1:

The Global Peace Service charity has promoted and advised the COAJ in Argentina for more than ten years. The activities that have been sponsored include workshops for informing community representatives about national mining, environmental and land law, legal advice for affected communities as well as training courses for indigenous development. Furthermore, the public relations and lobbying activities of the COAJ in Argentina and in the international arena are supported, e.g., with regard to bodies of the UNO.

INFO 2: THE HISTORY OF WATER IN DEVELOPMENT POLICY

(By Nora Rohde)

For more than 20 years, water has played a prominent role in global development policy. Back in 1992, four central agreements of the international water community were developed at the first World Water Forum in Dublin, referred to as the "Dublin principles". In these, the role of drinking water is emphasised as a finite resource that requires protection as well as the importance of water for human life, development and the environment. In order for these principles to be respected in political decision-making processes as well, projects for obtaining and managing water must be based on participation, integrating everyone involved and giving them the right to consultation. Here, women play a particular role because they are traditionally given the task of obtaining water in developing countries and they require a lot of water resources for everyday cooking and washing. Furthermore, the Dublin principles also assign an economic value to the resource of water: Water becomes an economic asset that is subject to competition from various potential users as a result of its scarcity.

More than 20 institutions deal with the complex water issues at the United Nations, and adopt different perspectives to it. The "clean side" of water (drinking water, groundwater, etc.) has long been at the centre of political activities. Even as part of the Millennium Development Goals (MDGs), the goal of "ensuring environmental sustainability"



Serpents stand for water in Bosnia © Mikhail Evstafiev

initially only referred to halving the proportion of people who have no access to improved sources of drinking water. It was only at the World Summit in Johannesburg in 2002 that the "dirty side" (waste water, sanitary facilities) of water was included in the MDGs, linked to the goal of ensuring access to improved basic sanitation worldwide. This complex topic attracted even more attention when the human right to clean water and sanitary provision was introduced by the UN in 2010. To date, however, the law is not actionable. It therefore remains to be hoped that these promises will become deeds and that political efforts will not be contradicted by economic targets and agreements.

INFO 3: WATER AND ITS IMPORTANCE FOR THE IDENTITY AND CULTURE OF INDIGENOUS POPULATIONS

In its publication entitled, *Water – Gift of Life,* the UN Voluntary Fund for Indigenous Peoples describes the importance of water for indigenous peoples: *"Water has many faces. It is liquid when it flows down from the mountains, it is vapour in the clouds which bring rain, it slumbers as ice and snow in the mountains and it is a level, a storm, a rivulet, a torrent or a flood. It caresses the ground as dew in the dawn and it also moves the mighty machine that generates electricity, it is fruitful rain or collects in a sewer, it evaporates in the air in order to return to the Earth in its unending cycle. In this way, the water cycle is similar to that of life, a perfect machine in which time, water and matter renew one another unceasingly in order to supply life, to keep life in an equilibrium that is adapted to the natural cycle and living within it."*

For indigenous peoples, water is a living being and a universal common good. It belongs to everyone and no one, it belongs to the Earth and living beings, and therefore also to people. Water must be handled appropriately; it must be protected and conserved, and its fair availability guaranteed so that all beings can live on the planet. There has been communal water management in indigenous communities for as long as people can remember. Families and social groups contribute to protecting water according to their individual abilities. They all feel linked to a community through water. Even if there are sometimes conflicts, fair distribution remains the rule – according to requirements and availability of water depending on the season.

LEARN • UNDERSTAND • ACT

1. Steinitz demands implementation of the"human right to access to clean water" enshrined by the UN.

a) How does the author justify putting this law into practice?
b) What difficulties and opposing interests stand in the way of achieving this requirement in many parts of the world? Collect material about this.

2. The author explains the extensive problems encountered in a region where water is scarce, taking the example of the Alencay family who live on the salt flat of Salinas Grandes.

a) Describe the main challenges facing Walter Alencay and his village community in your own words.
b) What is the role played by the "round table" of indigenous population groups in these circumstances? What importance is attributed to it?
c) The legal dispute regarding lithium extraction by foreign companies in the region has not yet been settled. However, the circumstances clearly show us how complex the questions relating to the topic of mining, soil and land use are, and what importance they have taken on in the meantime. What do you think are the causes of this? Justify your answers.
d) What encourages Walter to fight so stubbornly against the foreign companies? What spurs him on?
e) Lithium extraction: In which regions of the world are there other large deposits of the metal lithium, also referred to as "white gold"? For which products is the metal required, and what different actors have an interest in extracting the reserves? Compare the situation described in Argentina with that in another country of your choosing.



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3. On www.wasserraub.de, the Global Peace Service charity reports on global activities in the fight against the privatisation and contamination of water sources.

a) Conduct research online to find additional background information about this. Globally speaking, what are the key causes of drinking water scarcity, and what procedures can be described as "water theft", i.e. a criminal procedure? What insights do you come up with?
b) Conduct further research about the Global Peace Service (Weltfriedendienst) charity: What key topics does the association address? What are the guidelines of its project work in partnership with the countries of the Global South? Be sure to also take a look at their website: www.wfd.de

4. Discuss the importance of water for indigenous peoples amongst yourselves (Info 3). How does this differ from its importance in your culture and region? What conclusions do you draw from the comparison for you personally?

5. In 2010, the UN introduced the human right to clean water and sanitary provision (Info 2).
List possible reasons why this right has not yet been actionable.
Discuss these circumstances. What measures could be taken to change this?
Gather information from lawyers or political scientists who specialise in international law.

6. Virtual water – how much water do we really consume?

a) Explain the terms "virtual water" and "water footprint".

b) Discuss the effects of consumption of virtual water on developments in the areas of the environment, economy, society and health. In doing so, differentiate between these effects in two different countries and analyse their trade relations (imported and exported goods; for example, Germany and Brazil). Research this online.



c) How much water is actually required to produce food? Draw up a table on the topic of "virtual water in the shopping basket" and use selected products to gain an idea about how much water we each buy. How can you significantly improve your virtual water balance sheet?

d) "Anyone who shops and consumes with greater awareness will save water where it is really important, namely in the regions of the Earth where water is becoming more and more of a resource subject to conflict." Express your views about this statement. Be sure to also research this.

e) Virtual water – our saving tips
Write down your insights on an information sheet and distribute these at a weekly market or on the street, for example. Provide extensive information for consumers.



 © Frits Ahlefeldt

THE SECRET OF THE UNDERWATER CAVE – A STORY

By Ulrike Sinzel

Marek is astonished: A young woman is standing on the beach behind his house, and she has a complete set of diving equipment with her. It appears she is alone. Curious, he takes a few steps towards her and observes her from head to toe: pale skin, shining blue green eyes, her blond hair is tousled by the fresh sea breeze. She appears so delicate and graceful, almost fragile, and yet her expression is determined and concentrated. For Marek, there is no doubt: This beautiful woman is a stranger here. "There is something mysterious about her," thinks Marek. When he is standing directly in front of her, he says only three words with a slightly trembling voice, "I am Marek." It strikes him that the beautiful woman has a somewhat hunted look – or is she also nervous?

"Elena," she answers laconically.

"Do you want to go diving here alone?" asks Marek sceptically.

"Yes, for my research project, it is very important for me to investigate a mineral that exists only here in the lava cave."

"In the lava cave?" repeats Marek incredulously. "That is deep under the water! And with the air cylinder on your back, you will never make it through the narrow passages!"

The lava cave remains a mysterious place for Marek. When he was young, his father Rick often took him diving on the reef. The fantastic, colourful underwater world entranced him every time: Shining red corals, sea creatures camouflaged as tendrils of grass or those which disappeared into a hole in the ground as fast as lightning when you approached too close, as well as rays gliding majestically through the water and schools of patterned fishes also swimming there. But they always avoided the lava cave to a certain extent – it was rumoured that divers had already lost consciousness in it.

"Yes, I know that the cave is supposed to be very narrow," says Elena, tearing Marek away from his memories of his father. "But if I have to, I will take off the air cylinder before I go in, and hold my breath until I am in the cave. It is possible to breathe inside it."

Elena looks at Marek as if she is not yet certain whether she can trust him. She looks him straight in the eye. "I hope to find a mineral there that can stop the acidification of the ocean. But the cave might soon collapse, and it is getting more and more dangerous to dive down there."

Marek retorts with a firm voice, "But you mustn't do that alone! Don't you know you always need a diving buddy?"

"Of course I know that," replies Elena and gives him a meaningful glance. "Will you come with me?"

Since his father died six years ago, Marek has not been in the water a single time. And now he should accompany Elena to the lava cave? He feels himself overpowered by her direct manner. An expedition such as this needs really good preparation, he thinks. On the other hand, this is a unique opportunity to spend time with Elena. He asks Elena to wait briefly and runs back to the house to collect his diving gear.

Elena smiles with relief when she sees him come back with it. Without speaking many words, they put on their equipment, each lost in their





© Pete Nawrocky

own thoughts – and enter the warm water. Elena glides gracefully through the water as if this were her natural environment. Marek also feels more confident with each metre. "It is magnificent to dive again after such a long time," he thinks. A few minutes later, they have reached the sandy bottom. Marek is swimming ahead. Within a short time, they reach "Rick's Reef", as Marek called it in honour of his father. But when they come closer, Marek is horrified: The colourful underwater world that he loved so much as a boy has disappeared. Only a few fish cavort amongst the bleached, beige-coloured corals. The reef appears to have died.

The deeper they dive, the darker things become around them. Suddenly, Marek feels very uncomfortable. "It's not too late to turn back," he thinks. And yet he continues swimming and leads Elena to an inconspicuous black hole behind a small rock: the entrance to the lava cave.

The rock tunnel leading to the cave is actually too narrow for a grown diver. But without the air cylinder, they would be able to fit in. Marek's heart starts to beat wildly. Suddenly, it occurs to him that it is completely insane to explore one of the most mysterious places along the entire coast with this wild, strange woman without an air cylinder. His mask has misted over. He can no longer see Elena well. Maybe this is all just a dream?

But he can still just see Elena placing her diving gear on the bottom of the sea with a few hand movements, taking a last draft of air from the cylinder and disappearing into the hole. Marek struggles with himself. Does Elena actually need him there, or would it better for him to monitor the entrance? On the other hand, it is a unique opportunity to explore the cave himself, having already heard so many strange stories about it, and to find this rare mineral whatever Elena is expecting it to achieve.

Marek steels himself, sheds his air cylinder and follows Elena.

The blue light

In the rocky underwater tunnel that proceeds from the entrance, it is so dark that Marek can only feel his way slowly along the walls. He reaches into something slippery, instinctively recoils

with his hand and strikes the rock wall with his elbow. He is beginning to run out of air. Excitement consumes oxygen, so Marek tells himself to keep calm. Finally, the tunnel starts to widen. He reaches a cave that is only about half full of water. With relief, he surfaces, breathes deeply and scans the walls looking for Elena. But everything he sees is a bluish gleam of light – which suddenly moves. Something large and black comes towards him. Marek's stomach does a somersault. But it is Elena! She is holding a small LED torch in her hand, smiling at him and pointing at the roof of the cave.

Marek has never seen anything so magical before: nothing but bluish shimmering crystals. "Are those the minerals you are looking for?" he asks Elena.

She nods. Her face takes on a serious expression. "If they don't have the effect in seawater that I am hoping for, I cannot think of any other way to stop the acidification of the oceans. If that happens, all the coral reefs will die." When she sees Marek's uncomprehending look, she adds, "Climate change has caused the sea to absorb too much CO_2: The pH value has changed, the sea has become more and more acid. The acid water attacks the corals as well as the minute mollusc shells of the tiniest lifeforms, which will cause the entire food chain to collapse if they are decimated."

Marek still does not understand. How can the seawater be acid? That sounds like something from a bad science fiction film.

"The excessive CO_2 in the oceans is just as catastrophic as it is in the atmosphere," continues Elena, "but perhaps these minerals can stop the acidification." She pulls out a small hammer and chisel from a bag that she had carried with her, and starts to tap a few minerals off the cave wall.

Along with the ring of the hammer blows, Marek suddenly notices another noise: a distant rumbling that appears to be coming closer and closer.

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"Quick, go back, the cave is unstable," screams Elena at him in panic.

Marek cannot think clearly in this moment. As quickly as he can, he swims back down the dark, narrow tunnel towards the opening. Seconds later, he hears a terrible cracking accompanied by a dull undertone and a grinding sound as if the rock walls are splitting open. In fear of his life, Marek thinks about his dead father. He swore never to be as reckless as his father was.

He starts to feel dizzy. He does not want to die in the water. After what seems like an eternity, he sees some light again. It is the opening! With relief, he emerges from the hole and lurches for the mouthpiece of the diving gear: he has managed it.

But he cannot feel glad – because Elena is still in the cave. Marek asks himself when she will finally emerge.

A loud cracking interrupts his train of thought. A dense cloud of dust surges out of the hole leading to the cave. He has to go back inside to rescue Elena. Once again, Marek gathers all his courage – and swims right into the cloud of debris. He does not get far – the tunnel has been blocked by lumps of rock that have come loose. It is impossible to get through. Marek explores every nook and cranny with his fingers, but in vain. Only slowly does it occur to him: Elena hasn't made it. A hollow emptiness spreads throughout his being.

When Marek returns to the surface of the water, the sun is already low on the horizon. His body is functioning, his voice calls the water rescue patrol – but Marek's mind is a total blank.

In a daze, he watches the divers recovering Elena's dead body after searching for hours and using explosives. The crowds on the otherwise lonely beach, his best friend Steve who had come to comfort him – Marek only perceives all of this as if through a veil.

"What have you got there?" asks Steve, pointing to Marek's firmly clenched fist.

Marek opens it carefully: He is holding a small fragment of the minerals.

He will have it investigated by experts. And he wants to find out who Elena was working for. Whatever was behind the dive by this beautiful, remarkable woman – he must continue her quest and bring the story to a happy ending.

PLEASE NOTE: The article over the next few pages ("Why the ocean is slowly but surely becoming acid") reveals what is involved in Elena's search for minerals to prevent acidification of the oceans, and what there is in this story that actually reflects reality.

OUR AUTHOR

Ulrike Sinzel (b. 1979) worked as a volunteer at the Westdeutsche Zeitung newspaper in Düsseldorf, and following that as an editor at various daily newspapers. She is currently on sabbatical and is travelling around the world.



WHY THE OCEAN IS SLOWLY BUT SURELY BECOMING ACID

Scientific text about the short story: "The Secret of the Underwater Cave" By Ulrike Sinzel

Because we are pumping masses of greenhouse gases into the atmosphere, the ecosystems in our oceans are coming under increased threat. For one thing, the water is becoming warmer. For another, it is becoming more acid. The calcareous shells of mussels, corals and sea urchins are dissolving, and important sources of nutrients are being lost. Why are sea creatures suffering as a result of climate change, and where do we stand with possible solutions?

"Like in a bad science fiction film," is what Marek thinks when he hears from his new friend Elena that the oceans are becoming more acid. And yet acidification is real. It is not only in the atmosphere that the proportion of carbon dioxide (CO_2) is increasing. Each year, the oceans absorb about one-third of the carbon dioxide produced by humans. In the sea, the CO_2 reacts with the water and becomes carbonic acid. This changes the pH value of the seawater; it becomes more acid. Although the water is only becoming acid very slowly and to a small extent, the consequences are dramatic nonetheless. Scientists have discovered that the effects of climate change on marine ecosystems are currently even greater than those affecting on life on land.

Climate change is therefore affecting rock corals, for example, in several different ways at the same time, explains Prof. Dr. Jelle Bijma, Head of the Marine Biogeology Group at the Alfred Wegener Institute (AWI) in Kiel. Normally, the corals share a close, symbiotic relationship with a specific type of micro-algae (called zooxanthellae). The algae provide the corals with energy and nutrients and receive oxygen in return. This balanced system is now in danger. For one thing, the algae are extremely sensitive – they adapt poorly to rapid increases in water temperatures. For another, the corals increasingly perceive the algae to be foreign bodies as a result of this thermal stress and reject them.





Acidification of the seas is placing additional stress on the corals. "Like many other calcifiers, such as shells, starfish and sea urchins, corals are increasingly encountering difficulties in forming their shells," explains Professor Dr. Jelle Bijma. Their calcareous shells actually dissolve in excessively acid water. The combination of acidification, warming of the water and natural erosion processes is something that only very few coral reefs can withstand: "The result is called coral bleaching." They then look like "Rick's Reef", which is mentioned in the short story. Only if we are able to limit increases in global temperature to below

INFO 1: MEASURING ACID IN THE OCEANS

Since industrialisation, the pH value of the sea has dropped from 8.20 to 8.05. This does not appear to be much, but even just this small change amounts to an acidification of more than 30 per cent because pH values are measured on a logarithmic scale. It takes about 100,000 years for the carbon dioxide cycle to stabilise after an abrupt change. We know this on the basis of reconstructions of the Earth's history. "55 million years ago, the ocean acidified due to the release of methane clathrates," explains Prof. Dr. Bijma of the Alfred Wegener Institute. "It is not certain whether the pH value will actually ever return to its original value following severe acidification," adds Dr Tatiana Ilyina of the Hamburg Max Planck Institute for Meteorology.

1.5 degrees worldwide will around half of the coral reefs survive. Otherwise, and even if global temperatures increase by just two degrees, more than two-thirds of tropical coral reefs could be destroyed by 2030, according to the results of a study by the Potsdam Institute for Climate Impact Research (PIK) in 2012.

350

Drastic loss

We are therefore on the threshold of losing the colourful water paradise of coral reefs forever, which would be fatal. "Their structures, with their many caves, overhangs and crannies, mean that coral reefs possess the greatest variety of species," observes Professor Bijma. If the coral reefs disappear, so would the habitat for about one-quarter of ocean species. As a result, the sea creatures would disappear not only as filters of pollutants but also as food for other life forms.

The effects of acidification are also known based on a study of a marine region close to Mount Vesuvius near Naples in Italy, where there is an increased CO_2 content: "Biodiversity suffers significantly from this. For example, shells have been found there with their skeletons as thin as paper: They cannot survive," says Bijma. In addition, oyster fishermen in the US state of Washington have already felt the effect of excessive CO_2 in the water. A natural up-welling of carbon-dioxide-rich deep-sea water acidified the seawater on the surface: "There were enormous losses at the oyster farms. We observed that the larvae of the oysters were no longer able to store enough calcium to anchor themselves to the ground."

INFO 2: DEATH OF THE ALGAE

The majority of plants that live in seawater are algae. These minute, mostly single-celled micro-algae form phytoplankton. Algae primarily absorb nutrients as phosphates and nitrogen in the form of nitrates. They grow and multiply with the help of sunlight and carbon dioxide. This means they produce organic matter at the start of a food chain, and are therefore important for the life of all marine organisms. It is estimated that phytoplankton is responsible for producing 50 to 80 per cent of the oxygen in the atmosphere. Primarily due to rising sea temperatures, the amount of marine phytoplankton has declined by 40 per cent since 1950.

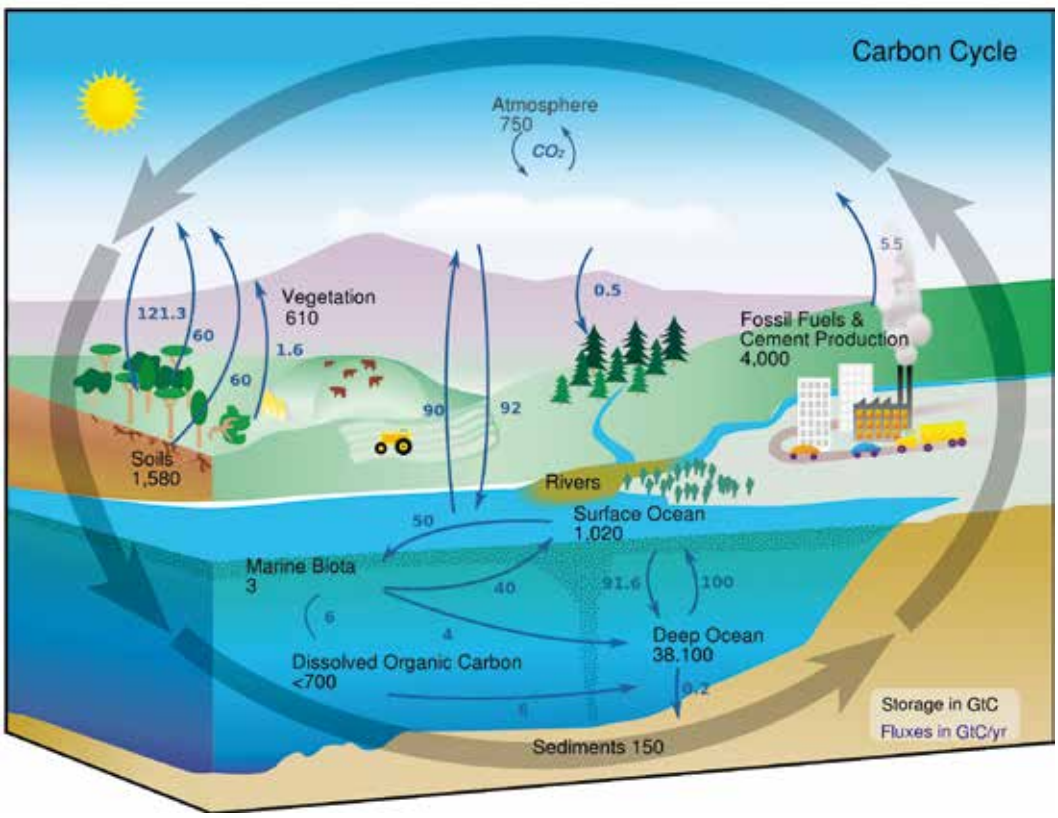


Diagram of the carbon cycle. The black figures show how many billion tonnes of carbon are present in the various stores. The violet numbers indicate how much carbon is between the Individual stores per year

As has been shown by an international team of researchers in a concluding study that appeared in the specialist Nature Climate Change magazine in 2013, sea creatures adapt to climate change at different rates, as a result of which the food chain and the equilibrium of nutrient demand and supply is presumably knocked off kilter. As a result of the temperature increase, many species of fish migrate to colder waters, although they struggle to survive there because they lack plant nutrients and sunlight; others start to lay eggs much earlier than usual. The consequences might be shrinking stocks – a risk for species that are already endangered, such as the whales.

Are we really facing a dark future? At present, no one can say. Bijma is not particularly optimistic: "An abrupt change in the carbon cycle – such as acidification of the seawater – combined with global warming and the loss of oxygen content that is also triggered by climate change; it is the combination of these three causes that has already led to mass extinctions five times in the Earth's history," explains the scientist. "We are doing precisely what has led to mass extinctions in the past – although ten times faster than ever before in the history of the Earth."

Fertiliser for the ocean?

So what can we do? There is in fact a mineral that can increase the pH value of ocean water again, making it more alkaline (less acid). It is called olivine but it does not shine blue as it does in the story; instead it looks like a green rock. "It absorbs CO_2 from the atmosphere and weathers down to bicarbonate, which neutralises the acid: The water becomes more alkaline," explains Bijma.

INFO 3: META-STUDY ON THE EFFECTS OF OCEAN ACIDIFICATION

Researchers have long since pointed out that ocean acidification due to climate change will have consequences for marine life forms. The effects have already been researched in some detail in individual species. In August 2013, an analysis was published under the title, "Global imprint of climate change on marine life", which aggregated the results of about 200 scientific studies. One key result of this meta-study is that, amongst invertebrates, it is above all corals, molluscs and echinoderms, such as starfishes and sea urchins, that will suffer as a result of acidification. Crustaceans appear to be more robust. Fish, by contrast, can compensate for falling pH values in their blood, whereas corals do not have the physiological mechanisms to compensate for increases in carbon dioxide values. Link: www.nature.com/nclimate/index.html

So, could ocean acidification be neutralised by "fertilising" the seas with olivine? "We need to take a look at the scale of the issue," says Bijma. "Mankind is producing ten gigatonnes of CO_2 annually. Imagine that a goods train was loaded with coal comprising 80-per-cent carbon, i.e. CO_2. Ten gigatonnes would correspond to a train spanning the Earth 60 times over." To stop acidification, we would need to produce this amount of olivine. "I believe it would be impossible in these quantities," says the Professor, adding, "On the other hand, we do manage to produce that much CO_2." The olivine could be spread over land, for example, allowing it to weather. It would react with rainwater and CO_2 to form bicarbonate, a substance that counteracts acidification. It would enter the groundwater in tropical rivers and then flow into the ocean. Of course, there would be a danger of rivers and seas becoming too alkaline. "What the effects of that would be are unclear," says Dr Tatiana Ilyina of the Hamburg Max Planck Institute for Meteorology. The Head of the Ocean Biogeochemistry Group only knows of a single study into alkaline water, and its findings suggest that such a process would be just as dangerous to ecosystems as excessively acid water is.



Mineral Olivin © Hannes Grobe, AWI

In addition, Dr Ilyina thinks that the possibility of stopping global acidification of the seas with olivine is unrealistic. "For example, manufacturing a corresponding fertiliser would involve burning limestone, which would also give off CO_2." However, local application might be possible, "such as on coral reefs, which are of great value for the ecosystem."

Out of all the methods grouped together under the term geoengineering,

most of which involve interventions in natural systems, she nevertheless regards the idea of ocean fertilisation with limestone or olivine to be the most reasonable. "It is because this method is very similar to natural processes." Other ideas – such as blowing aerosols into the atmosphere to stop global warming – would not change anything about the CO_2 content, and would therefore only conceal the actual problem. "It is dangerous to use these methods without understanding how they function in the global system," says Dr Ilyina.

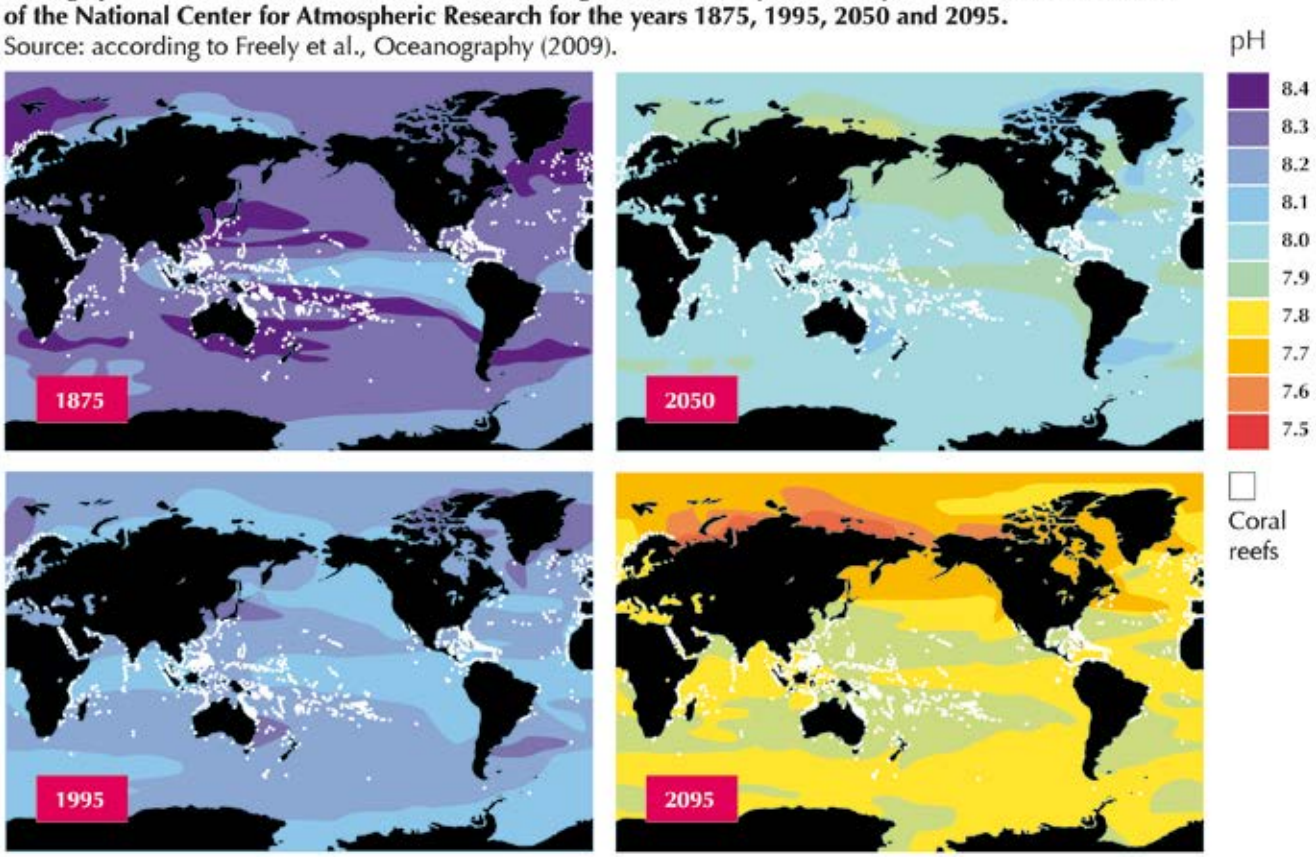
Scientists do agree that it is better to produce less and less CO_2: The shift from fossil fuels to other energy sources, such as solar, wind and water, would make a significant contribution to this. Moreover, energy consumption can be reduced in all kinds of areas, such as building management and mobility. It will be crucial for sea creatures and therefore our own future as well how we harness these possibilities.

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© Geomar nach Feeley et al., Oceanography (2009)

Average pH values at the sea surface calculated using the Community Climate System Model 3.1 (CCSM3) of the National Center for Atmospheric Research for the years 1875, 1995, 2050 and 2095.
Source: according to Freely et al., Oceanography (2009).



LEARN • UNDERSTAND • ACT

1. "Acidification of the seas is real." Research this online.

a) What does the pH value of seawater tell us?
What in particular is contributing to changing this in the world's oceans?
b) Describe the effects and consequences of acidification of the seas on the ocean ecosystem.
c) What function do coral reefs play in this system?

2. The rapid rise in CO_2 concentration in the sea is a cause for concern. Discuss the cause and effect of this situation amongst yourselves.

3. There have been five mass extinctions already in the Earth's history. Name and explain their causes.

4. It is important to stop global acidification of the seas.

a) What role could the mineral olivine play in this?
b) Discuss amongst yourselves the possibilities and consequences of using this mineral. Research this online.
c) Name and explain additional measures – without uncertain side effects – each of us could employ to contribute to decisively counteracting the serious consequences of ocean acidification.

5. "The ocean ecosystem in danger" could be a particularly important and interesting topic for an exhibition at your school or university in order to do justice to this major thematic challenge.

a) Conduct research into this. Be sure to also get in touch with experts. Working together if possible, establish the main topics for the planned exhibition.
b) Present your exhibition's concept to a class in the same year as yours. Incorporate improvements and corrections.
c) Working in groups, put the principles of your exhibition into practice. Possible perspectives: organisation, supporters and promoters, working out and designing the topics, public relations and guided tours, etc.
d) Set up the exhibition together. No doubt many people will look forward to your invitation to the opening of your exhibition.
e) Do not forget to evaluate your project later.



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THE ETERNAL ICE IS MELTING – A HABITAT IS DISAPPEARING

An interview with Arved Fuchs

For thirty years now, Arved Fuchs has been leading exhibitions through the icy landscapes of the Arctic and Antarctic. He prefers to journey on foot, by dog sledge or in his Dagmar Aaen, an old sailing ship but one that is still seaworthy. In the interview, he talks about teamwork on the high seas, climate change and the particular vulnerability of nature in the polar regions. He calls on us to take action at last. Because, he concludes, it is only jointly that we will be able to restore and safeguard the ocean ecosystem, and therefore the equilibrium of the Earth as well.
By Ariane Missuweit

***youthinkgreen*:** Mr Fuchs, you have explored almost the entire world on more than 30 expeditions, and you love extremes: In 1989, you were the first person to reach both the North and South Poles by sledge in the same year. How did your passion for discovery come about?

Fuchs: In 1977, I embarked on my first expedition by canoe to Labrador, Canada. Following that, I discovered the delicate beauty of ice landscapes in the polar regions for myself. Earlier



on, I set out because I liked to live in the great outdoors. These challenges always stimulated me, including on an athletic level. However, I have abandoned some of my impartiality over time. During our North Pole expedition in 1998, no one was thinking about climate change at the time. It was a matter of different environmental problems such as the ozone hole that had formed over the South Pole region back in the 1980s. Together with the Canadian Environmental Assessment Agency and on behalf of the United Nations, we wanted to find out whether the same thing could also happen over the North Pole.

youthinkgreen: And how can we research that?

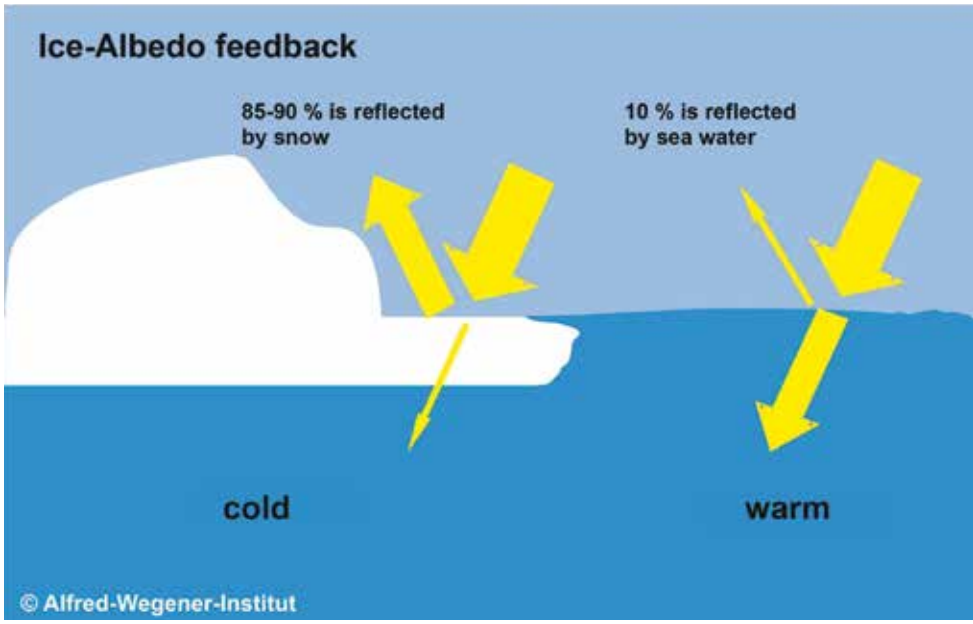
Fuchs: We launched weather balloons at certain intervals, which rose up to the stratosphere, carrying measuring probes. At the time, we were accused of scaremongering, because there was no way that a hole could form in the ozone layer over the North Pole as it had over the Antarctic. People said it was not cold enough in the stratosphere there to do this. But as we know today, a hole formed in the ozone layer in the north as well shortly after. The international community responded to this and agreed on the Montreal Protocol, which prohibited the use of fluorinated hydrocarbons being used as propellants. Nowadays, it is possible to observe that the hole in the ozone layer is slowly closing up. This shows that changing for the better is always possible!

Nature is not an urban park

youthinkgreen: Does that mean that we as people have a significant influence on natural processes?

Fuchs: If my expeditions have taught me anything, it is the need to be humble in the face of nature and creation. To do this, it is important to free ourselves from this digitalised world from time to time. It is a mistaken belief that everything can be put right. Nature is not an urban park. Nature is not a garden such as you might have at home, or the nearby recreation area around the corner. Nature is everything animate and inanimate around us that has not been created by mankind. And we form part of this whole. We have to understand our responsibility and our role in this nature.

youthinkgreen: From your perspective, what is needed for a successful and sustainable expedition?



Fuchs: I need to know the rules of the game in nature and subject myself to them. After all, I never travel with a lot of technical equipment; instead I attempt to get by with the simplest possible means.

It is particularly important that I work together with my expedition team effectively, and that we merge into a single unit, both people and animals. Or, if I am travelling in my old ship, the Dagmar Aaen, then it is like a little microcosm. The team has thoroughly prepared itself, we have analysed the particular wind and ice conditions and the currents in advance. We depart from harbour



© Arved Fuchs expeditions

and leave the mainland behind us. As long as the weather is sunny and a moderate wind is blowing, everything proceeds smoothly. But when a storm blows up or we encounter difficulties in the ice, that is when we find out how well the team works together. There is a nice line by Joseph Conrad: "Ships are alright, but it comes down to the people." And it is just the same with our Earth.

Melting ice and the consequences

youthinkgreen: At present, climate change is the greatest challenge facing us. Global warming goes hand and hand with more frequent and severe droughts, floods, cyclones and more extreme summer and winter weather. How do you experience this process as a polar researcher?

Fuchs: The Arctic is warming at about twice the rate of the rest of the world. It is a kind of early warning system for nature. To name just one example, in 2003, we undertook an expedition through the Northwest Passage, an archipelago to the north of the North American continent. At that time, there was still enough ice there that we were forced to overwinter on our ship halfway through the trip. We spoke to the Inuit people, and they were fairly certain that the Canadian Arctic would remain cold in spite of climate change. Unfortunately, however, this has proven to be incorrect. Now cruise ships steam through there, even yachts without mechanical propulsion or reinforcement against the ice. In summer, the Passage is entirely ice-free throughout, and the phases during winter when the ice freezes are becoming shorter (see graphic). It breaks my heart to have to see this process.

youthinkgreen: What do we need the ice for anyway?

Fuchs: Basically, the ice functions like an enormous parabolic mirror. It reflects a large amount of the sunlight back into space, which means it functions like a thermostat for the Earth by ensuring that the environment does not heat up excessively. The more dark water and dark land there is, the more heat and solar energy are absorbed. And this sets off a chain reaction. For example, if the enormous ice sheet covering all of Greenland, the largest island in the world, were to melt, sea levels would rise by seven metres. This will not happen from one day to the next, but the process would be irreversible and the consequences are so sever that I do not even want to think about them. And it is already a reality that Greenland is losing ice mass. Thousands of icebergs are floating in the water off the coast. The entire ecosystem of the oceans, the animal and plant kingdoms, are under enormous threat due as a result. The ice is an important habitat!Not only for polar bears and ringed seals, but also for many small indigenous population groups. They do not have a lobby, and scarcely any politicians pay attention to their interests (see Info 2).

What is at stake

youthinkgreen: What can we do to prevent the polar icecaps from melting?

Fuchs: Climate change is not an just idea for "eco-fantasists". Today, scientists are no longer in any doubt that climate change is largely attributable to mankind. And this is why we have to look at our own behaviour. We need new forms of energy and we have to handle the various kinds of energy effectively and with great efficiency. Climate protection is an investment in the future. If the sea levels continue to rise due to melting

polar icecaps, hundreds of cities with populations in the millions located by the sea will be affected. These include New York, Shanghai, Rio de Janeiro, Hamburg and Rotterdam. Enormous assets are at risk.

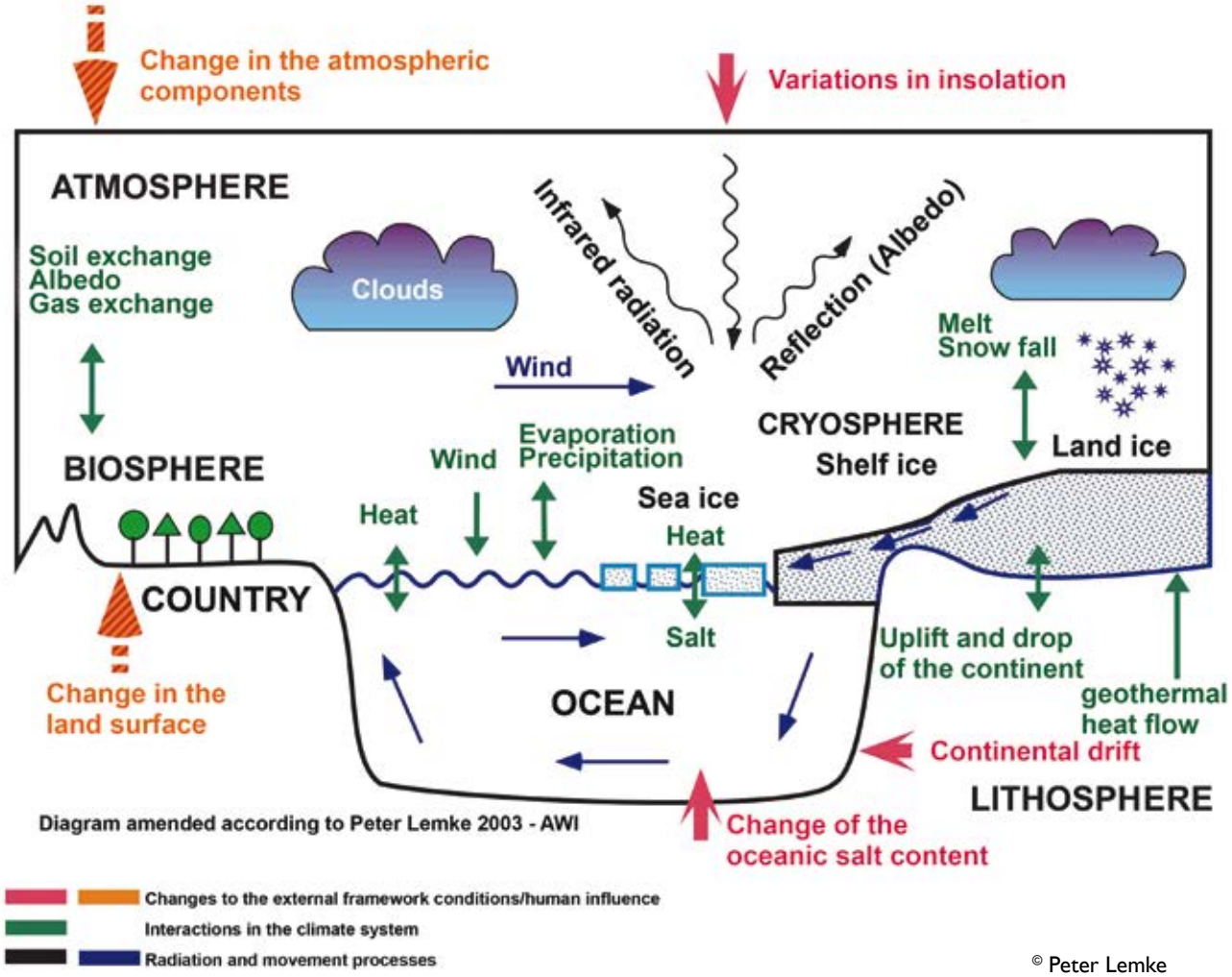
youthinkgreen: And what are the consequences for us if we do nothing?

Fuchs: If we do not stop climate change, there will be more and more climate refugees in future. Of course, this involves a huge potential for conflict: the droughts, fighting for water, all of that. In addition, it is not only the sea ice which will warm up, but also the land around it. The ground that was once permanently frozen, referred to as the "permafrost", will thaw out. In some regions of Siberia, toxic methane will be released from the frozen ground, which will lead to a greenhouse effect 20 times as severe as that caused by CO_2. Soil erosion is the consequence. In North America and Alaska, the coast is already eroding a rate of

UNSERE AUTORIN



Ariane Missuweit (* 1985) hat Diplom-Sozialwissenschaften studiert und als freie Journalistin gearbeitet. Seit 2014 ist sie bei *youthinkgreen* als Mitarbeiterin tätig, wirkte konzeptionell und redaktionell am Buch »Tree of Hope« mit und leitet seit 2015 das Projekt »konsumwandeln«.



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up to 16 metres per year. Many houses that were still standing twenty years ago are no longer there today. But climate change is not just limited to the Arctic. It will reach the entire world, after a certain delay.

youthinkgreen: All of this sounds very sobering! Can climate change still be stopped at all?

Fuchs: Yes, I believe it can! I am a notorious optimist; otherwise I could not carry out expeditions in this way. We will get a handle on it in time. After all, we already have the option to meet our energy needs from solar radiation, wind and other alternative forms, and we know how to do it. All we need is the will, and we need ideas. We need young people like you who think green and say, "Yes I want to contribute and I am going to get involved now." We only have this one planet, and we should treat it well. Hopefully, a comprehensive rethink will now take place at last. After all, a society without vision will leave behind a generation without perspective. And none of us wants to live without perspective!

Links and recommended reading:

Researching in the ice at the Alfred Wegener Institute – Helmholtz Centre for Polar and Marine Research www.awi.de/de/entdecken and www.polarjahr.de/Schueler-Lehrer.58.0.html

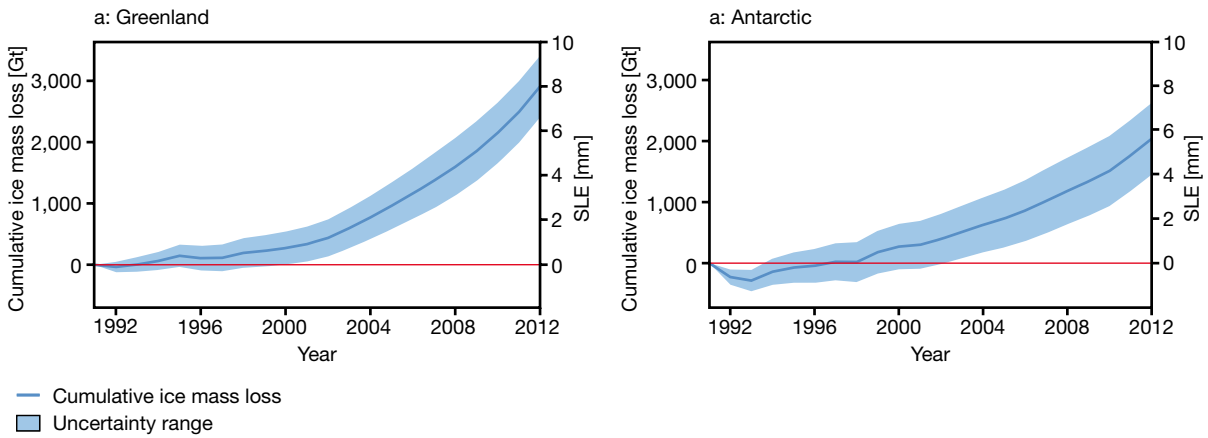
Climate researchers blog about their current insights: www.scilogs.de/klimalounge

Planet Schule: Worksheets on the topic of Greenland: Reichtum durch Klimawandel www.planet-schule.de/wissenspool/klimawandel/inhalt/unterricht/groenlands-gier-reichtum-durch-klimawandel.html

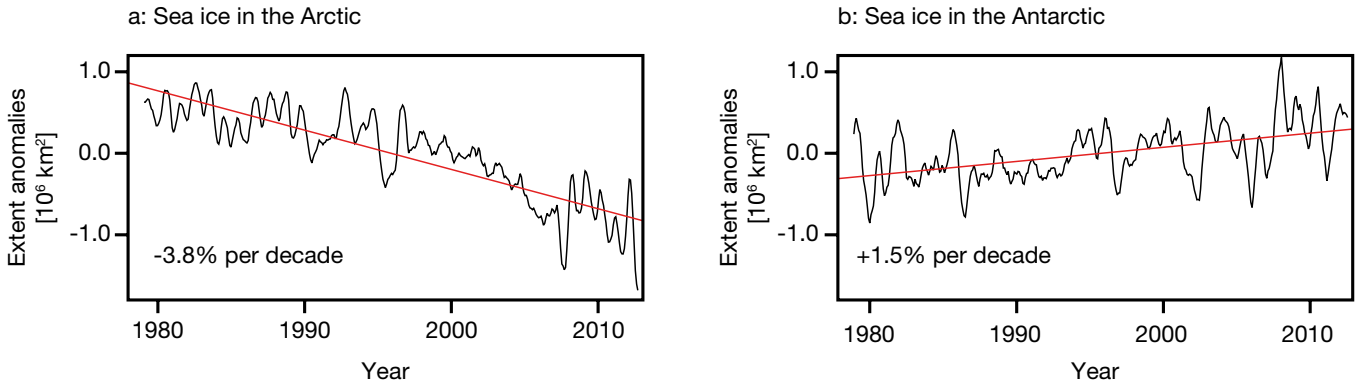
Raw materials policy in the Arctic region: www.bpb.de/apuz/33498/arktischer-raum

Research at the National Snow and Ice Data Center (NSIDC), latest data and satellite pictures: http://nsidc.org/arcticseaicenews/

Recommended book: Arved Fuchs et al.: Polarlicht in den Segeln: Eine Winterreise zu den Lofoten, Delius Klasing Verlag, Bielefeld 2013.



© WBGU – German Advisory Council on Global Change (2014): Climate Protection as a World Citizen Movement, Special report, Berlin



© WBGU – German Advisory Council on Global Change (2014): Climate Protection as a World Citizen Movement, Special report, Berlin

INFO 1: A PORTRAIT – THE INUIT IN GREENLAND

When we think about Inuit people, we may imagine people wrapped in animal skin jackets building an igloo, hunting in a kayak and butchering whale meat. The life of the Inuit in Greenland no longer resembles this very much. They came to the island from Alaska around the year 1400 by crossing the ice.



© Arved Fuchs expeditions

Ideally adapted to the cold, they lived for hundreds of years as hunters and fishermen. However, the ice sheet on the island is gradually melting. If humanity continues to emit climate gases at the current rate, temperatures in Greenland could increase by eight degrees in the summer. In that case, the ice covering Greenland would disappear almost completely within 2000 years. Even today, the Inuit are no longer able to hunt in winter with dog teams on the frozen sea as they used to because the sea ice is also shrinking.

Traditional conservation methods for meat are also more difficult to practise. However, the warmer climate has its own benefits. Farmers in the southern part of the island can cultivate strawberries and potatoes. Underground resources, such as valuable minerals and ores, are becoming more accessible and the tourist season is longer. However, in some weeks of summer it is now so dry that the plants out in the field are really scorched. A considerable proportion of Greenland's population still depends on state aid from former colonial power Denmark. Income from the raw materials business could solve this problem. However, this in turn exposes people and the environment to risk. As a result, Arctic inhabitants cannot be described as either purely "winners" or "losers" when it comes to climate change. But one thing is certain: Their living circumstances are changing rapidly due to global warming.

INFO 2: UP FOR NEGOTIATION – WHO OWNS THE NORTH POLE?

According to international marine law, the North Pole is located in the open sea. That means it belongs to everyone in the world. In total, some four million people live in the region. Approximately ten per cent are considered members of an indigenous population. Their way of life is being threatened by Western lifestyles and climate change. Temperatures in the Arctic are rising disproportionately, and the weather is becoming less predictable. On the other hand, the melting processes are also shortening trade routes, including the Northeast Passage. Raw material resources like crude oil, natural gas, manganese and gold are becoming more accessible.

The states bordering the North Pole, namely Canada, the US and Russia as well as Norway and Denmark, are consequently preparing major territorial demands at the United Nations. They are sending economically motivated expeditions into these areas in order to measure their continental shelf. If it is found that raw material deposits are located in a country's continental shelf area, that country is then exclusively permitted to exploit the raw materials. This means a scramble is currently in progress for the Arctic. At the heart of this scramble is the sea floor, which used to be considered part of humanity's common inheritance.



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1. About Arved Fuchs

a) Who is Arved Fuchs? What does Arved Fuchs do for a living, and how did his passion for travel and discovery come about? Research these questions on the Internet in order to supplement the information provided in the interview.



b) Expedition planning: Select an expedition by Arved Fuchs that you would like to learn about in greater depth. You can also select one that was not discussed in the text. Research it online and develop a brief expedition plan. The following key questions will help you in this:

- What route did Fuchs follow, and how did he travel?
- What items of equipment could he not do without?
- Who was in the team with Fuchs? What criteria were important in selecting his companions?
- What might be possible risks and challenges during the expedition? How can these be overcome?

c) Sustainable travel: Arved Fuchs plans his research trips very conscientiously and always together with his team. What does "sustainable travel" mean to him? Name and explain possible aspects.

d) Our role in nature: Arved Fuchs says, "We have to understand our responsibility, our role in this nature." What might he mean by this? In a few sentences, describe your personal understanding of your role as a creature in nature and a member of society. Discuss your thoughts and work together to produce a list of demands for careful treatment of nature. Consider whom your demands are primarily directed towards.

2. Environment, economy and politics

a) Explanation of topics and terminology: Re-read the interview carefully and take note of the key statement made by the expedition leader. Working together, collect materials that contain the main observations made by Arved Fuchs. Clarify in advance the terms and text passages you have questions about.

b) In a table, note of the differences between the Arctic and Antarctic. Name reasons why the ice on the polar caps is of great importance to the Earth's ecosystem.
c) Climate change will cause significant changes in the polar regions. What local consequences will these circumstances have for flora, fauna and indigenous peoples? Be sure conduct research using your school books and online.
d) Power struggles at the North Pole: Who actually owns the North Pole? What conflicts are going on there? Research the background (see Info 2) in the library or on the Internet, and also use the graphic.

3. Future and climate change
Climate change is causing the Greenland ice sheet to melt.
This has far-reaching consequences, e.g., for agriculture and life there (see Info 1).

a) And what will change in your region? State the effects of climate change that are already apparent and noticeable in your country. Explain them.
b) What adaptations to climate changes have already been discussed or taken?
c) The effects of global warming will continue to increase. How is that likely to change your everyday life in future? Illustrate possible changes using examples.
d) There are also those who say that climate change could bring advantages for many people in particular regions. Examine this statement and express your opinion on it.

4. Learning through travel
Do you know other famous adventurers or expedition participants from your own country? Where do they travel to, how do they prepare themselves, and what have they experienced?
Perhaps they will answer your questions in an interview.
Why not talk to them?

5. Ways into science

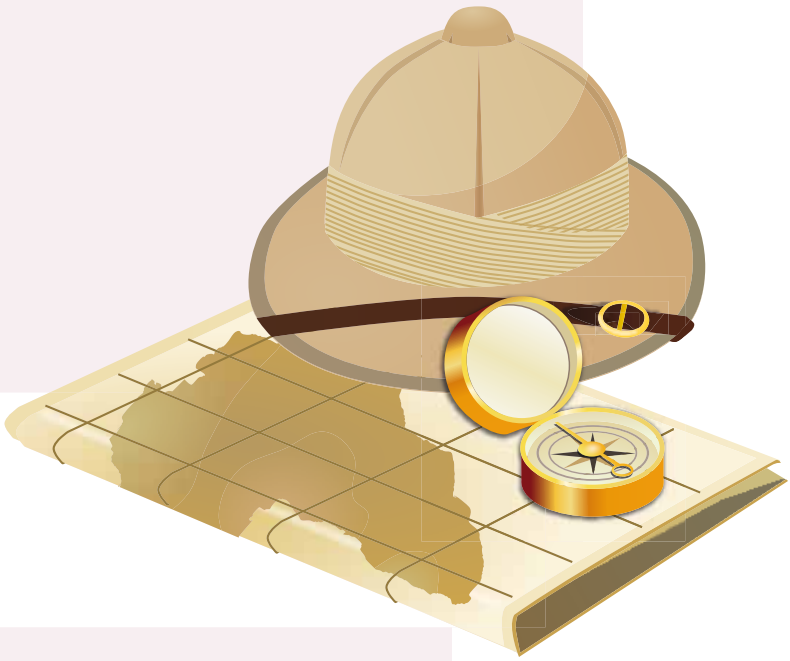
a) Find out more about the profession of a polar researcher and marine biologist. What skills do they have? What activities do they carry out?
b) Conduct research about this online and, if possible, get in contact with researchers and marine biologists. Ask them your own questions that the text leaves unanswered. One a question might be, Is there a relationship between shrinking ice cover in the North Pole region and cold snaps in the northern hemisphere during winter? Present your questions and research results to the group.

→

6. From research into practice: Plan your own expedition: Now you are involved in discovering the world!

a) Select a destination: Collect and discuss possible destinations for your journey that allow you to link climate and environmental protection (forestry, organic farm, tidal flats, municipal utility companies, etc.). You can also find suggestions on the Internet. Many environmental associations offer excursions.

b) Division of tasks: Assign different roles and tasks amongst yourselves for sustainable planning of the expedition, such as time monitor, presenter, technician, minutes-taker, lateral thinker, etc.



c) Sustainable planning: Consider important reference data, such as the duration of the expedition, expedition route, research questions, finance, equipment items, possible companions (journalists, politicians or photographers), potential local points of contact, possible risks, etc.
What do you think is involved in sustainable travel planning and how can you achieve this?

d) Implementation: Carry out your expedition, collect data, pictures and impressions, talk to your contacts, get your questions answered, make a note of everything important.

e) Documentation: Back home safely? Then all that remains is the follow up. Design a presentation with photos or write a newspaper article and tell other people about your journey.

EXCURSION EXAMPLE:
Anton reports

The Wadden Sea, which is right on our doorstep here in Friesland, was the destination my year and I chose. The Wadden Sea joins several countries: Denmark, Germany and the Netherlands, and much of it is a UNESCO World Heritage Site. We were able to get there by bike, which meant we wouldn't have to damage the environment by travelling by bus or other motor vehicle. To us, good preparation meant thinking about the right clothes, studying the tide and researching the Wadden Sea, which would enable us to ask our guide certain questions:
1. What features of the Wadden Sea could mitigate climate change?
2. Has climate change already impacted the Wadden Sea and the people who live there?
3. What measures are being carried out in terms of coastal protection?
Ingrid, our Wadden Sea guide, patiently answered all of our questions. She told us the Wadden Sea is capable of storing carbon and breaks the waves before they reach the coast. Climate change and the rising sea levels that accompany it will reduce the area of the Wadden Sea, reducing its carbon storage and performance as a breakwater in the process. She told us that politicians are not doing what is needed to protect the coast. Should residents implement their own initiative at this point? However, for me, the most fascinating aspect of the day was the moment when the tide turned. Standing barefoot in the sand, the water came closer and closer and became higher and higher. Before the tide came in, we had a funny moment when Clara sunk down into the sand up to her knees. But together we were able to pull her out. We each recorded our impressions of the day once we returned home and made sure to analyse our photos. We used these to create an "adventure poster" at school.



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3.3. TOUR DE FORCE: T BATTLE FOR CLIMATE CLIMATE JUSTICE

Introduction

The effects of climate change can already be felt by millions of people. Sea levels are rising and extreme weather events, including storms and heat waves, are on the increase. And the injustice is this: those bearing greatest responsibility for climate change are the industrialised countries, whose economic systems and prosperity were developed on the basis of fossil fuels and high-emission industries. Yet it is the people in developing and emerging countries, who have contributed least to global warming, who are currently suffering the most from its effects. Furthermore, industrialised countries are far better equipped to deal with the effects of climate change, whereas those in the affected regions in the Global South lack the necessary financial and technical means.

The concept of "climate justice" is based on the principle that those who cause climate change should also have to pay for the damages and losses it entails, and compensate those affected or come to their aid. This guiding principle already enjoys widespread acceptance in international climate and human rights policies, in governmental and in civil-society development cooperation, even though there is still great controversy about the ways and means to make it reality. However, all authors on this topic agree on one thing: climate change presents us with massive human rights problems and sooner or later, we are all going to be affected. The global battle against climate change is therefore a battle for the rights of future generations and for international solidarity to make survival under humane conditions possible on our planet. Awareness of a common but differentiated responsibility at all social and political levels is vital to its success.

In his contribution, Professor Manfred Nowak, focuses on climate and environmental refugees.



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THE INTERNATIONAL
E PROTECTION AND



© Klaus Fahlbusch

For it is not only coastal and island inhabitants who will be forced to leave their homes due to rising sea levels. People in Africa's Sahel region and other arid areas will also be affected by displacement caused by climate change, if they are no longer able to support their families due to increasing droughts.

In her contribution, Dr Andrea Schapper analyses the different human rights facets of climate change and discusses the extent to which strengthening human rights can contribute to climate justice. She argues that ecologically sound climate protection measures may even cause human rights to be violated; for example, if the local population is not involved a project and loses access to its land or to water supplies in connection with a dam-building scheme, for instance.

These humanitarian, social and legal aspects of the topic are also close to the heart of the U.N. Special Envoy for Climate Change, Dr Mary Robinson. In her contribution, she comments on central factors for implementing climate justice and emphasises the significance of the United Nations Framework Convention on Climate Change 2015 in Paris, at which one hopes a common, sustainable, legal and binding climate protection agreement can be adopted.

And Jessica Fritz from the German Red Cross Youth describes how committed young people in several large associations in Germany are campaigning for the recognition and protection of climate refugees.

CLIMATE REFUGEES: DO WE NEED TO EXTEND THE SCOPE OF HUMAN RIGHTS?

By Prof Dr Manfred Nowak

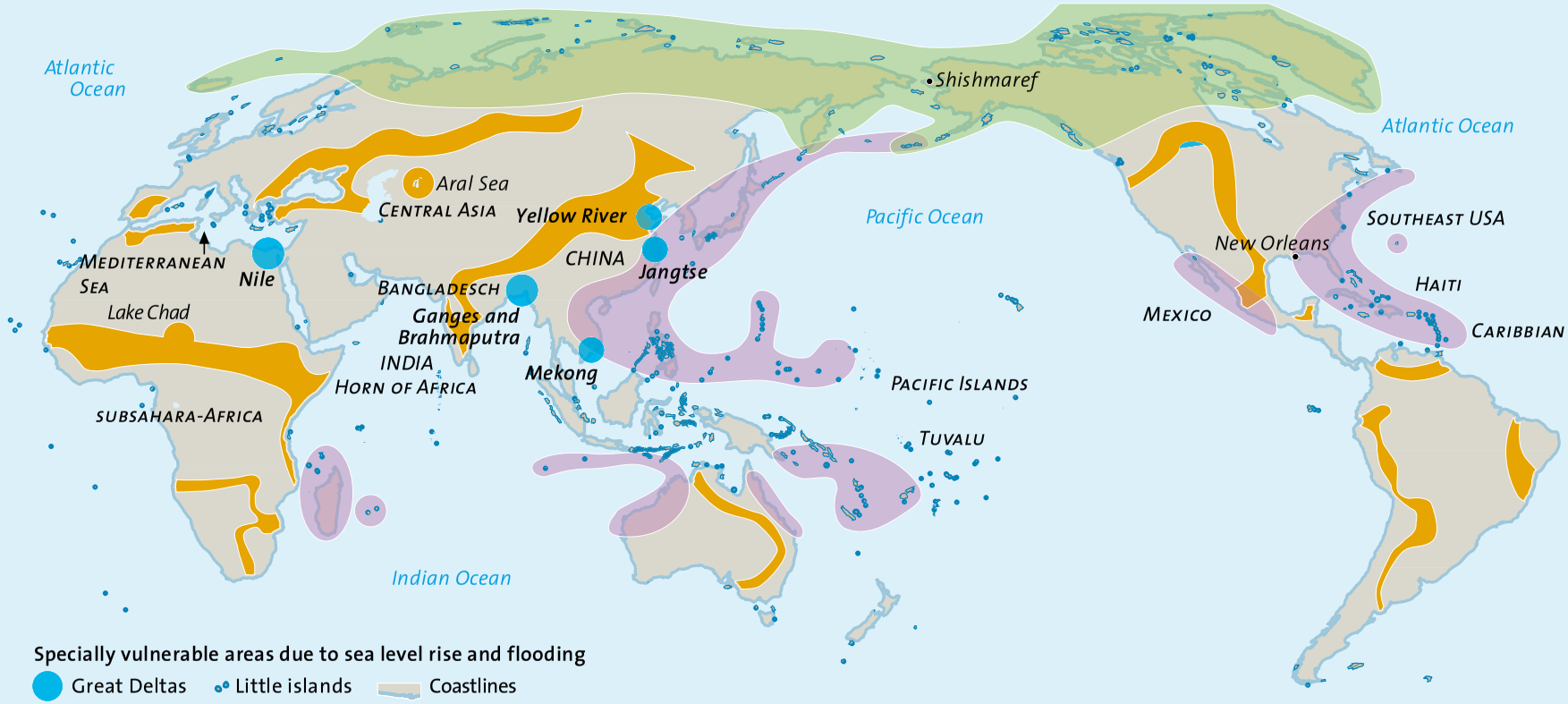
Today, we know from scientific studies that climate change is a phenomenon caused by humans and not just a figment of the imagination of "do-gooders" or idealists. We cannot yet properly assess the impact of climate change on the global ecosystem. One thing is clear however: as soon as global warming exceeds two degrees Celsius, the effects will be catastrophic and many people will lose their homes. What options for protection and assistance can we find?



Flooding in Bangladesh

As we become more certain that climate change and its effects are caused by humans, the realisation grows that we are dealing with one of the greatest human rights problems of the 21st century. What is particularly unfair about the situation is that climate change has been caused primarily by people living in the rich industrialised countries of the Global North and that our excessive lifestyle is exacerbating it. Meanwhile, it is the poorest people in countries in the Global South who are affected the most. In addition, these people generally do not have the financial or technical means to protect themselves against the effects of climate change through so-called adaptation measures.

People living in the Netherlands or Venice have centuries of experience in protecting themselves from the sea using dyke systems or similar barriers, whereas people in Bangladesh or the Philippines continue to be at the mercy of increased flooding without any defence. Some island nations in the Pacific, such as Tuvalu, will literally become submerged in the event of a massive increase in sea level and vanish from the map. What will happen to its inhabitants? Will the Americans or the Europeans, whose greenhouse gases are to blame for the demise of these island states, be prepared to take these now stateless people in? That brings us to the phenomenon of so-called climate and environmental refugees.



The vast majority of climate refugees come from developing countries. Whether they are fleeing from armed conflicts and poverty or more Environmental reasons, is often difficult to distinguish

Climate change will make millions of people refugees

©2008, Le Monde diplomatique, Berlin

Sources: Norman Myers, »Environmental refugees: An emergent security issue«, Akten des 13.Wirtschaftsforums der OSZE, Prag, Mai 2005; Millennium Ecosystem Assessment, 2005; Liser, 2007.

© Source: Le Monde diplomatique (ed.), Atlas der Globalisierung, Klima, Berlin (taz Verlag) 2008

Many people will lose their homes

Reliable estimates predict that by the year 2050, approximately 250 million people will be forced to flee their homes due to climate change. This displacement caused by climate change will not only affect coastal inhabitants, but also people in Africa's Sahel region, no longer able to support themselves and their families due to drought. Even today, some one billion people on our planet do not have access to clean drinking water or sufficient food. This figure is likely to rise dramatically due to climate change and the increasing battle for these vital resources. Many indigenous peoples, such as the Inuit tribes in the Arctic, will be losing their traditional living environment due to melting ice. Meanwhile, oil company executives rub their hands at the prospect of drilling for huge oil reserves, previously inaccessible due to the thick Arctic ice sheet, in the not-too-distant future. The burning of this additional oil in industries and vehicles will accelerate climate change further.

How can this vicious circle be broken? Can the internationally guaranteed human rights help? Would a UN-proclaimed right to a healthy environment for all people make a difference? Should nations include in their constitutions human rights to drinking water and a clean environment? Should the right of asylum for refugees be extended to cover "climate refugees"? Many questions that must be discussed and answered!

The promotion of human rights entails enormous potential for recognising existing injustices and tackling them effectively. In the past, this took the form of revolutionary upheavals in the context of existing nation states. Historical examples of this include: the French Revolution against Bourbon rule in 1789, the Bourgeoisie Revolutions of Germany in 1848, the Socialist Revolutions in Russia and in other countries in the 20th century, the vanquishing of European colonialism in Africa and Asia after the end of the Second World War, the overthrow of Latin-American dictators and Communist regimes in Europe during the 1980s and the end of Apartheid in South Africa in 1994. The human rights philosophy with its call for the "empowerment" of suppressed people has created an awareness of wrongdoing and injustice. Yet the greatest injustices of our time are no longer of a national nature; they are global and thus much more difficult to combat.

OUR AUTHOR

Professor Manfred Nowak (b. 1950) holds the title of Professor for International Law and Human Rights at the University of Vienna; he is the founder and head of the Ludwig Boltzmann Institute of Human Rights. He served, among other things, as a judge at the Human Rights Chamber for Bosnia-Herzegovina in Sarajevo for the Council of Europe, and also as a United Nations Special Rapporteur on Torture.



Helplessness of nation states and international politics

The chief cause of these injustices is global capitalism, which has proliferated to an unprecedented extent through the ideology of neoliberalism with its rampant privatisation, deregulation and selfishness. Genuine possibilities for nation states to control the unbridled forces of the global financial and economic markets have decreased drastically. This perilous development has resulted in global economic, financial and food crises, organised global crime including arms trade, drug trafficking, human trafficking and organ trade, global terrorism and armed conflicts, extreme poverty, ecological disasters and, not least, unabated climate change. Nation states are no longer in a position to reign in these dangerous developments, which in part is down to the short-term



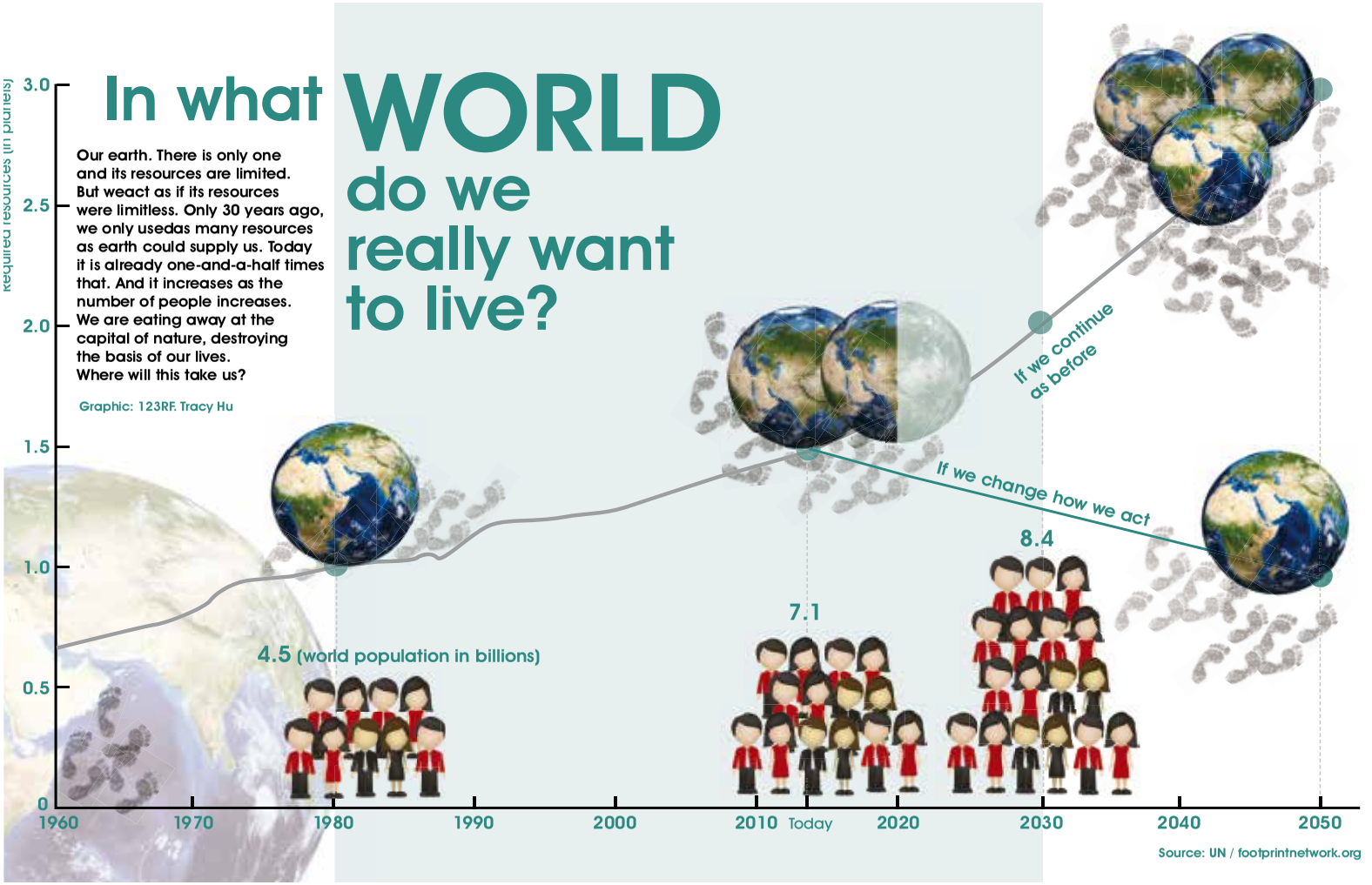
thinking of the political elites. The mechanisms of so-called "global governance" and universal human rights protection are unfortunately still far too weak to compensate for the incorrect decisions and failure to act at national government level.

A radical shift in awareness is therefore required at a global level to bring the unbridled forces of the global markets, as well as excessive climate change, back under control. Established policy no longer seems capable of doing so and, in truth, appears to have given up. The required changes can therefore only be initiated by a global civilian population and social (youth) movements: by citizens who are aware of their responsibility to the future of our planet. We need citizens who are prepared to fight for a just world order based on universally recognised human rights, by revolutionary means if necessary.

Challenges facing today's youth

The fact that climate change is gradually being perceived and acknowledged as one of the greatest human rights problems of the 21st century is an important first step. Climate change threatens not only the right to a healthy environment, it also threatens almost all other human rights of the inhabitants living in the areas immediately affected. Particularly important from a human rights perspective is the realisation that we do not live in different (first, second, third) worlds, but have only one shared world to survive in. We are talking about the rights of future generations and about international solidarity for making dignified survival possible on our planet.

And so, many more and often painful steps will be needed to create the necessary political awareness and the required global structures and to curb climate change and other detrimental consequences of global capitalism. That said, youth movements, such as *youthinkgreen – jugend denkt um.welt,* are on the right track in the only possible direction.



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1. The author describes real causes and possible consequences of climate change:

a) Which main causes of climate change does he address? Which causes would you definitely add to the list? And who bears main responsibility in your opinion?
b) List the different consequences and classify them as environmental, economic and social consequences.
c) Which of the specified consequences can already be viewed as reality (facts) and which are likely to occur in the future?
d) To what extent do the consequences of climate change differ for developing and emerging countries?
e) The author mentions climate adaptation and climate protection as two objectives. Different measures are required to achieve these objectives, yet they are structurally interlinked. Do some online research on the two main objectives in small groups and present possible measures to the whole group.

2. The author speaks of a "vicious circle" in the fight for resources and when dealing with global warming.

a) Illustrate this vicious circle using several examples.
b) Which fundamental questions define the international debates on an escape from this vicious circle, according to Nowak?

3. The author views human rights as having enormous potential for combating existing injustices effectively.

a) What are human rights in contrast to civil rights?
b) The author substantiates his statement citing examples of human rights movements in history. Add some important details that you know from history class or that you have found online to his brief summary. Do you share his opinion? Justify your answer.
c) Which human rights do you know and in which institutions have these rights been enshrined at international level as well?
d) To what extent can citizens insist on adherence to human rights – at national and international level?

4. The author speaks of the "helplessness of nation states" in combating injustices.

a) How does he support and substantiate this statement? Which phenomena contribute to the helplessness and which actors exploit them to their own ends?
b) What does Nowak conclude from his assumptions? Which different approaches to the problem does he present?

→

5. Which central realisation does the author demand of us all to make dignified survival possible on our planet?

a) Discuss this fundamental idea and create your own messages or slogans.

b) "Survival in Dignity" is the motto of your campaign.
Put your messages on posters. Organise a small exhibition in which you aim to raise other groups' awareness of the subject matter and to encourage their social engagement.

6. Time for debate!

Many call for the right of asylum for refugees to be extended to cover climate refugees. Prepare a debate on this topic (for and against) in your class. Invite other groups to the actual debate too. Record people's opinions on the topic before and after the debate. What results have you reached? Publish your findings.

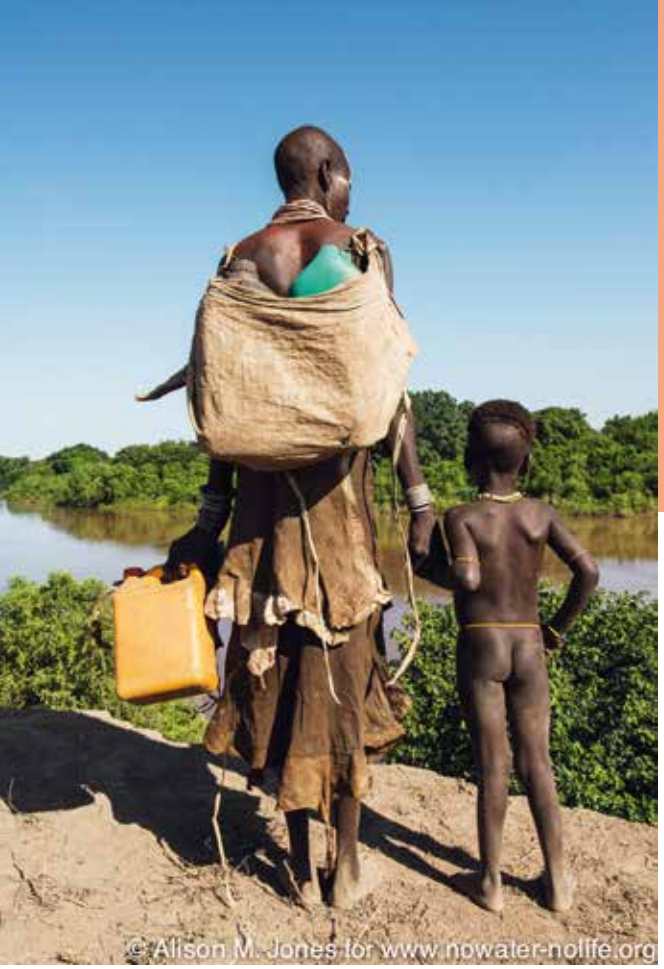
7. "Nobody wants me – I'm a climate refugee!"

a) Try to express the problems facing a climate refugee in small theatre scenes. Find inspiration on the Internet, e.g. by visiting the websites of theatre associations or other youth organisations, e.g. www.72stunden.de/mitmachen/projektideen/ideenpool/flucht.html

b) Make short videos of your theatre scenes and publish them on youtube or on the *youthinkgreen* website.



Life jackets discarded on the beach by refugees having fled across the Mediterranean



People at the Omo River, Ethiopia

THE HUMAN FACE OF CLIMATE CHANGE

By Dr Andrea Schapper

Significant consequences of climate change, such as rising sea levels and extreme weather events, put in jeopardy the rights to food, water, health, adequate housing and, in some instances, even the right to life. The inhabitants of many parts of Sub-Saharan Africa, South Asia, Latin America and the smaller island nations are already being affected today. This contribution highlights the various human rights facets of climate change and discusses the extent to which strengthening human rights can contribute to climate justice.

In recent times, global climate change has increasingly been given "a human face" (Cordes-Holland 2007: p. 13): it is considered a human rights issue. In this debate, civil society in particular draws attention to the fact that, because of the effects of environmental changes, social, economic and cultural human rights can no longer be guaranteed in many parts of the world today (e.g. CIEL 2013). In recent years, climate justice issues have been raised primarily in political theory and philosophy, taking into account various dimensions of justice.

- **International issues of justice** are being debated between developed and less developed countries in the context of CO_2-intensive industries. (e. g. Bulkeley/Newell 2010, p. 29). Less developed countries insist on their collective right to development, enshrined in the Declaration on the Right to Development (Orellana 2010, 5–6). Many state representatives argue that this right to development reduces their obligation to adhere to guidelines on the reduction of CO_2 emissions in the course of the development process. After all, the so-called developed countries had not done so in the past either.

- Issues of **intergenerational justice** are to do with ensuring an ecologically sustainable shaping of the future, so that basic needs, such as access to water, sufficient food and health, can also be satisfied for future generations (e.g. Hiskes 2009, Caney 2008, Shue 2011).

- Also critical to this discussion are forms of **intergenerational justice** where attention is focused on particularly vulnerable groups within a society. A report by the United Nations Human Rights Council has found that women, children and indigenous populations as well as the elder-

ly and people with disabilities require particular protection in view of climate change (United Nations 2009).

All of these dimensions of justice are linked by the concept of human rights. If binding rights, as formulated in the Universal Declaration of Human Rights (and in the binding International Covenant on Civil and Political Rights), were actually being put into practice and adhered to, then we would already have made important strides on the path towards climate justice (cf. Hiskes 2009). In particular, inequalities and injustices between social groups and different countries could then be reduced. Guaranteeing basic human rights is considered a moral limit in the climate discussion (Caney 2010): With their commitment to basic human rights, nations have assumed the duty to shape policy in such a way that, even under changed climatic conditions, the rights of all people on this planet are protected and guaranteed.



Which human rights are being violated?

Specific effects of climate change can be correlated very directly to potential rights violations. Heat waves, flooding, droughts and extreme weather conditions can jeopardise the right to life, which is enshrined in the International Covenant on Civil and Political Rights (ICCPR) of 1966 and in the Convention on the Rights of the Child of 1989. The right to life – a right of social and political dimensions – is closely linked to the guarantee of a series of basic economic and social rights. These include the right to food, water, health and adequate housing.

The right to food is threatened in particular by global warming and extreme climatic events. The melting of glaciers, droughts and flooding are likely to mean that gaining access to clean drinking water will become considerably more difficult. Health rights are also impacted by weather events, which can lead to malnutrition or increased incidence of diarrhoeal, respiratory and infectious diseases. Global warming can also influence the spread of malaria and vector-borne diseases.

OUR AUTHOR

Since 2012, Dr Andrea Schapper (b. 1980) has lectured and conducted research at Technische Universität Darmstadt in the field of international relations with a focus on the topics of human rights (and climate change), international organisations and governance.



The right to adequate housing is predominantly threatened in coastal regions; here, rising sea levels and the proliferation of storms can limit the guarantee of this right. In low-lying island nations and in the Arctic, this is already being felt with parts of the population having had to be resettled in the recent past (cf. United Nations 2009). All of the economic and social rights concerned have been laid down in binding terms since 1966 in the ICCPR and also form an integral part of different key treaties of the UN's human rights system.

Climate (in)justice? Case study: Ethiopia

Climate change policy measures, which are supposed to counteract the above-mentioned threats and alleviate the impact, often interfere massively in the living environment of indigenous populations and local communities. Ethiopia provides us with a concrete case study. The country in the Horn of Africa has adopted a promising "Green Economy" strategy. This means that the country is trying to take a leading role in the implementation of a strategy of (ecologically, economically and, at the same time, socially) sustainable development (UNEP 2011). Investments in renewable energies are of particular importance here (Federal Democratic Republic of Ethiopia 2011). Against this backdrop, a massive hydroelectric dam has been built in the southern part of the country, in the Lower Omo Valley. Gibe III (as it is known) on the River Omo is expected to become the largest dam in the whole of Africa in the future (Human Rights Watch 2012, p. 1).

However, the construction of the dam has entailed some serious human rights violations. Indigenous groups, who use the long river for their agricultural planning, have been subjected to harassment, violence, destruction of property and arbitrary arrests aimed at driving them from their native land. State authorities have told the agro-pastoral communities living in this region that they must reduce their livestock numbers and move to new locations. Furthermore, they stand to lose access to the River Omo. This will then jeopardise their right to food and means of subsistence, as laid down in the ICCPR. Moreover, the local groups have not been consulted on this issue, their approval has not been obtained, and they have not been compensated for their loss of land. The right to property and the right to development are further human rights that are being violated with the construction of the dam (Human Rights Watch 2012, p. 2-4).

In summary, it is clear that land rights, the right to self-determination and social rights are at greatest risk from climate change policy measures. It is against this backdrop that scientists, lawyers, civil rights activists and politicians not only insist on adherence to **substantial human rights,** but also call for the introduction of so-called **procedural rights.** These include the right to information and the right to participation, which would give the affected local populations a stronger voice in the decision-making processes of such political programmes.





Aswan Dam, Egypt © Hajor

Human rights in global climate policy

The first steps on the way to embedding human rights more firmly in global climate policy can already be observed today. In some climate change policy measures – for example, in the area of forest protection – procedural rights have already been introduced. Over the next few years, we will be able to witness civil-society actors in particular as well as some state representatives calling for greater consideration of human rights aspects in climate policy, at international as well as regional and national level.

Intensive discussions are currently taking place on whether and to what extent human rights will play a role in the new climate treaty, which will be adopted in Paris in 2015. The focus here will initially be on strengthening channels of information, participation and consultation for affected people in the developing countries. Because all climate change policy measures should be based on informed decisions, with the local population being involved adequately and having its concerns heard.

Crucial steps could then be taken to get closer to international, intergenerational and intra-societal climate justice. And precisely because such integrative solutions are required – given the complexity of the issues arising from anthropogenic climate change – we will be able to see even more institutionalisation processes at the interface of climate change and human rights in the future.

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LEARN • UNDERSTAND • ACT

1. Climate change increasingly endangers human rights.
Obtain an overview of human rights violations due to climate change at a national and international level. Do some research on the Internet.

2. Climate justice relates to global environmental changes among other things. Which concept and which basic ideas are behind the term climate justice?

3. The concept of climate justice has many different facets and dimensions.

a) Discuss the three dimensions of justice addressed in the text within your group.
b) What role does the concept of human rights play in this context?

4. What different rights are laid down in the International Covenant on Civil and Political Rights of the United Nations? Comment on the threat to these rights by concrete consequences of climate change.

5. Case study: Ethiopia

a) Use this case study to describe the influence of climate policy measures on adherence to certain human rights.
b) What contribution could procedural rights have made in this context?
c) Discuss the term climate justice in the context of this case study. What conclusions do you come to?

6. As a delegate at the United Nations Climate Change Conference in Paris (2015), it is your objective to embed human rights more firmly in global climate policy.

a) Which aspects absolutely have to be included in your draft? Give reasons for your choice.
b) Where do you see potential supporters of your proposition?

7. Call to action "For Climate Justice"

a) You want to provide joint support to an organisation in Africa whose main aim is to alleviate the effects of climate change locally. Create an action plan in consultation with the school leadership.

b) Seek supporters and fellow campaigners, send invitations, make all the necessary preparations...

c) Put your plan into action.

d) Evaluate your activity. What have you achieved?



Young Hamar in Ethiopia © MauritsV-Flickr

PATHS TO CLIMATE JUSTICE: THE BATTLE FOR MULTILATERAL AGREEMENTS [1]

By Dr Mary Robinson

We need to change the debate on climate change – to move beyond its construct as a scientific or environmental problem and to realise that it is in essence an issue of development and of rights – an issue of importance to people now and in the future – a phenomenon that will shape our societies in the coming years and decades.

For too long climate change has been left to scientists – and they to their credit have given us the evidence we need that climate change is happening and that it is caused by human activity. Climate change is a problem caused by people, with impacts on people, and must be solved by people. The impacts are as much social as physical, and the solutions as much legal as technical. Hence the title of the working group under which we are convened - the social and legal aspects of climate change.

I have seen first-hand on my visits to countries in the Global South the concrete impacts of climate change on the lives of the people there. Extreme weather events and changed seasons with unpredictable temperatures and rainfall threaten the lives of people and communities already struggling to survive and make a living. My friend Constance Okellet, who lives in a village in Northern Uganda, explained to me that she has witnessed dramatic and unprecedented changes in climatic conditions. I had to recognise that these impacts were affecting the human rights I spent so much of my life upholding and protecting. What I saw was an injustice – the negative impacts of a warming climate being felt most acutely by those who contributed least to the cause of the problem.

The injustice spreads beyond those currently affected by climate impacts, to the future generations who will inherit a warmer and less stable planet, having to cope with increasing resource scarcity and social unrest. With the world's population expected to rise to an estimated nine billion people by 2050, these problems will only get worse. These developments present today's decision makers with a moral dilemma, as they balance the needs of current generations with the needs of those without a voice at the table, the generations to come.

We must do something about these present and future injustices and work to ensure that a sustainable, legal and binding climate protection

1) This contribution is from a speech made by Dr Mary Robinson at the Dahrendorf Symposium in Berlin on 14 Nov 2013. Translation provided by Aline Höfer as part of the PerMondo initiative, supported by Mondo Agit - an agency that offers translations in all world languages. Stylistic editing of the text: *youthinkgreen* editorial office.

agreement is adopted at the UN climate conference 2015 in Paris.

The High Level Advisory Committee of the Climate Justice Dialogue – an initiative of the "Mary-Robinson Foundation – Climate Justice" and of the "World Resource Institute" – thus published a "Declaration on Climate Justice" in September 2013. The declaration highlights ways in which climate justice can be implemented (see info), calls for transformative leadership and places an emphasis on the rule of law in delivering climate justice.

Mary Robinson Foundation Climate Justice

The Rule of Law

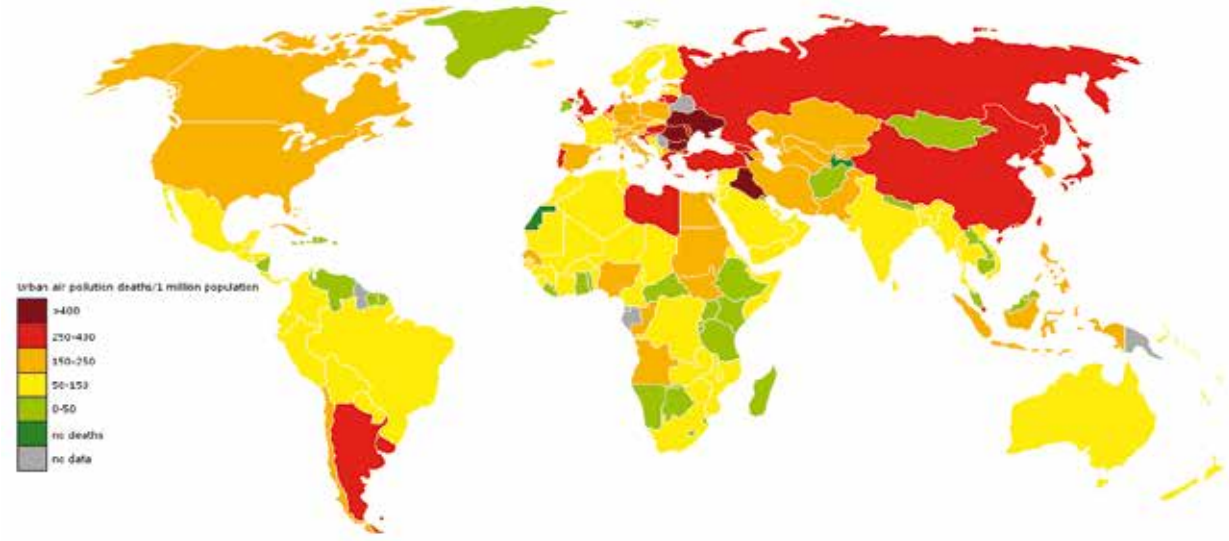
The rule of law is critical to the achievement of climate justice. An international legally binding climate agreement is an important step in protecting the most vulnerable by reducing greenhouse gas emissions in advanced economies and avoiding dangerous climate change. A legally binding agreement would also ensure that richer nations provide adequate financial and technical support to enable the poorest countries to adapt to climate

I would like to focus in on these two themes as they address both the legal and social aspects of the actions needed to avoid what is potentially the greatest threat to human rights in the 21st century.

OUR AUTHOR

Dr Mary Robinson (b. 1944) was president of the Republic of Ireland and UN High Commissioner for Human Rights. In 2010, she founded the Mary Robinson Foundation – Climate Justice (www.mrfcj.org). Since July 2014, she has been the UN Special Envoy on Climate Change.





Number of deaths per million inhabitants caused by air pollution (estimated figures, as at 2004) © KVDP



change and embrace low carbon development. Without a legally binding international agreement, there is no obligation to act.

The rule of law – applied at the international level and translated into national policies and actions – is a key tool in delivering justice. It ensures commitment and accountability, and provides a framework for ensuring transparency and equitable action. A legally binding agreement would include measures for holding the international community and individual states, to account for their actions. Nothing short of a new international treaty can provide this level of commitment and certainty.

It is becoming increasingly evident that a Kyoto style protocol is not a likely outcome of the ongoing climate negotiations. Nevertheless it is critical to maintain the strong legal character of the instrument to be agreed in 2015 and to enter into force by 2020. Under the Durban Platform for Enhanced Action the consensus is to "develop a protocol, another legal instrument or an agreed outcome with legal force under a Convention... applicable to all parties...".

It is vital to adhere to this Rule of Law approach and strive for an international climate change instrument with a strong legal character, firm commitments and a robust compliance and enforcement mechanism. Ultimately legal character is an expression of or an extension of political will: "... the binding character of an agreement under international law is an expression of the highest level of political will of all parties to achieve common objectives ..." (cf. Mehling 2012). There is evidence from the operation of other Multilateral Environmental Agreements that legal form and strong compliance mechanisms, are more effective than voluntary political commitments.

In the Declaration on Climate Justice we stressed that 'international and national legal processes and systems will need to evolve and be used more imaginatively to ensure accountability and justice.'

While we work towards a new climate agreement we need to look in parallel at the role other legal instruments can play – from the fields of human rights and refugee law to trade and corporate law.

Climate change is not just a climate issue; it is a development issue, an economic issue, a rights issue and a legal issue. This means that our approach to finding a legal and just solution needs to be informed by all relevant aspects of law at national, regional and international level. I am encouraged by efforts to apply learning from the field of transitional justice to addressing the unavoidable impacts of climate change – referred to as loss and damage. It is this kind of creative thinking and learning across legal disciplines that will inform a robust legal response to the climate challenge.

Transformative leadership

Lord Ralf Dahrendorf, whom I had the pleasure of knowing and working with in the past, warned against taking seemingly comfortable policy frames and political positions for granted. He urged academics to question the status quo and to challenge the political Zeitgeist. Never has this approach been more critical. Business as usual will not deliver climate justice, nor will it deliver sustainable development or inclusive societies. To move away from business as usual requires brave, enlightened and above all, transformative leadership.

This leadership is needed at all levels – from the grassroots farmers like Mulualem Brhane (whom I met in October in Addis) from the Amhara region in Ethiopia, are finding solutions to cope with increasingly unpredictable rainfall patters, while building the capacity of their community and giving leadership at district level – to the highest political level where increasingly leaders like President Joyce Banda from Malawi and the UN Secretary General Ban Ki Moon are recognising the need for climate justice. Climate change affects us all – but not equally. Solving the problem will take a global effort and this global effort can yield rewards.

At the conference I attended in Addis Ababa in October, the theme was Africa on the Rise and it posed the question: 'Can the Opportunities from Climate Change Spring the Continent to Transformative Development?' The discussions centred on the challenge of lifting people out of poverty, creating jobs and generating economic growth in a way that meets not just the short term needs of current generations but also paves the way for a sustainable and secure future for Africa's young population and the generations to come. We need visionary leaders to drive the societal change required to make the leap from business as usual powered by fossil fuels to a new model of low carbon, climate resilient development with people at the centre.



Millet harvest in Ethiopia
© A. Davey from Where I Live Now: Pacific Northwest

I think much of this leadership will come from developing countries, where the possibility of investing now - and for the first time - in the infrastructure needed to enable this transition is an attractive alternative to the expensive retro-fitting of infrastructure that will dominate in industrialised countries. But to be successful, and at the scale needed to be transformative, African leaders and investors will need the support of the private sector and international financial institutions to implement these ambitious plans. They will also need an international climate agreement which clarifies and ensures the delivery of ambitious commitments by industrialised countries – in keeping with their responsibilities.



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Form strong coalitions

As part of global collective action, emphasis will need to be placed on the role of diverse 'coalitions of the working' that are already emerging at the community, local, city, corporate and country levels, and the vital role they will play in mobilizing action. A global solution is not just an issue for decision makers working at the international level. The solutions that will fuel the changes we need are coming from entrepreneurs, small scale farmers, researchers, scientists, town planners, women, young people and those who hold indigenous knowledge.

Coalitions of mayors, alliances of business leaders and women groups will play a vital role in demonstrating what can be done and inspiring the political leadership needed to deliver the political will to avoid dangerous climate change and ensure climate justice.

The phrase ringing in my ears come from the famous 'I Have A Dream' speech of Martin Luther King Junior, delivered 50 years ago this year; "The fierce urgency of now".

Literature:

Mehling, M.(2012): Enforcing compliance in an evolving climate regime in »Promoting Compliance in an Evolving Climate Regime« (Brunnée, Doelle and Rajamani, Eds), Cambridge University Press.

INFO:
DECLARATION ON CLIMATE JUSTICE

The declaration names five central principles (priority pathways) to achieve climate justice:

Giving voice: The world cannot respond adequately to climate change unless we give those most affected a voice, listen to their solutions and empower them to act.

A new way to grow: To reduce greenhouse gas emissions significantly, we also have to transform our current economic system to one based on low-carbon production and consumption, so that we can create inclusive sustainable development and reduce inequality.

Investing in the future: A new investment model is required to deal with the risks posed by climate change – now and in the future. Policy certainty sends signals to invest in the right things.

Commitment and accountability: Achieving climate justice requires that broader issues of inequality and weak governance are addressed both within countries and at a global level. Accountability is key to success.

Rule of law: Strong legal frameworks can provide certainty to ensure transparency, longevity, credibility and effective enforcement of climate and related policies. These are necessary to protect those people most at risk from the impacts of climate changes.

Source: www.climatejusticedialogue.org

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1. What is the greatest social injustice of climate change?

2. Discuss the Declaration on Climate Justice (see info).

a) How would you evaluate the five priority pathways?
b) Discuss which measures would be appropriate and necessary to pursue such pathways in your country?
c) Which of these measures and pathways are supported by policy in your country, and which ones are not?

3. On the path to a binding treaty:

a) Why is it necessary to counter the already visible consequences of climate change through internationally binding principles of law?
b) Who could contribute solutions to the problems?
c) What additional legal instruments could play a part here?

4. The sociologist Ralf Darendorf already called for social and political structures, which appear to be correct and to have stood the test of time, to be challenged.

a) What form might transformative leadership take? Which different actors and which social levels play a role here?
b) What coalitions of actors would have to be formed and strengthened to cope with the changes involved in climate change?
c) To what extent would an international climate change treaty help the coalitions of leaders who are working on a social transformation?

5. The author quotes Martin Luther King and his analysis: "The fierce urgency of now."

a) Discuss this appeal amongst yourselves.
b) What conclusions do you come to?



6. "We need to change our thinking" is a principle demand made by Robinson.

a) Create a campaign plan on this topic.
b) Discuss transformation measures to convert this appeal into something meaningful and productive.

7. Conduct an interview with a climate refugee – if possible – and publish it.



CLIMATE
VOLUNTEERS
Change something,
before the climate does.

FROM REAL LIFE: THE CLIMATE CAMPAIGN OF THE GERMAN RED CROSS YOUTH

By Jessica Fritz

Image material: © Deutsches Jugendrotkreuz

In 2012, we started a nationwide campaign at the Red Cross Youth (Jugendrotkreuz), using the motto: "Climate volunteer. Change something before the climate does". Here, we focus on the following five points: health, education, disaster management, climate protection and climate-induced migration. We formulated a list of demands for each of these topics to raise awareness among the public and politicians.

Unfortunately, the topic of climate-induced migration is low down on the political and media agenda. To change this, we sought strong allies. At numerous debates and events, organised together with Climate-Alliance Germany, Oxfam, Kindernothilfe (charity for needy children) and Bread for the World, we stressed that the greatest challenge lies in preventing climate-induced migration through active climate protection and effective climate adaptation methods. However, existing climate protection and adaptation measures are nowhere near sufficient. The Federal Government and the international community of states must therefore find solutions to protect climate refugees who have no hope of remaining in their homeland, either because they have lost their property and possessions due to severe weather, or because persistent drought has rendered their lands infertile. However, we must first come up with an exact definition of the term climate-induced migration. We realise that we need broad civil-society alliances to introduce the topic of "climate-induced migration" into public discourse and to lobby effectively in the political arena.



To this end, we started a petition in collaboration with Naturschutzjugend - NAJU (nature protection youth) and BUNDjugend (Young Friends of the Earth Germany) addressed to the German parliament. In it we called on decision-makers, among other things, to acknowledge the direct impact of climate change as a ground for refugee status in the asylum process if refugees cannot return to their country of origin. Between May and August 2014, we managed to collect 3,500 signatures for the petition. Unfortunately, this meant that we did not meet the parliament's requirements for a hearing in the petition committee. However, there was some positive news because we were able to present the list to two members of parliament from Bündnis 90/Die Grünen, Luise Amtsberg and Peter Meiwald. In conversation with us, both promised to promote our cause in the German parliament.

In collaboration with NAJU and BUNDjugend, we then prepared a motion seeking support for our demands from the German Federal Youth Council (DBJR), the largest children and youth group lobbying parliament and the government. Finally, in October 2014, our motion to "acknowledge the direct impact of climate change as a ground for refugee status!" was carried unanimously by the member associations in the plenary meeting of the DBJR – and this is now an official position. For us as Red Cross Youth members, who tend to be active more in our own youth association, this was a major achievement! Now we have to decide how we can continue to play an active role. We do not want to rest on our laurels – we want to reinforce our demands and continue the process we have started. And so we hope that this cause can reach more and more people.

UNSERE AUTORIN



Jessica Fritz (* 1978), Bildungsreferentin im Bundesverband des Deutschen Jugendrotkreuzes, hat zusammen mit ehren- und hauptamtlichen Mitarbeitenden des Verbands die Klimahelfer-Kampagne konzipiert. Neben Klimawandel sind Nachhaltigkeit, Humanitäres Völkerrecht sowie Flucht und Migration weitere thematische Schwerpunkte ihrer Arbeit.

Excerpt from the text of the decision of the German Federal Youth Council in October 2014:

"The circumstances causing people to become refugees are interdependent and cannot be considered in isolation. People are often forced to flee their homes by a whole array of mutually reinforcing causes. These include, for example, extreme poverty and high rates of unemployment, armed conflicts and tensions or a lack of access to education and healthcare. Climate change compounds all of these causes.

Children and young people are particularly affected by this, especially because they are also the ones who will feel the effects of this development the most in the future. They have the right to grow up in an intact environment, to lead a healthy life and to develop fully as individuals [...].



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Germany has a humanitarian responsibility to those in particular need of help and, as a country having contributed to climate change, it has a duty in the context of social and ecological justice to support those whose livelihoods are threatened by climate change. In the coalition agreement, the Federal Government agreed to engagement on the topic of "climate refugees". Yet words must be followed by actions. We therefore call upon the German Federal Government to acknowledge the direct impacts of climate change, such as rising sea levels and extreme weather events, as grounds for refugee status in the asylum process where the livelihoods of asylum seekers are demonstrably threatened by these impacts, making a return to their country of origin impossible. A list of criteria must be developed for this.

Close collaboration with the European Union is vital to this end. Because only through pan-European reform of asylum policy can a sustainable and humane solution be found. Indirect effects of climate change also lead to migration. In view of this, we demand that the immigration legislation be developed further to allow migration to Germany because of climate change, for instance, on principle."

Materials and links

- www.jugendrotkreuz.de

- www.mein-jrk.de/klimahelfer (incl. a guide "Schutz für alle!" with games and methods on the topic of climate refugees)



- DBJR motion to "Acknowledge the direct impact of climate change as a ground for refugee status!": www.dbjr.de/gremien/87-vollversammlung.html

- Handout "Vom Klimawandel vertrieben" (dis placed by climate change) by Red Cross Youth, Oxfam, Kindernothilfe (charity for needy children), Climate-Alliance Germany and Bread for the World: www.mein-jrk.de/fileadmin/user_upload/11-Klimahelfer/Vom_Klimawandel_vertrieben.pdf

- Animated video for the petition: www.youtube.com/watch?v=JQfONK1eJZI

Quotes by committed young people:

Tevin Harris,
member of the campaign working group:
We, the young people, are the ones who will be most affected by flooding and heat waves in the future. We must become active – for our own protection and the protection of others."

Christoph Röttgers,
NAJU speaker:
"It is important to the NAJU that livelihoods can be protected and maintained across the globe. Where that fails, it is up to society to help the victims of climate change – and therefore also of our lifestyle. Irrespective of whether it is humans, animals or plants losing their living environment."



Deutsches Rotes Kreuz – Jugendrotkreuz
INCL. CLIMATE VOLUNTEERS
The climate change and migration game
PROTECTION FOR ALL!
Guideline for projects for campaigns about the topic of climate change and migration

Mandy Merker,
Red Cross Youth Deputy Director:
"We want something to be finally done about climate refugees. Vague wording and declarations of intent are not good enough."





German Red Cross General Secretariat, German Red Cross Youth (ed., 2013): "Klimajournal. Kampagnen-Magazin des Jugendrotkreuzes", Berlin.

EXPLORING OTHE SOLUTION INITIAT AND COURSES OF

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R PATHS –
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4.1 Insights into new social and economic models

Introduction
Page 398
How ecological modernisation can succeed world-wide: a plea
By *Prof Dr Ernst Ulrich von Weizsäcker*
Page 401
On the path to a post-growth economy: A brief guide to overcoming the "Dictatorship of Consumption and Growth"
By *sub Prof Dr Niko Paech*
Page 409
The economy for the common good – an economic model with a future?!
By *Dr Christian Felber*
Page 416

4.2 Promoting and sharing responsibility for the energy transition



Introduction
Page 424
Business People need more investment security
An interview with Max Schön
by *Judith Gebbe*
Page 427
Power rebels: The rocky road to “people's power”
By *Ursula Sladek*
Page 434
The germany energy transition – a boon fo exports?
By *Dr. Christian Hübner*
Page 440
China: Green revolution in a stinking boom?
By *Lea Deuber*
Page 448



4.3 Live sustainably and be mobile, but how?

Introduction
Page 456
Alternative housing concepts –
from hobbit holes to containers
By *Felix Simon*
Page 458
Mobility – a high-quality asset!
With input from *Gerd Würdemann, Lena Kasper*
and *Prof. Dr. Peter Seeger*
Page 466
The battle for sustainable urban development:
mobility in Brasília
By *Hanna Marzinkowski*
Page 478



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4.4 Fully embracing the consumer revolution



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Introduction
Page 484
What really nourishes bodies and souls:
An interview with Sarah Wiener by *Sandra Kirchner & Ariane Missuweit*
Page 486
Alternative forms of consumption: share, trade, borrow
By *Maike Gossen*
Page 498
Fairly and sustainably produced:
The latest smartphone trends
By *Christian Wölbert*
Page 506
"Everything is repaired in the jungle": An interview with Catherina Rust by *Helmut Spiering*
Page 513

4.5 A new look at our needs



© André Stern

Introduction
Page 522
Ways to go from "wanting to have more" to "being able to have less"
By *Boris Woynowski*
Page 524
Setting an example through happy frugality – triggering social change
By *Prof. Dr. Rainer Dollase*
Page 530
"Enthusiasm is fertiliser for the brain":
Christian Vock interviews André Stern
Page 538

4.1 INSIGHTS INTO NE ECONOMIC MODELS

Introduction

Steady economic growth, expressed in the gross domestic product (GDP), is still viewed as the ultimate goal across many parts of society, as the most important yardstick by which we measure the development of a country, and consequently as a basis for political decision-making. Because people firmly believe that it is through growth that we create jobs, combat poverty, generate funds for environmental protection and stabilise our social systems.

Yet the numerous social, ecological and financial crises of recent times have demonstrated that our current economic system is on shaky ground. Capitalism – the most successful economic system to date – is beginning to crumble. And it is no longer just politically left-leaning citizens or globalisation critics who are looking for ways out of the crises. Many people, young and old, journalists, economists, consumers and entrepreneurs, are increasingly calling into question the once firmly held belief concerning the "benefits" of growth to society as a whole.

- Is a better life really linked to economic growth in the conventional sense?
- Does economic growth really lead to greater prosperity for as many people as possible in the world?
- Infinite growth in a world with limited, finite resources – how is that supposed to work?
- Do we need other economic benchmarks and models to be able to better define and satisfy our needs and those of future generations?



© Jona Hölderle / Jugendfotos.de

Reformers may have different approaches to solving these problems, but all agree that our current capitalist system must be changed in such a way that our human needs are fulfilled by our economic activity while remaining within the ecological limits. Because the fact of the matter is that the environment and the countries of the Global South are paying a high price for growth and prosperity, as we understand these terms today. In plain language,

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this means that we continue to go well beyond the ecological limits with our current global economic system.

The "Earth Overshoot Day", the symbolic day on which humanity's resource consumption for the year starts to exceed the Earth's capacity to "regenerate" those resources, fell on 20 August in 2013 and comes earlier with each successive year. On the remaining days until the end of the year, we live at the expense of the climate, of biodiversity and of natural resources, as it were. The media report on "peak oil" and even "peak everything", i.e. the point from which we will start running out of oil or other raw materials. It is very obvious that we are now at a crossroads and that we must set the right course for our future.



PROSPERITY © Gerhard Mester

The basic question under discussion, on which there are still many different views, is this: Is it possible, within our current capitalist system, for us to adapt quickly and comprehensively enough to still be able to reach the climate protection goals essential for survival and prevent the ecosystems from being destroyed? Or will it take mass protests, a "revolution", a comprehensive transformation of the system, a shrinking economy, a totally new concept of society?

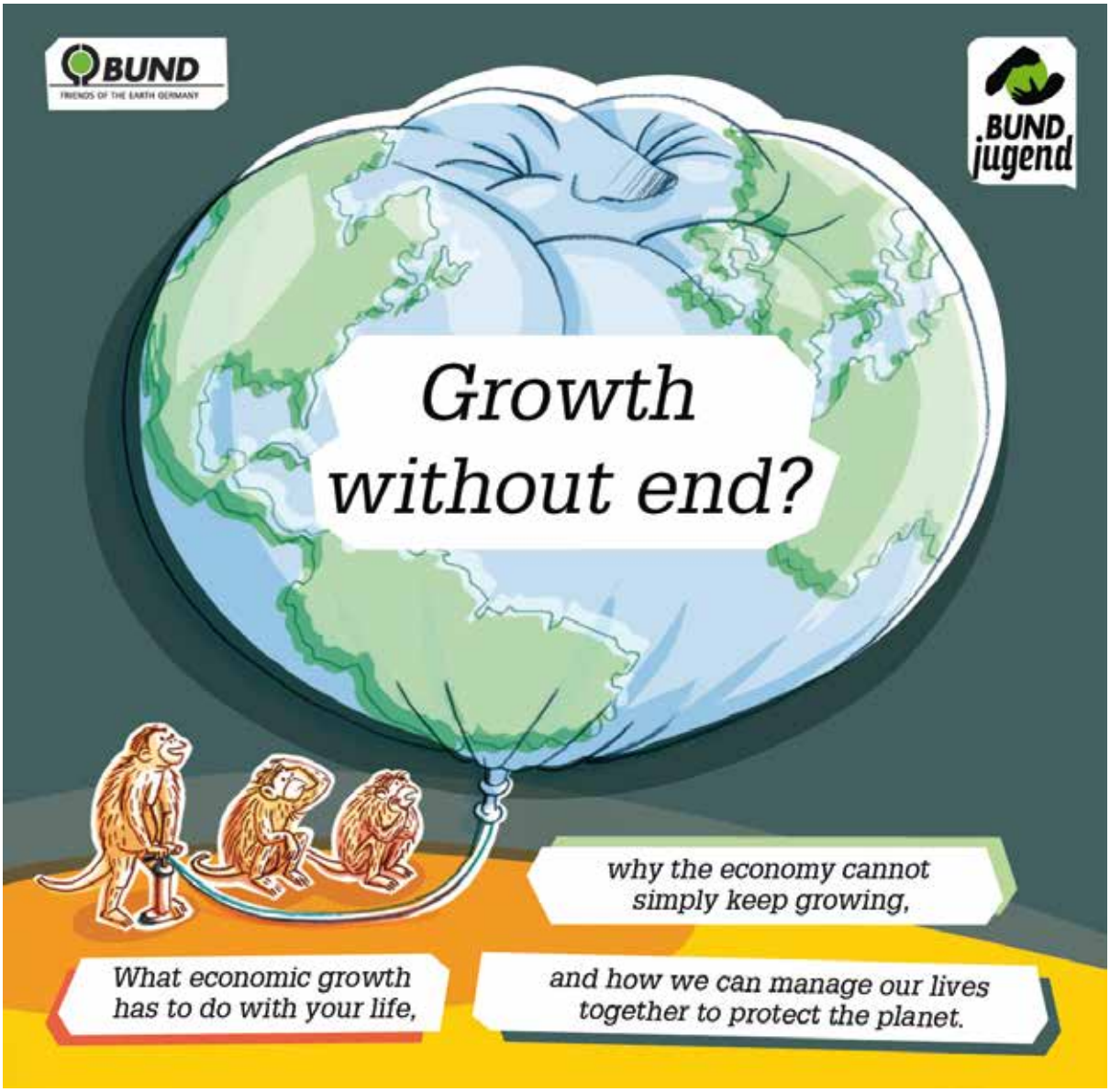
The spectrum of alternative economic models being discussed ranges from those that advocate partial corrections to the system by means of technical progress to shape economic growth in a more sustainable manner and to uncouple it from environmental destruction (see Ecological Modernisation, Green Growth, Green Economy, Blue Economy, Green New Deal, Cradle to Cradle, Factor X) to those that address growth as the problem and call for capitalist economic systems to contract (Degrowth, Post-growth). Models that shift the focus away from the economy and lifestyle and towards the well-being of humans (Economy for the Common Good, Solidarity Economy, Transition Movement) represent a third path. Sub-section 4.1 introduces you to one representative for each of these three paths.

The three authors find very different answers to these questions. While Ernst Ulrich von Weizsäcker argues for technical, ecological and social innovations and also for new political incentive structures aimed at the ecological modernisation of capitalism, Niko Paech calls for the "dismant-

ling of the global world economy based on the division of labour". Christian Felber, for his part, makes the case for companies, communities and non-governmental organisations moving their focus towards the common good, advocating an annual assessment of the progress made in areas such as human dignity, solidarity, co-determination and justice.

Although these alternative economic models and philosophies may appear to conflict in their outlook, on closer inspection they are similar in their objectives, intentions and hopes, all aiming to achieve and guarantee a good quality of life for us, our children and our children's children in all regions of the world. Understandably, sub-section 4.1 provides a great deal of material to discuss.

- Which of the models do you think is unrealistic or even utopian?
- Which approaches could realistically be implemented in your society and which ones would you support?
- How can the abstract, theoretical ideas produce new scope for action?
- To what extent are the proposals made by the three authors actually contradictory?



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Havana (Kuba)

HOW ECOLOGICAL MODERNISATION CAN SUCCEED WORLD-WIDE: A PLEA

By Prof Dr Ernst Ulrich von Weizsäcker[1]

Sustainable development is conventionally measured by the ecological footprint. This represents the area we require for the manufacture of all the goods we consume and all the services we use. Based on the current world population of some seven billion, an ecological footprint of two hectares per person would be classified as corresponding to sustainable living. Development, on the other hand, is linked above all to wealth, i.e. a high per capita income, high life expectancy and high standards of education in a society.

To measure the development of countries in these areas, the United Nations has developed the Human Development Index (HDI). Depending on the level of development, each country is allocated a value between 0 and 1 using this index. All countries with a value of 0.8 or higher are classified as developed. The Global Footprint Network linked the two concepts – the ecological footprint and the HDI – to discover which countries could be labelled both sustainable and developed. The staggering revelation from a few years ago: Cuba was the only one! In the meantime, Cuba is no longer "sustainable" according to theses standards either. Why is that the case?

1) This text is based on a speech given by Professor Ernst Ulrich von Weizsäcker at the 1st World Youth Sustainability Summit in Berlin in May 2013 organised by *youthinkgreen – jugend denkt um.welt e.V.*

Greed for resources

The Cubans may have poor economic conditions, but they benefit from relatively intact healthcare and education systems. Cuba is viewed as an attractive tourist destination, yet it is not exactly an oasis for immigrants due to the political situation – in contrast to the USA. Incidentally, the average ecological footprint of an American citizen exceeds nine hectares. If all of the world's inhabitants lived as the Americans do and consumed as much, we would need five Earths. This is, of course, a purely hypothetical calculation. Because we only have this one Earth. And prosperity has become a problem, so it seems. It is only over the last 60 years or so that we have seen a rapid increase in energy consumption and a limitless greed for natural resources. This begs the question: where can we intervene to stop the force of destruction that goes with this development?

There are of course many small ways to reduce one's own individual footprint: buy regional fruit and vegetables only, eat less meat, cycle to university instead of driving, only treat yourself to a new mobile phone every four years at the most and so on and so forth. All of this helps a little and soothes our conscience. But what measurable effects does this have on our climate and on environmental protection? Perhaps, we would then only need four and a half planets! A sustainable solution looks different and this is where the big questions of justice begin. Will the people in developing countries and future generations be allowed to enjoy the same standard of living as we currently enjoy in Europe? And when will we exceed the planetary limits? Very soon – if we continue doing what we're doing!

I maintain that we need technical innovation and a five-fold improvement in resource productivity to double our prosperity and to halve our resource consumption globally. Only by these means can we achieve ecological modernisation and sustainable co-evolution of man and nature. Resource productivity represents the relationship between the economic output and the associated consumption of resources of water, energy, land, raw materials, etc. Only by increasing resource productivity massively can all countries achieve their prosperity objectives as well as sustainability. This is possible, and does not need to involve the "detour" via the massive CO_2 emissions and industrial environmental pollution the Western countries have taken.

Who dares to take the first step?

Since 2009, we have observed a stagnation in the climate negotiations; zero progress has been made in the binding reduction of CO_2 emissions. Why is that? I think we have landed ourselves in a situation akin to a game of Mikado. The first person to make a move loses. Nobody wants to take this first step and reduce their CO_2 emissions independently of everyone else.



There is this firmly held belief in the world that you can only worry about the environment and the climate if you are rich! This assumption from environmental economics is illustrated by the environmental Kuznets curve (see figure). Judging from the curve progression, the emissions of various environmental pollutants in a growing national economy initially increase in parallel with rising per capita incomes. However, once a certain level of wealth has been reached and once the development from an industry-based to a service-based economy has taken place, pollution falls again with increasing per capita incomes. The trouble is that this has only applied to local pollution in the past. It is a different story with CO_2 emissions: the richer the country, the worse its CO_2 emissions are.

THE PATH TO SUSTAINABLE DEVELOPMENT

No country is yet achieving a high level of human development with a globally sustainable Footprint – but some are moving in the right direction

For a country to achieve globally sustainable development, it must have a per capita Ecological Footprint smaller than the per capita biocapacity available on the planet, while maintaining a decent standard of living. The former means a per capita Footprint lower than 1.7 gha – the maximum that could be replicated worldwide without resulting in global overshoot. The latter can be defined as a score of 0.71 or above on the UN inequality-adjusted Human Development Index (IHDI). Currently, no country meets both of these criteria.

The **Human Development Index (HDI)** is published in the Human Development Report of the Development Programme of the United Nations (UNDP). It measures human well-being by combining indicators for life expectancy, literacy and per capita gross domestic product (GDP). In 2010, the report started to include three further indices, including the Inequality-adjusted Human Development Index (IHDI).

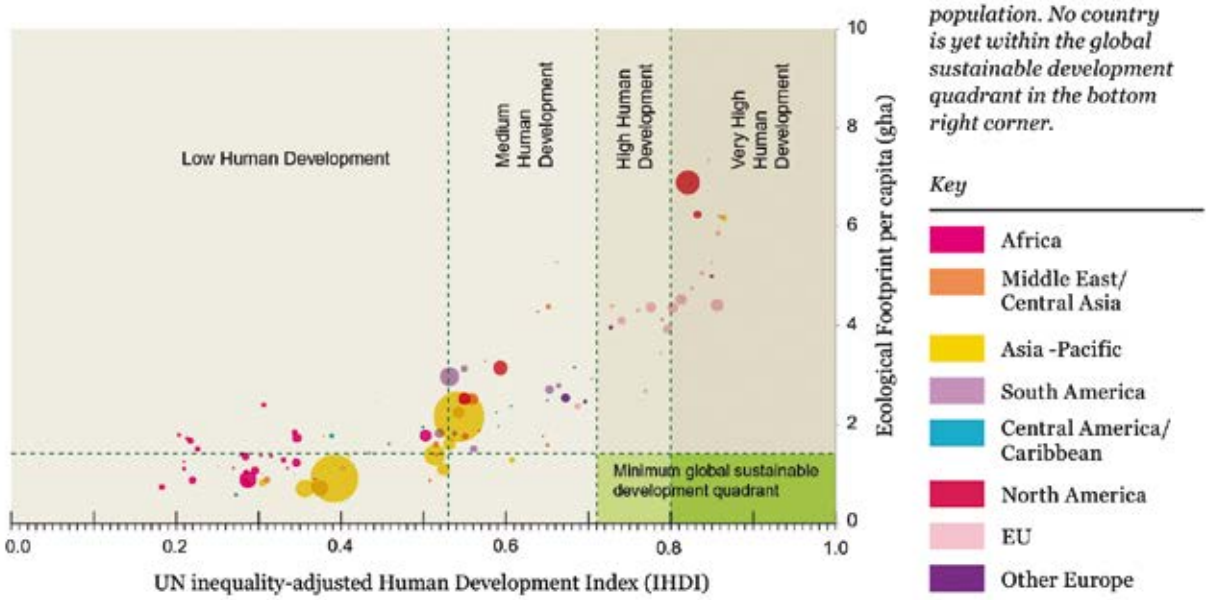
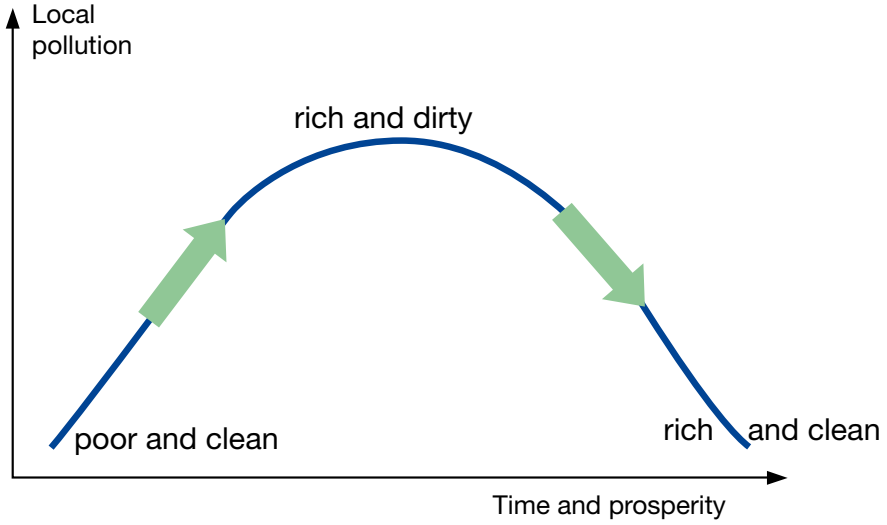


Figure 8: Correlating the Ecological Footprint with inequality-adjusted Human Development Index (for latest year) *The dots representing each country are coloured according to their geographic region and scaled relative to their population. No country is yet within the global sustainable development quadrant in the bottom right corner.*

©WWF / Global Footprint Network - Living Planet Report 2014

Everybody has the Kuznet curve in their head: get rich first and then engage in environmental protection! And they think the same goes for climate protection.



Now is the time for us in the North to start heading downwards on the "CO_2 Kuznets curve". For developing countries, this could be the signal to tunnel through this curve; that is, achieve greater prosperity and economic growth while at the same time remaining low on CO_2 emissions. The rise in environmental and resource productivity must turn into a financial source of profit, as was the case previously with labour and capital productivity. Furthermore, we need integrated solutions in environmental protection instead of retrospective measures; in concrete terms this means recycling, a circular economy, sustainable resource management and clean technologies (water, wind, solar energy or hydrogen) instead of exhaust air purification, sewage treatment or waste incineration. Technical innovation must be exploited to uncouple economic growth from environmental destruction.

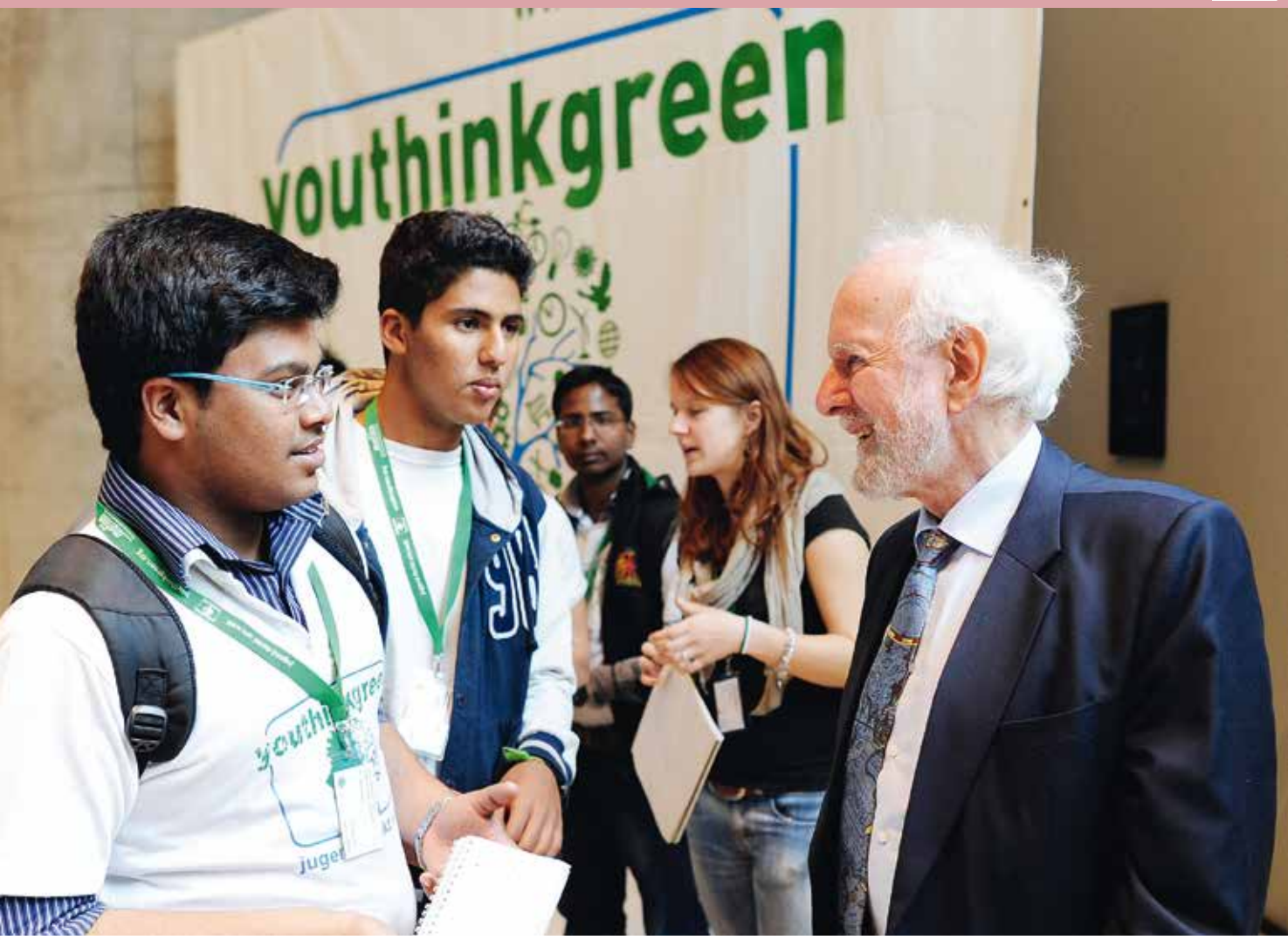
OUR AUTHOR

Professor Ernst Ulrich von Weizsäcker (b. 1939), German scientist and politician (SPD), ranks among the pioneers of sustainable development. He has been the Co-President of the Club of Rome since 2012.





Simon Smith Kuznets



However, in the long term, resource productivity can only be increased if we continue to raise the costs of energy, CO_2 emissions and material resources while reducing indirect labour costs and incidental costs. I therefore advocate a permanent ecological tax reform, similar to what we saw introduced in Germany between 1999 and 2003. The pace of the price increases could be guided by the increase in resource productivity, so that the resource costs incurred by the consumer remain constant on average. This proposal is comparable to the gradual increase in labour productivity and gross wage costs during industrialisation.

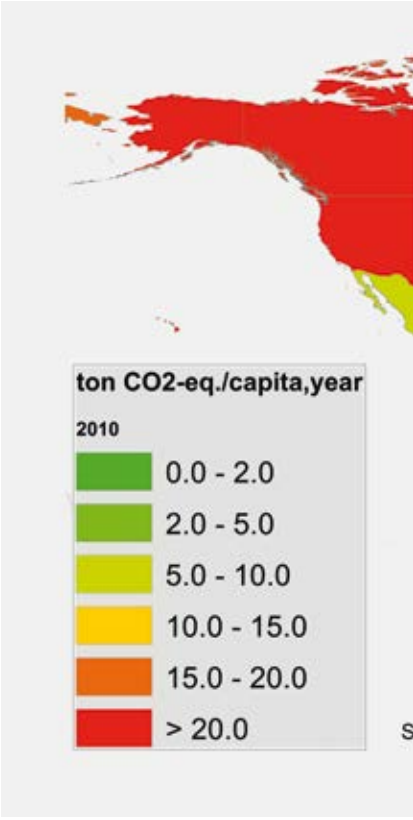
One process reinforced the other. Rising energy and resource prices would continuously prompt new technical developments for higher resource productivity. Calculations have indicated that the ecological tax reform in Germany created or saved some 200,000 to 300,000 jobs. The political aim was and must be to ensure relatively consistent monthly energy costs for the consumer, because ideally efficiency should compensate for the increase in prices.

Without these continuous price increases, you would run the risk of incurring the "rebound effect" (savings achieved through resource efficiency being neutralised by increased consumption and the associated increased use of energy and resources). The following example highlights this. Better engine technology and the reduced fuel consumption that comes with it would presumably result in motorists covering more kilometres. This theoretical assumption has already proven to come true in the USA. Travelling by car is simply too cheap there.

New winners and losers

In addition, I propose two modifications to the path of increasing prices: firstly, a low social rate for basic needs, so that poorer families are not impacted too heavily by the increasing energy and water prices; and secondly, "revenue neutrality" for particularly energy-dependent industry sectors that would otherwise relocate away from Germany. If investing in efficiency becomes more lucrative with each passing year, the global economic ship will move away from an exclusive concern for labour productivity and move towards increasing resource productivity.

Who would be the winners and losers? The winning side would include companies in the high-tech sector, the entire eco-sector, skilled trade, rail transport, maintenance and recycling companies, educational institutions, science, the consulting and culture sectors. On the losing side could be the logistics sector (lorries, vans etc.), aircraft construction, mining and primary industry – simply because demand for their products would be on the decrease. In geographical terms, Europe, East Asia and developing countries lacking in raw materials would be on the winning side, i.e. some 80 percent of the world's population. From this perspective, the losing side would include only those countries which survive by selling their natural resources or do not manage to overcome lifestyles associated with squandering resources.



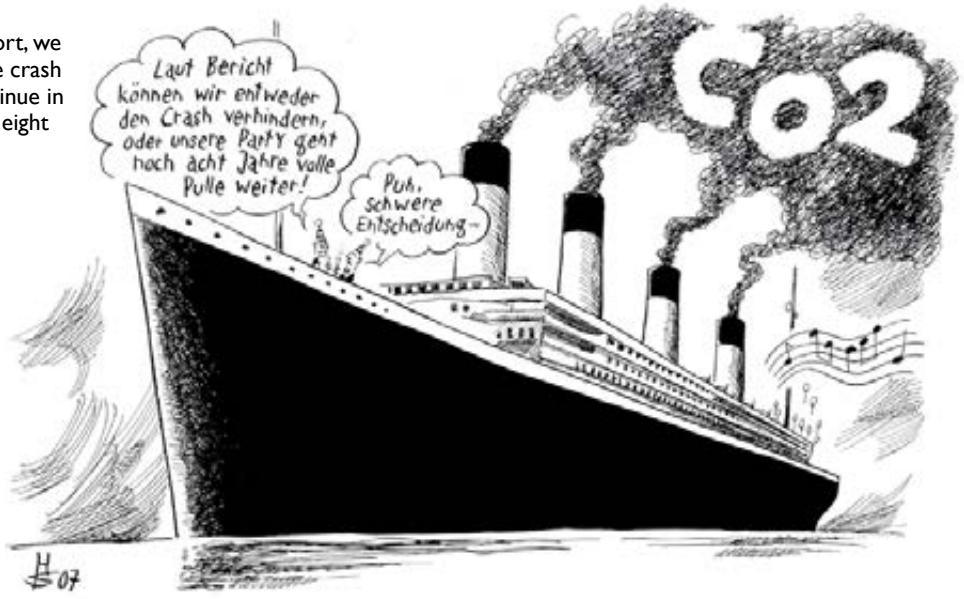
Put succinctly:

low energy and natural resource prices encourage waste and the rebound effect,

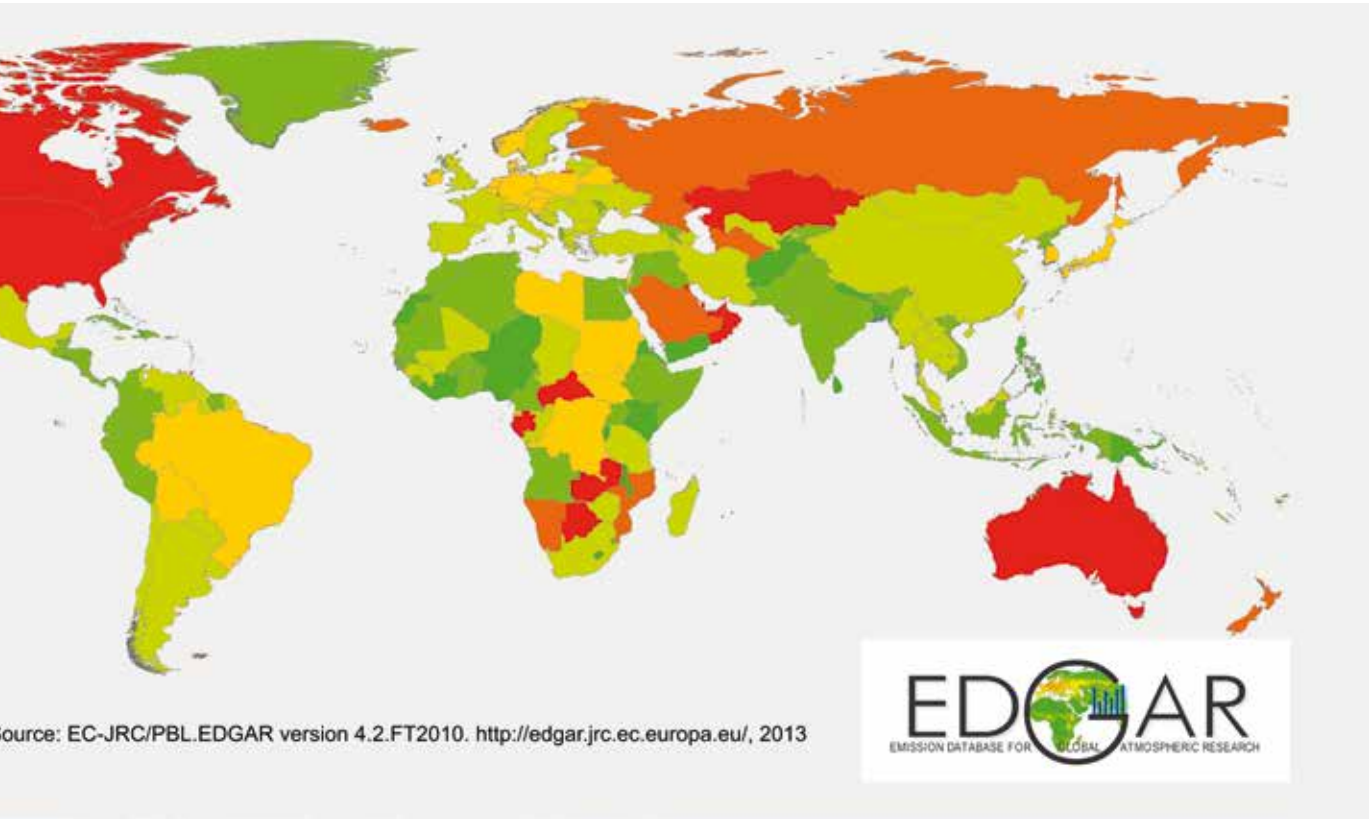
high prices increase efficiency and common sense as well as courageous and ecological modernisation.

According to the report, we can either prevent the crash or our party will continue in full swing for another eight years!

Phew, hard decision...



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The USA belongs in the latter category and should not be our role model in this respect, unless we want to sit in front of our Mikado sticks in 50 years' time with a yawn on our faces and our hands in our laps, while outside storms, drought and rising sea levels threaten people's lives. Let's tackle ecological modernisation, proceeding gently and seamlessly yet with courage and effectiveness. Let's free ourselves of the dominance of the Anglo-Saxon idea of man that places the market above all else, where egotism reigns and where state-organised solidarity is ridiculed. Let's put our faith in technical innovations and in a transformation of the economic structures to ensure that sustainable sectors can grow and environmentally harmful activities and industries shrink. Or figuratively speaking: let's make sure that Cuba isn't the only country in the green corner of Sustainable Development!

LEARN • UNDERSTAND • ACT

1. According to data collected by the Global Footprint Network (2005) and the applied method, only Cuba could be classified as sustainable and developed.

a) How did the author come to this conclusion? Describe the two concepts that the Global Footprint Network has linked.
b) Use this method and the graphic to classify other countries that are considered relatively developed and sustainable.
c) What conclusions can be drawn from the data?

2. 2. The author calls for effective ecological modernisation. Which approaches does he highlight in particular in this context?

3. The "environmental Kuznets curve" plays an important part in environmental economics.

a) Describe the curve and use case studies to interpret it.
b) What challenges do countries of the Global South face, also bearing the Kuznets curve in mind?

4. The author advocates a permanent ecological tax reform.

a) Describe the objective of such a reform and give examples.
b) What measures would the author employ to tackle the risk of the rebound effect? Comment on his observations using several examples.
c) Describe the role of consumers in the context of this reform.
d) List potential courses of action in support of the author's demand in a collection of material.

5. The author wants to stop the destructive dynamic. To do so, he demands a five-fold improvement in resource productivity.

a) Comment on the term resource productivity.
b) Name potential winners and losers in this move away from labour productivity and towards resource productivity.

6. In the final paragraph, the author makes an urgent appeal to us all. Do you agree with his statements? Discuss this amongst yourselves.

7. Von Weizsäcker demands: "Let's embark on an ecological modernisation that is not timid but courageous and effective." Design a flyer around this call to action.



ON THE PATH TO A POST-GROWTH ECONOMY

A brief guide to overcoming the "dictatorship of consumption and growth" sub Prof Dr Niko Paech

In his latest book "Befreiung vom Überfluss. Auf dem Weg in die Postwachstumsökonomie", economics and sustainability scientist Dr Niko Paech calls for the radical rejection of the Western world's prosperity model and for the "degrowth" of the global world economy based on the division of labour. In return, he promises a happier life on the basis of regional self-sufficiency, manual activity, joint use of consumer goods and a frugal basic attitude. He firmly believes that if we want to save the world we can no longer afford to live beyond our means.

I shall start directly with a couple of provocative theories: Previous attempts at sustainability have all failed, be they political, technological or educational measures. Even progressive-ecological lifestyles have long since been buried deep under a flood of material upgrades, digitisation and littering through disposable packaging. There is not a single field of action where ecological damage has not increased permanently.



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At the same time, new event formats for sustainability, green networks, initiatives and projects on the topic are emerging everywhere. And the financial gains made by selling "green" products and the spread of "sustainable" products is also on the increase. Has sustainability therefore not already become an ecological form of hide and seek?

Consumer actions are subject to increased ethical pressure in the Western world. People who buy environmentally-friendly products such as drinks containers with an eco-mark or use an electric car are showing a politically-correct attitude. Because products and technologies do one thing above all: they carry messages which give their users or owners an identity in line with the motto: "Tell me what car you drive, what smartphone you use and where you spent your last holiday – and I'll tell you who you are!"

The much criticised "greenwashing" is not only used to spruce up corporate images, but also to give consumers a clear conscience. A photovoltaic system on the roof and membership in a car-sharing initiative can be stacked up by the

consumers to create a symbolic counterbalance to other, environmentally unfriendly actions.

"Having bought only eco-T-shirts in recent times and being an early adopter of green electricity, there'll be nothing wrong with my long-haul flight to the Caribbean," so the thinking goes. What a beautiful illusion!



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Limits to "self-realisation"

Many contemporaries actually believe that you can base sustainable living on individual acts or purchasing decisions. Yet the fact that this commitment to "sustainability" and climate protection is legitimised by resource-guzzling conferences involving long flights speaks volumes. On which continent will the next (presumably fruitless) social or climate summit take place? And when will the next school exchange with Nicaragua or overseas work placement in South Africa be organised?

As long as the "Education for Sustainability" programme has nothing to counter the thrust of an egocentric, spatially confined self-realisation, it will produce legions of self-professed "saviours of the world" and "networking tourists" at best. Experiencing adventure, seeing the world, feeling important, improving your chances of landing a good job: commitment to "sustainability" makes it possible.

That is why we need an honest benchmark by which we can recognise sustainable acts. Only establishing individual ecological and CO_2 footprints can help to ensure that this ecological hide and seek comes to an end. This begs the key question: What can each of us afford in terms of material freedoms without living beyond our social or ecological means?

New logic of frugality

With respect to the climate protection goal of limiting global warming to two degrees Celsius, each person should cut their CO_2 emissions to 2.7 tonnes per year. However, the average emissions caused by each individual in Germany amount to almost eleven tonnes. A trip from Germany to New York (flying there and back) causes more than four tonnes of CO_2 and a return trip to New Zealand more than fourteen tonnes.

Without having to do too many calculations, one thing becomes clear: the only way out is to not just scale back the global industrial system, but to reduce global mobility significantly. That requires more frugal lifestyles – in the sustainability debate, the term "eco-sufficiency" is often used in this context. And let's be honest: would that really make us less happy?

Stress, a lack of direction, and consumption burnout characterise the normal state of these modern consumer societies, which have become plagued by overstimulation. Our life is jam-packed with products, services, trips, events and digital communication channels. We lack the time to process everything in such a way that it increases our well-being and makes us happy. Time is the scarcest resource we have, and feelings cannot be automated or delegated to someone else. And our desire to cheat this time scarcity by multitasking does not do us any good, on the contrary. Neurologists have known for many years that we can concentrate on two things at once at best.

Since there are only 24 hours in a day – yet the number of things and experiences at our disposal has virtually exploded – we give less and less attention to any one of them. At the same time, we have this fear of missing out on something else if we dedicate too much of our time to any one object or activity. As a result, consumer prosperity becomes a strain because we are confronted with new options everywhere, which take a lot of time to acknowledge and make decisions about. I believe that eco-sufficiency, the ability to do away with prosperity junk that takes up time but offers only minimal benefit, means that you become less dependent on money and earning and thus reduce anxiety about the future, because those who need less are also less vulnerable!

Self-sufficiency in the 21st century?

There is an important second principle In addition to eco-sufficiency, which can pave the way to the post-growth economy (Paech 2012), involving cooperative forms of self-sufficiency known as "subsistence". There are various approaches to this. We can distinguish between the following: firstly, forms of joint use of consumer goods (sharing, swapping, markets where goods are given away); secondly, extending the useful life of products by repair, maintenance, rebuilding, etc.; and thirdly, producing your own consumer goods.

In the food sector, household, roof-top and communal gardens as well as other forms of urban agriculture are becoming a dynamic trend that can contribute to the de-industrialisation of this sector. Artistic and DIY activities range from the creative recycling of discarded items (recycling and upcycling) to fashioning items from wood or metal to semi-professional "do-it-yourself construction". However, three resources are required for this: firstly, improvisation skills and basic manual abilities; secondly, your own time resources; and thirdly, social relations-



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OUR AUTHOR



Since 2010, Dr Niko Paech (b. 1960) has been a visiting professor for production and environment at the University of Oldenburg. He is considered one of the most important advocates of an "economy without growth".



Roof garden as living space © FBB e.V.

hips or networks. We need this third resource to ensure that we can complement each other in our various interests and talents in a synergistic manner.

At the level of society, economic policy would have to be redefined from the ground up. The ability to become as self-sufficient as possible would have to serve as our guiding principle, not consumerism fed by industrial production. The task for politicians would then be to facilitate a reduction and redistribution of the average working week of 40 hours by implementing appropriate legislative measures. If the industrial economic and mobility system could be reduced initially to half its current size – which is vital purely for ecological reasons – 20-hour employment would be available for each adult. That way we would have full employment based on a 20-hour week. The 20 hours that are freed up would enable cooperative forms of self-sufficiency involving manual activities.

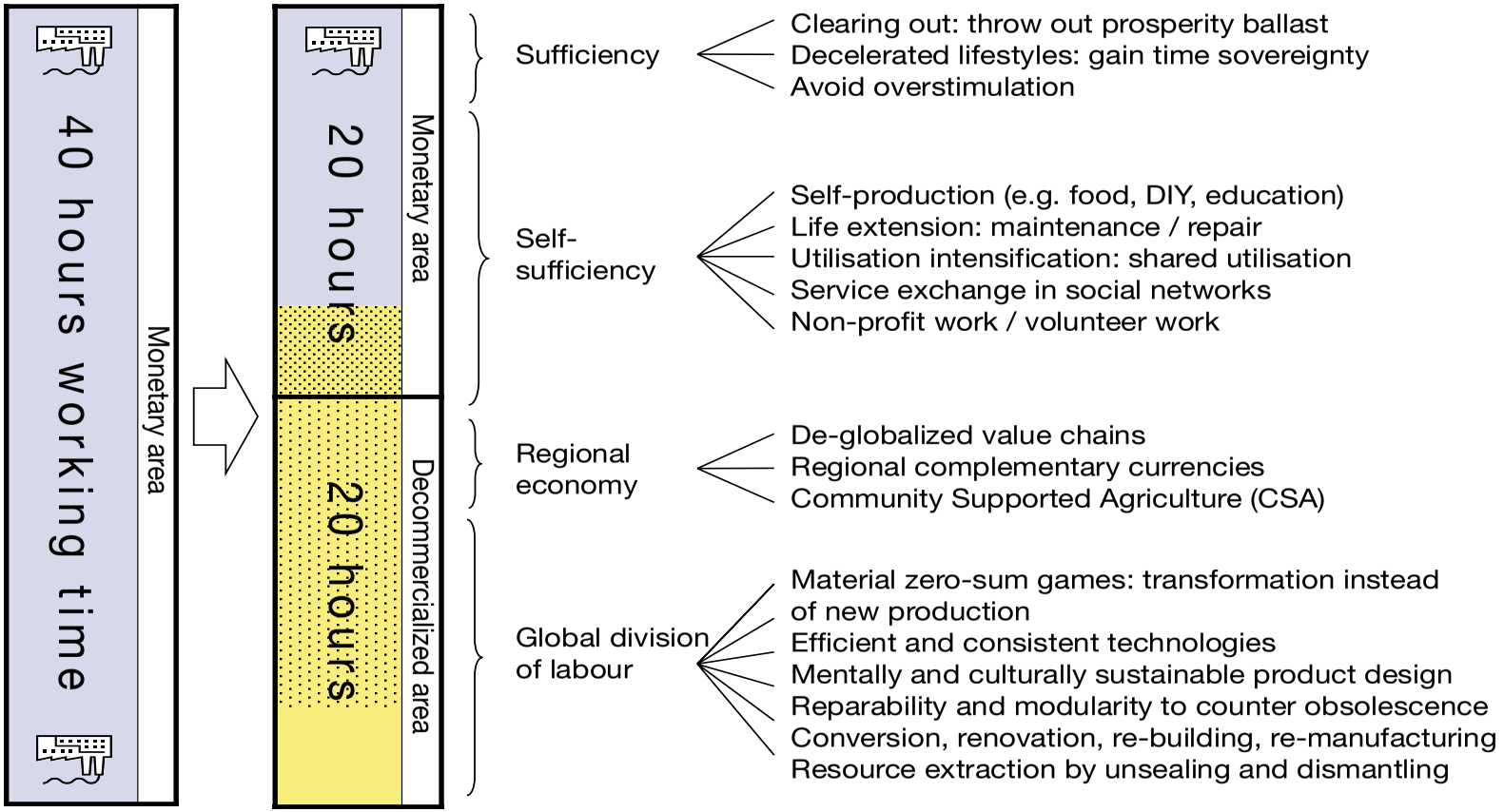
Social policy fit for the 21st century can no longer restrict itself solely to the provision of benefits or redistribution of income and wealth. It must aim at being robust in the face of crises, i.e. offer economic resilience. Local authorities could make available cultivation areas, disused property and workshops to provide new forms of urban subsistence. Training and education could focus more on "moneyless" supply practices and promote manual proficiency. Companies could run repair courses offering maintenance skills instead of products. The multitude of emerging repair cafés, initiatives (such as ifixit.com or murks-nein-danke.de) as well as repair initiatives in the Transition Town initiatives are model projects leading the way.

One should also consider setting down longer warranty or guarantee periods for products in law. We must use political measures to take stronger action against companies planning for their products to wear out. That is the way to turn helpless consumers into confident repairmen and women.

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Post-growth economy overview (Niko Paech)



© Niko Paech

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1. The author advances the hypothesis that all previous efforts at sustainability have failed.

a) What are his central arguments for this pessimistic view?

b) Why, from his perspective, is sustainability often little more than an "ecological form of hide and seek"?

2. These days products and technology usually offer consumers a certain status.

a) What is the reason for this? What protection measures are there to combat this?

b) Discuss in small groups the various facets of "greenwashing".



Flowery language

Words or expressions that have no clear meaning, such as "environmentally-friendly"



Simply not credible

Anybody for environmentally-friendly cigarettes? "Greening" does not make a dangerous product less dangerous



Green products versus dirty company

The manufacture of an energy-saving lamp pollutes rivers



Jargon

Jargon and information that only a scientist can check or understand



Suggestive images

Green image that gives the illusion of eco-friendliness such as flowers coming out of exhausts



Imaginary friends

A label that looks like an endorsement from a third party, but is invented



Irrelevant statements

Emphasising a tiny green feature while everything else is "non-green"



Lack of proof

It could be true, but where is the proof?



Best in class

Maintaining that you are "greener" than the others even though the others are rather awful



Straight lie

Totally invented statement or details

3. The author calls on all of us to end this ecological hide and seek.

a) What measurable indicators are there to quantify your potential change? How can these be calculated or defined? Do some online research on this.

b) Paech names "eco-sufficiency" and "subsistence" as key principles for finding solutions. What do these two terms mean? Illustrate this giving examples.

c) In small groups, design a catalogue of measures following Paech's key principles of eco-sufficiency and subsistence. In as concrete terms as possible, describe which positive effects these measures might have on environmental and climate protection and give your feelings on this matter.

d) Present your results to the whole group, discuss them and adopt the agreements/objectives which are ideally supported by everyone.
e) It would make sense to integrate your agreement or propositions into a weekly or monthly plan.

4. Comment on how the author presents the post-growth economy with respect to the whole of society. Is it at all possible for companies to exist without growth or without making profits? Research case studies of growth-neutral companies on the Internet (also using the term "degrowth").

5. Give a critical view on the author's proposals. Comment on and challenge the final sentence in the text: "That is the way to turn helpless consumers into confident repairmen and women!"

6. You want to set up a student business::

a) To begin with, you will need to develop a business idea and a business plan, do market research, create a financial plan and obtain information on legal matters. That way you will learn what it means to plan for the long term, to produce and to sell the products you create or to manage the services you offer. The desire to become rich should come second. You could have a go at becoming entrepreneurs and learn valuable skills that you could put to use in your professional life.
b) Seek tips and support, online for instance at http://schuelerfirmen.com/ or get inspiration from other student businesses.
c) Find out to what extent Paech's proposals and criteria can be applied in the context of your student business and publish your findings.

7. "Against heteronomy and overstimulation, for eco-sufficiency and subsistence" is a somewhat long-winded message that non-governmental organisations, consumer initiatives and eco-villages use in their PR.

a) Analyse the fundamental terms of this slogan. The following key words should help you with this: reduction in consumption, self-limitation, deceleration, shedding ballast, decommercialisation, self-sufficiency without significant surpluses, a new view on the economy, production of life instead of goods...
b) Develop the theme of the message by posing a variety of questions, e.g.:
How much is enough for you? Do we have to pay for everything with money?
What significance is subsistence given in "modern" economies?
Are there protection mechanisms against products?
What messages should products convey?
c) Your task is to organise a forum for students using the above slogan.
What headline, which must be appealing to and understood by young people, are you going to pick for your poster?

THE ECONOMY FOR THE COMMON GOOD – AN ECONOMIC MODEL WITH A FUTURE?!

By Dr Christian Felber

According to a survey conducted by the Bertelsmann Foundation, 88 per cent of Germans and 90 per cent of Austrians would like to see a "new economic system". The Economy for the Common Good offers an alternative to capitalist market and centrally planned economies. It is based on relationship and constitutional values and measures their implementation by means of common good balance sheets and the common good product. 1,500 companies from 30 countries are now supporting the movement, communities for the common good are emerging, and more and more universities are becoming involved. Now to the concept and why it is a promising one!



The reforming movement "Wirtschaftsreformbewegung Gemeinwohl-Ökonomie" was conceived in 2010 on my initiative by a dozen Austrian entrepreneurs who had grown disillusioned with the existing economic system. They find it unfair that they suffer competitive disadvantages when they act in an ethical manner. The Economy for the Common Good (ECG) is firstly a "fully ethical market economy", which takes the fundamental values of human dignity, fairness, sustainability, solidarity and democracy seriously, and secondly a truly liberal market economy. It thereby clearly sets itself apart from the present-day capitalist and tendentiously illiberal market economy, in which freedom and other fundamental values are increasingly coming under threat.

The key pillars of the ECG are not "new", but involve an adaptation of the economic system to the goals and values of the constitutions of democratic states. The ECG defines the values, goals and means of economic activities. Thus, we see money, profit and capital turn from the pure "purpose" into the "means" of economic activities. At present, there is no constitution that says that money or increasing capital is or should be the purpose of the economy.



ECONOMY FOR THE COMMON GOOD An economic model for the future
© Gemeinwohl-Ökonomie Berlin-Brandenburg e.V

On the contrary. The Bavarian constitution, for instance, states: "All economic activity serves the common good" (art. 151). The Italian constitution defines the "common good" as the goal of the public and private economy (art. 41). The German constitution states: "Property entails obligations. Its use shall also serve the public good" (art. 14).

Progress and focus on the common good

However, these goals can neither be satisfactorily achieved nor measured in the real economy. We lack the appropriate performance indicators. Gross domestic product (national economics) and financial profit (business economics), the two key performance indicators in today's economy, provide no reliable information on goal attainment: the fulfilment of basic needs, quality of life, the common good. The "common good product" would in the future involve over 20 indicators to measure progress in areas such as nutrition, health, housing, relationship quality, trust, social security, basic rights, co-determination, gender equality, peace, etc.; we would then be able to determine the "success" of a national economy. The indicators would be defined by the general public itself in communal civil participation processes.

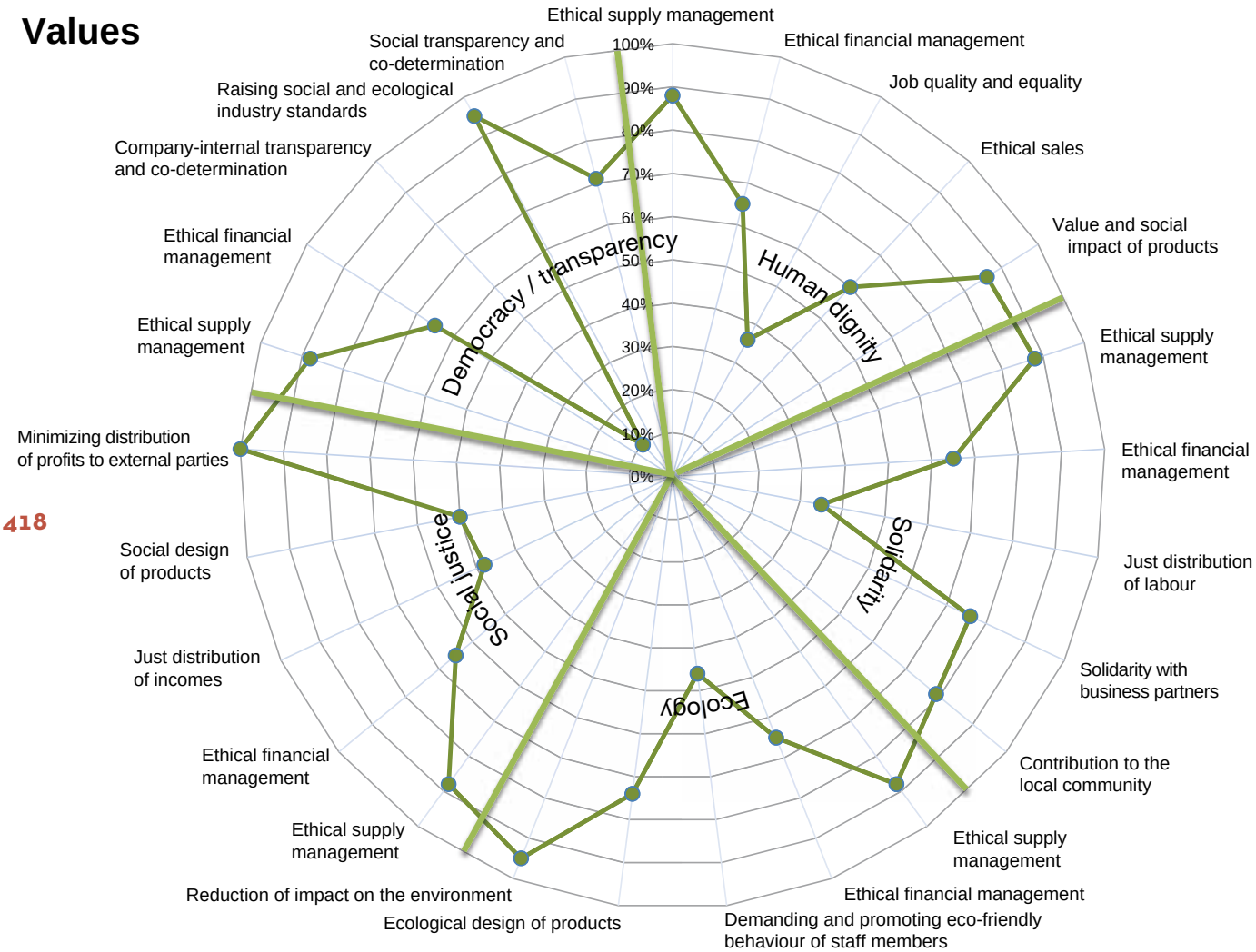
The "success" of a company would also have to be redefined based on its contribution to the common good. This could be measured using a so-called common good balance sheet, which could answer the most burning social questions, such as: How useful is the product or service? How ecological are its production, distribution and disposal? How humane are the working conditions? Are women and men treated and paid equally? Are revenues distributed fairly? How cooperatively does the company behave in the market? Or: who makes the decisions?

A points system would be in place, under which a company could score a maximum of 1,000 points. The result could appear on all products and services in the form of a traffic light symbol. The consumer would run his or her mobile over the QR code and the overall common good balance score would flash up on the display.

Common Good Balance MÄRKISCHES LANDBROT

(Fiscal year 2011, matrix 4.0, score after audit 652 out of 1000)

Values



418

© Märkisches Landbrot

The ECG would then fulfil the basic market economy promise of transparent information – the basis for rational purchasing decisions. The better the result the company's common good balance would be, the more legal advantages it would enjoy, such as a lower VAT rate, customs tariff or loan interest. Or it would be given priority in public procurement and in connection with joint research ventures involving public universities.

Using these market-based incentives, today's distorted setup can be corrected. Those behaving most ethically, most sustainably and showing greatest loyalty to the constitution would be rewarded because their products would be cheaper than the products of unethical and reckless companies. The latter would have to change or vanish from the market. The "laws" of the market would finally correspond to the values of society.

Four years after its inception, the ECG has evolved from an idea into an international movement. The whole process, which started in Vienna in October 2010, comprises three so-called pioneer groups: companies (including Sparda-Bank München, VAUDE, Bodan, La Fageda, Hotel La Perla, Märkisches Landbrot, Sonnentor...), communities for the common good (Mals, Schlanders, Laas and Latsch in South Tyrol; Carcaboso and Miranda de Azán in Spain) and universities.

At the University of Salzburg, the first MBA on the subject of "The Economy for the Common Good" has just been developed; an international chair has been created in collaboration with UNESCO. Circles of actors are forming around the pioneer groups: consultants and auditors support the companies; speakers and ambassadors go into the public arena. The "Matrix Development Team" constantly collects feedback from the pioneer groups and makes improvements to the common good balance sheet.

Everyone can become involved

The ideas is for "communal economic conventions" to be organised in the communities for the common good, where the general public formulates the economic system of the future based on the 20 key questions underlying the ECG. The aim of the movement is not to push any specific individual content, but to foster democratic discussion and decision-making for a sustainable economic constitution. A historically fitting time for this could be 2019 and 2020: 100 years of democracy in Germany and Austria.

The most frequent criticism levelled at our concept of an Economy for the Common Good concerns our image of humanity. One often hears that people are not "as good" as they are portrayed in the ECG. Yet the ECG does not actually put forward an image of humanity; instead, it sets positive stimuli for indisputable virtues and constitutional values. By its actions, the ECG indirectly refutes the capitalist image of humanity. Numerous scientific disciplines are now moving towards cooperation as a strategy for success. Connectedness, empathy and sympathy are viewed as key qualities that may admittedly be submerged and overshadowed by patriarchal values, but are ultimately very "human" in every respect.

We increasingly see politicians including ideas from the ECG movement at a communal level. In addition to the nearly one hundred towns and communities that are showing an interest in the concept of communities for the common good,

OUR AUTHOR

Christian Felber (b. 1972) is an author and a university lecturer in Vienna. He co-founded Attac Austria and developed the concept of the "Economy for the Common Good".
Links: www.christian-felber.at and www.gemeinwohl-oekonomie.org



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the newly elected state government of Salzburg promised to support common good businesses in its 2013 government programme. The state of South Tyrol is considering becoming a "Model Region for the Economy of the Common Good". To date, 62 politicians from the most diverse parties support the movement, which has spread to some 100 regional groups in Europe, North and South America.

The model is open in terms of content. Its basic concept, which involves the clarification of values, goals and means, is universally applicable and can also be adjusted to meet local and cultural needs. The ECG offers a vision and accessible opportunities to become engaged to individuals, businesses, communities and educational institutions, even if the legal framework is not yet in place. However, the actual approach is determined by the local actors themselves, for example in Latin America. Everyone can participate in the Economy for the Common Good process. You too – become involved!

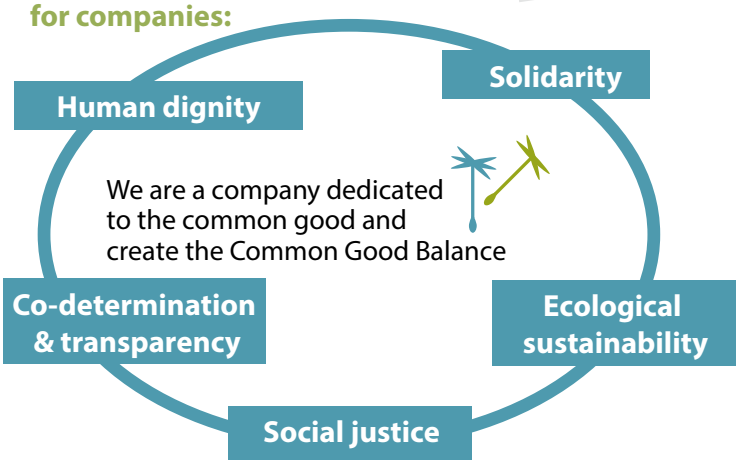
The process of creating a Common Good Balance ensures:

Common good optimization > profit maximization

Ethics > economic interests

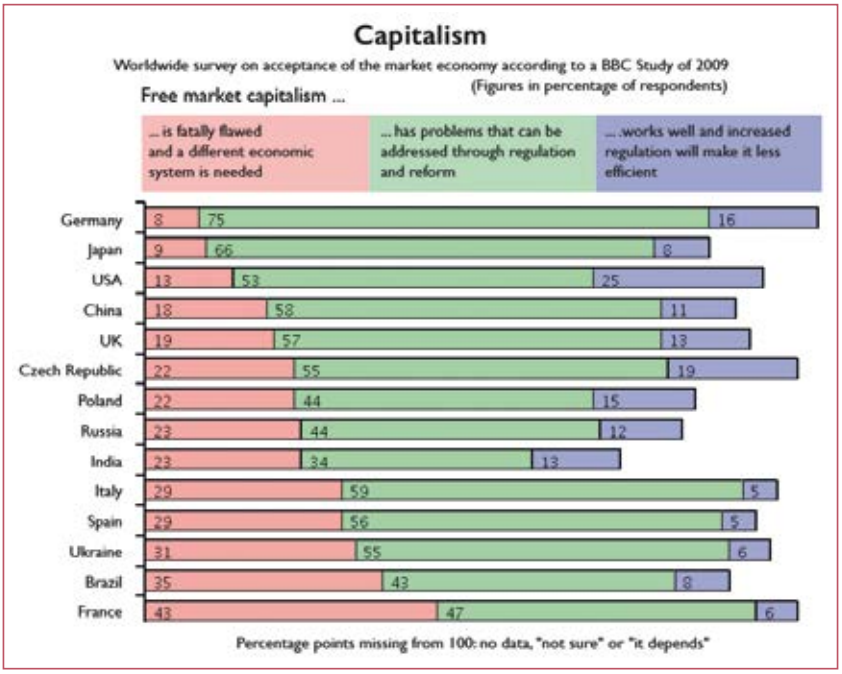
Human > profit

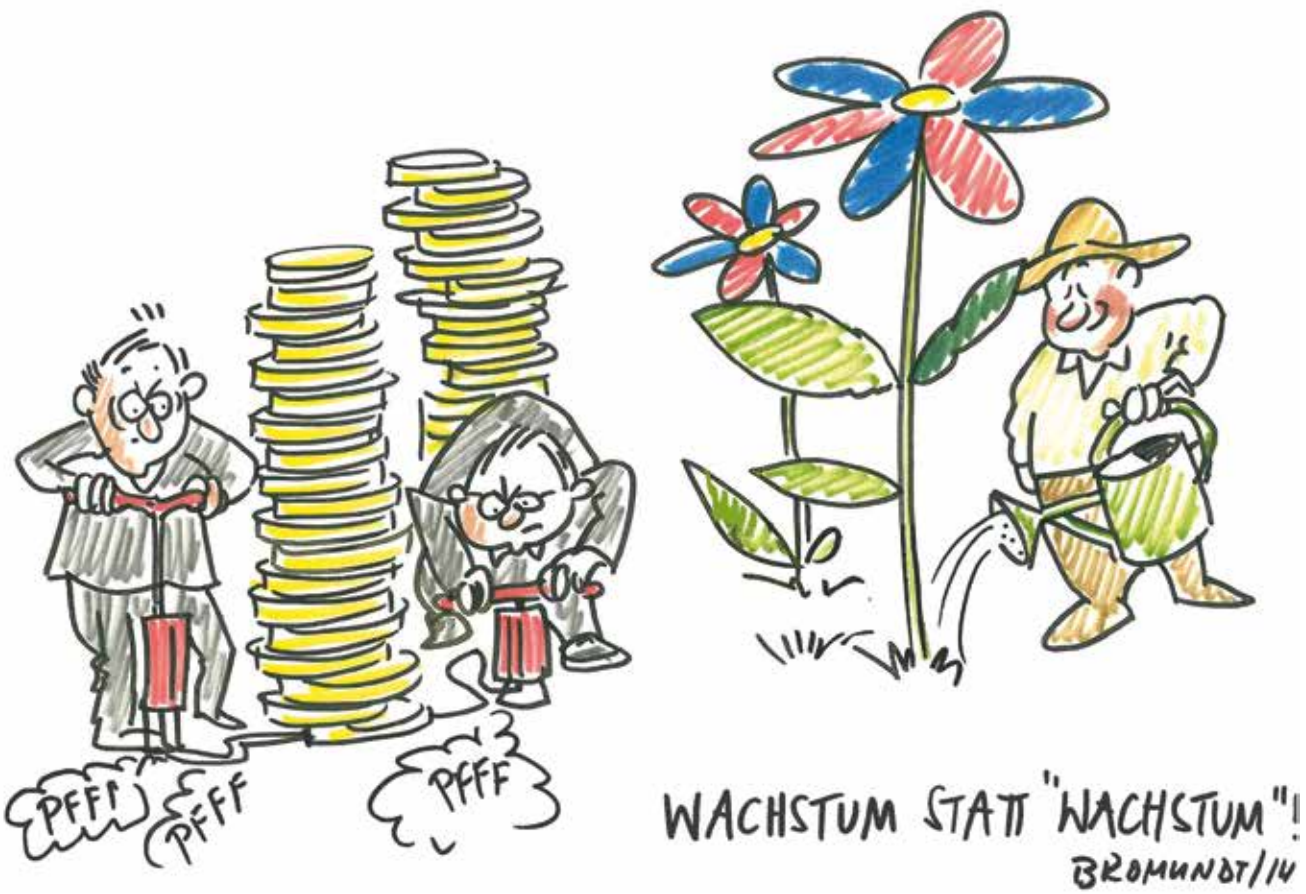
Assessment criteria for companies:



with regard to the individual stakeholders: purchasing/ suppliers, customers, employees, entrepreneurs, investors, social environment, environment/nature, ...

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© Corinne Bromundt

Growth instead of "growth"!

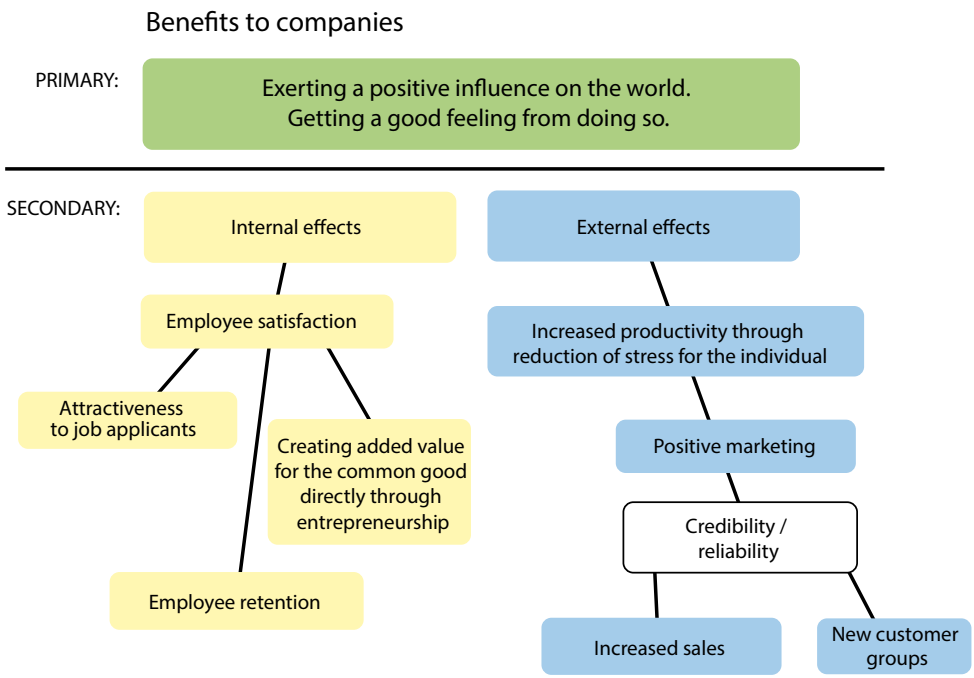
LEARN • UNDERSTAND • ACT

1. In his piece, the author advocates a new economic model with a future.

a) First, examine and clarify the terms constitution and economic system.
b) Comment on the conventional economic systems: capitalist market economy, centrally planned economy and social market economy.
c) What is the new economic model supposed to look like?
d) Why are the old economic systems no longer considered satisfactory or sustainable? Also establish connections with the political system of democracy and the associated fundamental values in this context.
e) According to the author, what are the decisive indicators for a satisfactory system?

2. The success of a company in the new system could be measured using a common good balance.

a) What criteria should this balance fulfil or consider?
b) What criteria do you consider necessary? Give reasons!



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3. Christian Felber would like his model to inspire many people.

a) What incentives could be created for having this new system implemented in as many businesses and countries as possible?

b) Do some online research to find out in which non-European countries the idea of the Economy for the Common Good has already found favour.

4. If possible, create a structure diagram illustrating the invitation to participate described in the text (sort by actors and opportunities for participation).

a) In specific terms, what does the Economy for the Common Good mean for citizens?

b) What influence can an individual person exert? How can we participate in the endeavour?

c) Can you find your place in this diagram too?

5. You want to publicise this economic reform movement (ECG) in your school or in your community.

a) Find actors in your immediate environment who already follow the concept of the Economy for the Common Good (preferably a school, university or an institution in the education sector) or find workshops on the topic "ECG in school".

b) Make contact with these actors or consultants and design a campaign plan with them for a common good balance initiative at your school. Convince your parents and teachers to actively support your project. Put together a list containing potential positive effects on the learning culture, the learning atmosphere and also the image of the school.

c) Compare your common good balance with other schools or present the concept to neighbouring schools in your area. Inform the local media as well.

4.2 PROMOTING AND SHARING RESPONSIB FOR THE ENERGY TR



Blow life into the energy revolution!

© Reiner Schwalme

Introduction

The so-called energy transition in Germany involves nothing less than the complete transformation of our existing energy supply - away from dirty brown coal and other fossil fuels to wind, solar, ocean, biogas and geothermal energy. But every plan and project in the area of energy policy needs to keep in mind three key aspects: economic efficiency, security of supply and environmental impact and create a good balance between them. This is certainly a difficult balancing act, and we still have a long way to go!

In the context of the energy transition, businessman Max Schön (see interview) believes there is a lack of reliable political framework conditions for investment and appropriate tax breaks for citizens who, for example, want to renovate their homes or purchase a new heating system. Using mobility as an example, the entrepreneur describes

BILITY
RANSITION

his vision of long-term, joined-up thinking and action in the context of the energy transition and the role the younger generation should play in this respect.

One thing is clear: the mammoth project that is the energy transition not only affects processes in business and politics but also our social and democratic structures. Instead of the previous power supply by industrial conglomerates and large coal-fired and nuclear power plants, we are now seeing smaller, decentralised models. Citizens and consumers are producing their own energy and marketing it (see the article by Ursula Sladek). In many regions the number of energy cooperatives and the willingness of the citizens to invest in the energy revolution is on the increase. Social roles and associated expectations are changing – in future, electricity producers, network operators and consumers will be more closely connected.

Germany's energy policy has been widely discussed at international level with regard to global warming, but also in view of the finite nature of fossil resources. And ultimately, if we are to slow down climate change, the renewable energy supply model must set an international precedent. Approximately half of global carbon dioxide emissions from the burning of fossil fuels is caused solely by four countries: China, the US, Russia and India. Christian Hübner argues in his contribution, emerging markets are observing the



INFO

Energy consumption causes 80 percent of greenhouse gas emissions in Germany. According to the German government, expanding renewable energy could prevent 148 million tonnes of CO_2 in 2013. The rapid expansion of renewable energies in Germany is based on the Renewable Energy Act (EEG) passed by the SPD/Green coalition government in 2000. Germany has set itself ambitious targets. The aim is for renewable energy to supply at least 35 percent of electricity by 2020, rising to 80 percent by 2050.

By 2020 greenhouse gas emissions are to be reduced by 40 percent, and by at least 80 percent by 2050. This target is all the more ambitious in view of the plan to shut down all nucler energy generation by 2022. But the energy transition means more than setting binding targets. It is a long-term process which speeds along in the fast lane, but also has to make diversions and deal with obstacles and dead ends.

energy transition with great interest and think Germany is a pioneer in the parallel use of fossil fuels and renewable energies.

China has also invested billions into renewable energy against the background of its economic growth and the increasing energy needs of the country, as Lea Deuber in Beijing and Shanghai has investigated.

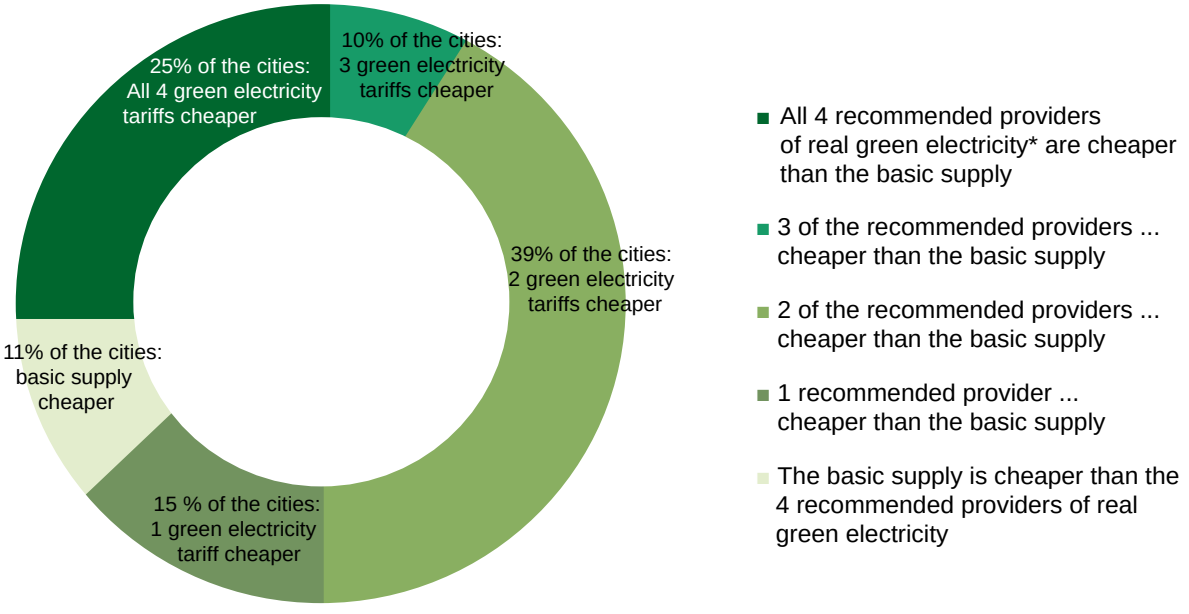
Nevertheless, China will continue to get most of its energy from coal, as the country has more than enough. In addition, air pollution in cities is an acute problem for which China would finally like to find a solution.

But the energy transition does not only mean the increased use of renewable energies. It also involves increased energy efficiency. So in Section 4.3 we will be taking an even more detailed look at real estate/living and mobility, areas where there is huge potential for energy savings.



Green electricity ~~Nuclear energy~~

Electricity price increases in large cities::
In 89% of the cases*, real green electricity is cheaper than the basic supply



*72 of the 100 largest cities in the country were considered, since no price increase took place in the other cities.
This is based on electricity prices for household customers with an annual consumption of 4000 kWh. Data from 23.11.2012,
Source: www.verivox.de, Graphic: M. Ball / Atomausstieg selber machen

*The recommended providers are EWS Schönau, Greenpeace Energy, Lichtblick and Naturstrom.

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BUSINESS PEOPLE NEED MORE INVESTMENT SECURITY

An interview with Max Schön



Max Schön is a successful businessman from Lübeck in northern Germany. For many years he was chairman a wholesale steel company, Max Schön AG, and chairman of "Stiftung 2° – German businesses for climate protection". In an interview with *youthinkgreen* Schön outlines some key social challenges affecting how businesses can operate in a more sustainable way, and describes the conflicts involved in his own everyday decisions for a sustainable way of life. In addition, Schön calls on young people to get more involved in finding solutions.

By Judith Gebbe

youthinkgreen: Mr Schön, climate change is often referred to as the greatest challenge of the 21st century. What impulses and initiatives do we need in order to meet this challenge?

Schön: For every region, every person and every company, it is important to develop and follow an individual "decarbonisation path". The key question for this is: how do we reduce CO_2 and soot as the two main causes of climate change in all our actions? This thought is inadequately embedded in everyday life, even in a developed country like Germany. We have rough goals but no proper road map. We need a specific action plan in addition to the sustainability goals and a supervisory body that can intervene when a target is in danger of being missed.

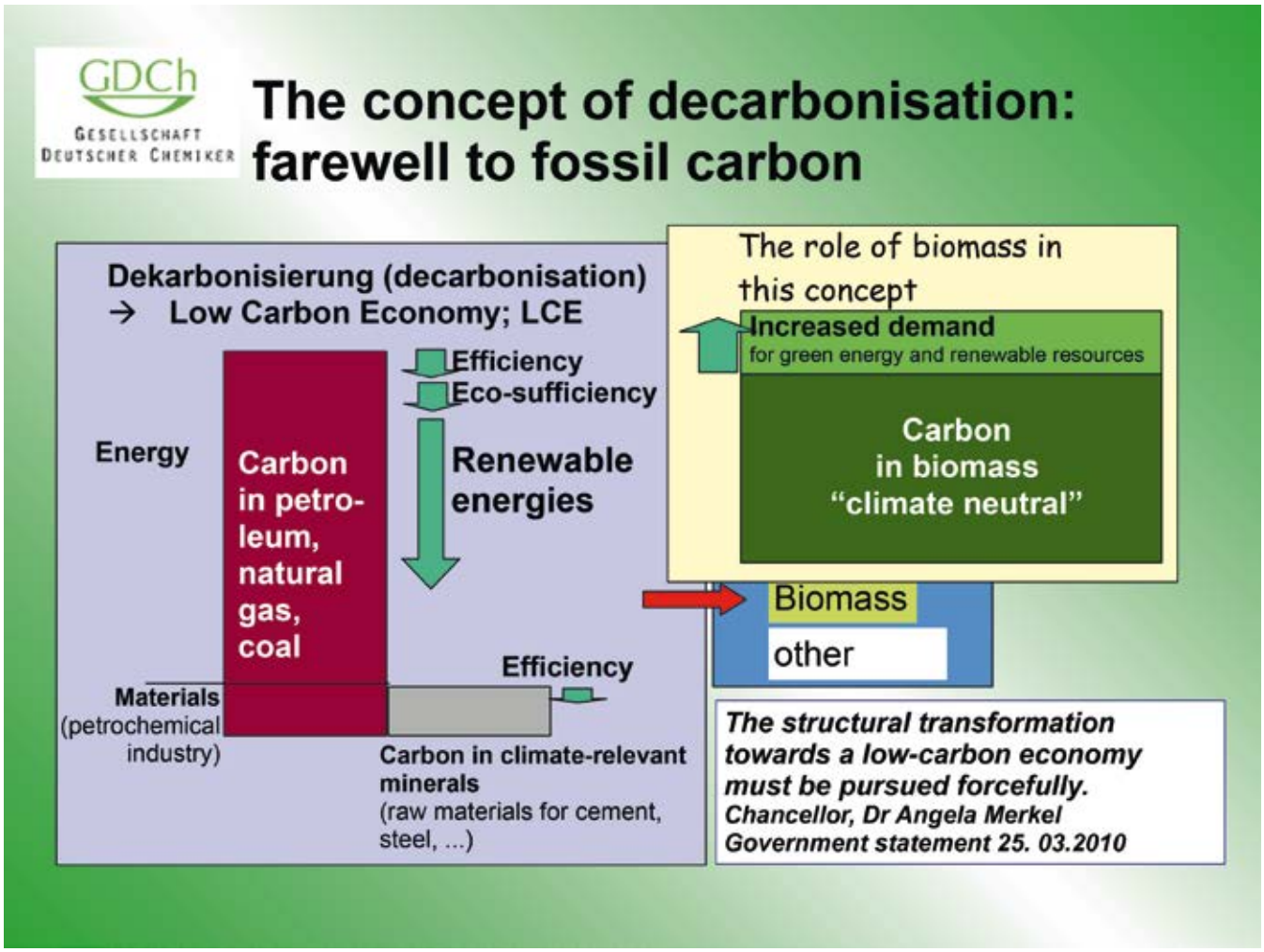
youthinkgreen: In the forum for sustainable business you pointed out that the actions of responsible companies depend on a clear policy framework. Specifically, what would such a framework look like?

Schön: As a businessman, if I build a power plant, a house or a new factory, then my decision has to make economic sense for at least the next 10 to 15 years. The hurdle for these or similar investments is that we don't actually know what will be the direction of our government over the next 10 to 20 years. I have to be confident that the policies that accompany the energy transition will also take into account my investments. But at the moment no-one knows whether this is the case. So many good investments - in renewable energies for example – are not being made. Potential investors are not concerned with the ins and outs of regulations but about having a new, reliable policy framework.

Long-term thinking

youthinkgreen: So politicians are not providing any "investment security"?

Schön: Yes, investment security is the word we use for this. We could also say that we're still quite hazy about the energy transition. In terms of mobility, implementing the energy transition also means a shift to using different kinds of



© Hermann Pütter

vehicles and changes in the way we travel. An energy transition also requires the involvement of the Ministry for Construction, because we have to change how we construct and insulate buildings. It is also linked to the production, transport and storage of energy and electricity prices – all primarily under the jurisdiction of the Ministry of Economics. But one part, renewable energies, come under the remit of the Ministry of Environment. The whole is coordinated at the Federal Chancellery, as this is where everything comes together in the sustainable development strategy converge. But there are coordination difficulties. As a businessman I can make short-term investments, for example, buy a new phone for the business and then wait two years until there are new specifications or new mobile phones. But in the long run if I'm investing in a new building or a new heating system, then I need to know the political framework and the plans. So many people are waiting for the haze that surrounds the energy transition to lift. We are wasting time when we should be preventing climate change.

youthinkgreen: As Chief Executive of "Stiftung 2° – German CEOs for Climate Protection", you have tried to boost the dialogue between policy makers and entrepreneurs. What challenges do you encounter in this role?

Schön: There are still a few climate change sceptics. For them, spending on something that they believe doesn't exist is a waste of money.

Stiftung 2°
Deutsche Unternehmer für Klimaschutz

Most climate sceptics can be found in business circles: on the one hand, because it's inconvenient to change their behavior, and on the other, because it is expensive to change the direction of businesses. In the traditional way of thinking about the economy, this leads directly to the loss of the short-term returns on investment.

The second aspect is closely linked to the first: most people fail to think in a long-term, joined-up way, as can be seen in the example of mobility. In Germany cars with combustion engines have a complete infrastructure: oil tankers, refineries, pipelines, petrol stations etc. But if we opt for electric mobility, we will need recharging points and have to think about how far we can drive and how long electric cars take to charge. The entire infrastructure would have to be rebuilt around the electric car. It's no longer just about the issue of the fuel - oil and gas or electricity - but rather the entire associated infrastructure.

When we think in this systematic way, we realize it's not just about drivers getting from point A to point B and having fun with their cars. We have to consider insurance issues and damage to bodywork. Electric cars are made of carbon fibres, not sheet metal. So we won't need body shops any more, but people who can work with plastic. We also have to think about "networked mobility": how can we select the perfect combination of bicycle, train and car for a particular transport need using a smartphone app?

There are some excellent systems for getting information, booking and buying tickets for different transport systems, but there is still no perfect solution to tying them all together.

A CO_2 -neutral life

youthinkgreen: What do you do personally to lead a low carbon lifestyle?

Schön: Of course long-term decisions include the issues of living and mobility. My family and I live in a two-hundred-year-old school, a listed timber-framed brick building. Due to technical difficulties we were only able to insulate the building to a certain degree, however loam plaster and hemp fibres have helped. In addition, we built a pellet heating system to use wood as a renewable fuel. This solution is not ideal and only a temporary measure, because the global demand for timber will rise sharply in the future. We also have a solar system for hot water and green electricity. But the best thing would certainly be to retrofit the house completely to use solar or geothermal energy.

In the area of mobility, the car is probably still too important for us as a mode of transport. We have a small and a large car because my girlfriend is a sculptor and has to transport stones. But in my daily routine I mostly go by train. With my diet, I try to eat little or no meat. But there are always moments when I put my beliefs to one side. If someone invites me for dinner, I don't say, "Put the roast away and just give me vegetables." There is still a lot to do. At the end of the year, when we offset our family's carbon footprint by buying trees for "Plant for the Planet", I always find we have still failed in our goal to live carbon neutral lives.

youthinkgreen: What can young people contribute to sustainable development?

Schön: Young people should exert pressure! Show that you're not happy, make a fuss, complain. Of course it's easier if you do it as a family. You can criticise your parents' behavior when it is harmful to the environment. For example, good and get to know people all over the world. Make the argument for a new heating system if the old one is really inefficient. My second recommendation is to join together with other young people around the world and work towards more sustainability. Next Green Heroes and Plant for

the Planet are examples of such international networks. They offer you an opportunity to do.

youthinkgreen: I have had these experiences with *youthinkgreen*. Sometimes I have the feeling that the decision makers in politics and business are running on the spot and don't move much - no matter how often we bang on the door. Don't adults want to hear our voice?

Schön: They do! The German Council for Sustainable Development - of which I'm a member – works specifically with young people at least once a year. We want to consciously find out te ideas that young people have and how they see the future.

We then publish the results and organise group meetings. The issues also have an effect in the annual conference of the Council for Sustainable Development. So it's vital that the older generations enable, finance and organise such meetings for young people.

youthinkgreen: Talking is all very well, but what about taking action?

OUR AUTHOR

Judith Gebbe (b. 1994) is a youthinkgreen veteran. She was active in the Osnabrück local group for many years and attendedh the international meetings in Berlin and Doha. She is currently studying Green Business Management in Iserlohn and is a member of the *youthinkgreen*-Youth Advisory Board.





© www.plant-for-the-planet.org



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Schön: I think it's important that you take concrete action. If you want fast, direct results, then do something that will produce them in the short term. Plant trees! Then you really feel you are doing something and can watch the trees grow. But if you are someone who prefers to work on something for a longer period, then choose something like saving the whales. It is better to get involved in something that gives you positive feedback that something where you have the feeling: "it won't work anyway, but we'll try."

youthinkgreen: As a businessman, what do you want young people to do to help meet the great challenges of our time?

Schön: Grab a piece of paper and ask yourself: "How can I reduce my carbon emissions by 30 to 50 percent in the next 2 years? Pin it on the wall in your room. Then you can keep checking, adjusting and changing your CO_2 goals. The second thing is to make sure you vote! If you aren't happy with what politicians are doing, then vote out the person or party that is currently in power. Politicians' main motivation is getting re-elected. If you keep that in the back of your mind, then sending letters and e-mails to your local MP can have a big effect.

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1. The interviewee criticised the fact that we have only set rough targets for dealing with climate change, our greatest social challenge, rather than drawing up a real roadmap.

a) What basic elements should be included in such a roadmap?

b) Use simple examples to illustrate the interviewee's statements. Back it up with sound research.



YTG – demo in Hanover



Flyer campaign in Wolfsburg



2. The interviewee believes dialogue between business and politics is vital for pushing forward these roadmaps.

a) What obstacles has he experienced or observed in this context?

b) What does he want from politicians and business?

3. But at the end of the day Max Schön makes demands of every individual.

a) What activities does he suggest young people should get involved in? Discuss.

b) What very concrete advice does he give to young people? Discuss.

c) Decarbonisation is seen as an important approach in the fight against climate change. The goal is a CO_2-neutral economy. Find out more: what aspects include the process of decarbonisation what strategies are there for this?

4. Out and about as a climate ambassador:

a) Look at individual firms – and energy companies – and find out more about their decarbonisation pathway. Try to find as many illustrations and statistics as you can to show the trend over a longer period (e.g. a chart showing the trend from 1990 to 2030). What does this say about their pathway? In this respect, investigate the reasons for the trend and other (binding) goals set by the company. Beforehand think carefully about the arguments and legal principles that you can use to demand transparency on the part of the company.

b) In the large group, evaluate your results and impressions. People in your local area are interested in the outcome.

c) You want to raise public awareness of the term "decarbonisation pathway". Pedestrian zones, weekly markets etc are ideal for this. Perhaps you can find other words and phrases that describe the process in a more appealing and memorable way. Produce posters or flyers to attract the attention of passers-by. Create an information sheet and carry out a survey (e.g. what do you understand by the term decarbonisation pathway?). Then give the interviewee an information sheet. This usually leads to a lively discussion. Think about possible critical remarks and questions t hat people may have and come up with some good counter arguments. Publish your results in the local newspaper.

POWER REBELS: THE ROCKY ROAD TO "PEOPLE'S POWER"

By Ursula Sladek



© Netzkauf EWS eG

The example of the Schönau power station in Germany's Black Forest region demonstrates that it is worth committing to a goal, fighting for it – and hanging in there, even when the going gets tough. It shows the energy, creativity and joy that are unleashed in us when we tackle a major challenge. And when we put our heart and soul into something, we can achieve more than we ever thought possible.

Today many people dream of investing in their own energy supply – so in a way becoming energy suppliers themselves and having access to clean energy. This was never my dream. When I was a young girl, first I wanted to be a vet and then a lawyer. In the end I became a teacher, the wife of a country doctor and the mother of five children.

But in 1986 Chernobyl exploded like a bomb in our rural idyll. The accident at the Chernobyl nuclear reactor shook us awake. We not only had to start worrying about how to feed our children with uncontaminated food, but also think about how power is generated and how energy can best be supplied in the future. After Chernobyl we set up a group called Parents for a Nuclear-Free Future. Most of us knew very little about energy so we had to start learning about it.



Of course at that time we never thought we could actually generate our own energy, this is something that only emerged later. The first thing we realised was that a great deal of energy is wasted – a problem that continues today. So we began by looking at energy efficiency and how to save energy. These are still very important issues for the Elektrizitätswerke Schönau (EWS), the power station that we set up as a result of our initiative.



© Carl Montgomery

An unusual initiative

Parents for a Nuclear-Free Future gave advice about saving energy, published energy-saving tips and invited entries to energy-saving competitions, which were taken up by many organisations and municipalities. Then the residents of Schönau set up a company to reactivate small hydroelectric power plants and support people who invested in district heating and solar panels.

But our activities were hampered by KWR, the local energy supplier that ran the nuclear power station. In 1990 it offered the town 100,000 deutschmarks if it would prematurely extend its licence for another 20 years – and of course this licence

would ignore the local people's concerns. Our organisation offered the town the same amount if it did not extend the licence. But the local council decided to reject this unusual offer on the part of our citizen's initiative and immediately granted KWR its licence extension. So our group organised a referendum. After a tough campaign where every vote was fought for, the citizen's initiative emerged victorious and the licence extension was stopped.



1,000 gingerbread biscuits serve as a flyer on voting day
© Netzkauf EWS eG

Victory of the "power rebels"

The Elektrizitätswerke Schönau GmbH (Schönau power station, EWS) was founded in January 1994. The sole shareholder was Netzkauf GbR, which involved more than 650 residents. Now they wanted to take over the energy supply and operation of the electricity grid in Schönau, and they applied to the town council for the electricity licence. The balance of power on the town council had changed, so in November 1995 the licence was in fact granted to EWS. The opponents of the citizens' initiative realised this was their last chance and organised a second referendum to reverse the decision. The campaign was even tougher than in 1991, but once again victory went to the "power rebels".

Now KWR, the previous supplier and nuclear power plant operator, tried to bring the EWS to its knees by demanding a ridiculous price of more than 8.7 million deutschmarks for the Schönau electricity grid. But KWR was soon forced to admit that its gamble had failed: the grid was now only worth 6.5 million marks, not 8.7 million. The local paper, the Badische Zeitung, commented that this was a major embarrassment.

The purchasers of the grid actually discovered that even this price was 2 million marks too high, but they wanted to stick with their strategy of "buy first, sue later" in order to avoid being held up by many years of legal wrangling. But the additional part of the purchase price had to be covered by donations, otherwise the profitability of the company and hence the granting of the licence as energy suppliers would be under threat.

How do you raise 2 million?

Once again it seemed failure was staring us in the face. How were we to raise 2 million marks? We had the idea of asking large German advertising agencies to create a campaign for us free of charge to attract donations, and several agencies actually agreed. The energy initiative decided on the "Störfall" campaign, which attracted attention all over Germany and was a resounding success. Newspapers published free advertisements, environmental groups drummed up support, and people asked for donations rather than gifts at private parties.

It took just a few months to raise 2 million marks, the extra amount that was needed to buy the grid. And long after they had begun supplying Schönau with green electricity, the power

OUR AUTHOR

Ursula Sladek (b.1946) and her husband have been running the first German green electricity supplier, Elektrizitätswerke Schönau (EWS) since 1997. In 2013 Ursula Sladek was awarded the German Environment Award for her work. For more information visit: www.ews-schoenau.de


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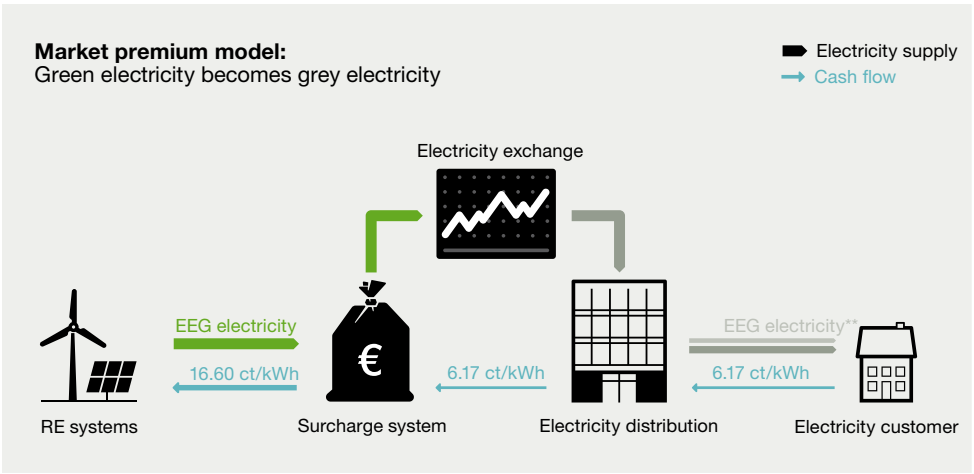


I am an incident. © Netzkauf EWS eG

rebels finally won their court case. The Schönau electricity grid was only worth 3.5 million marks, and KWR had to pay back the money they had overcharged EWS with interest and compound interest.

In July 1997 EWS became Schönau's electricity supplier. It offered its customers tariffs that favoured energy-saving and offered good remuneration for generating green electricity. The town's largest solar installation was placed on the protestant church. The first module was installed on the anniversary of the 1848 revolution, marking the start of a “solar revolution”. The Office for Historical Monuments had refused permission for the installation, but people dressed up in historic costumes to install the panels "in anticipation of receiving permission".

The interest of the media led to something of a miracle: permission was granted that same day. EWS went on to open new green power stations in other locations. With its "Sonnencent" funding programme, it has supported around 2,575 small, decentralised civic power plants that are owned by customers rather than companies.

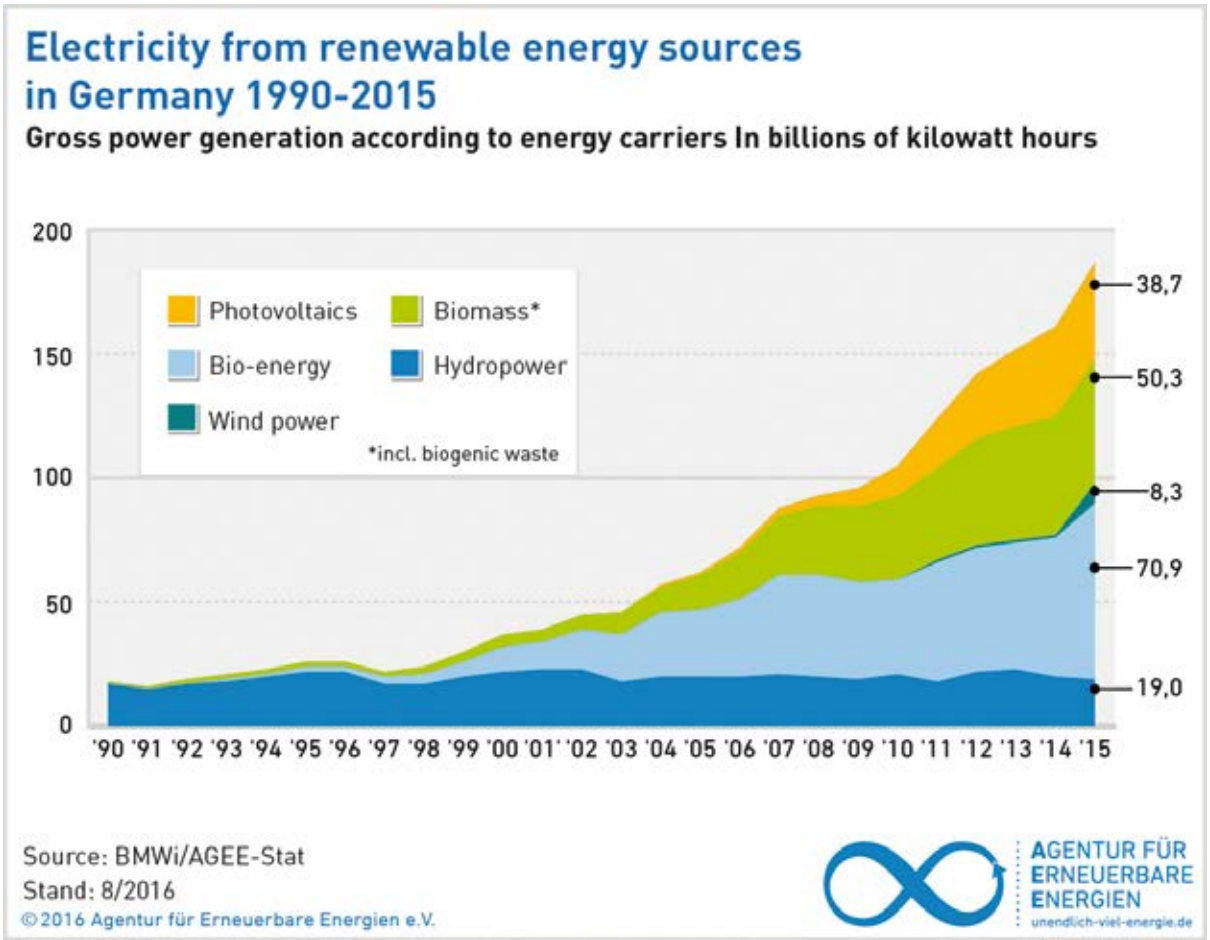


© Grafik: Carsten Raffel / Greenpeace Energy eG

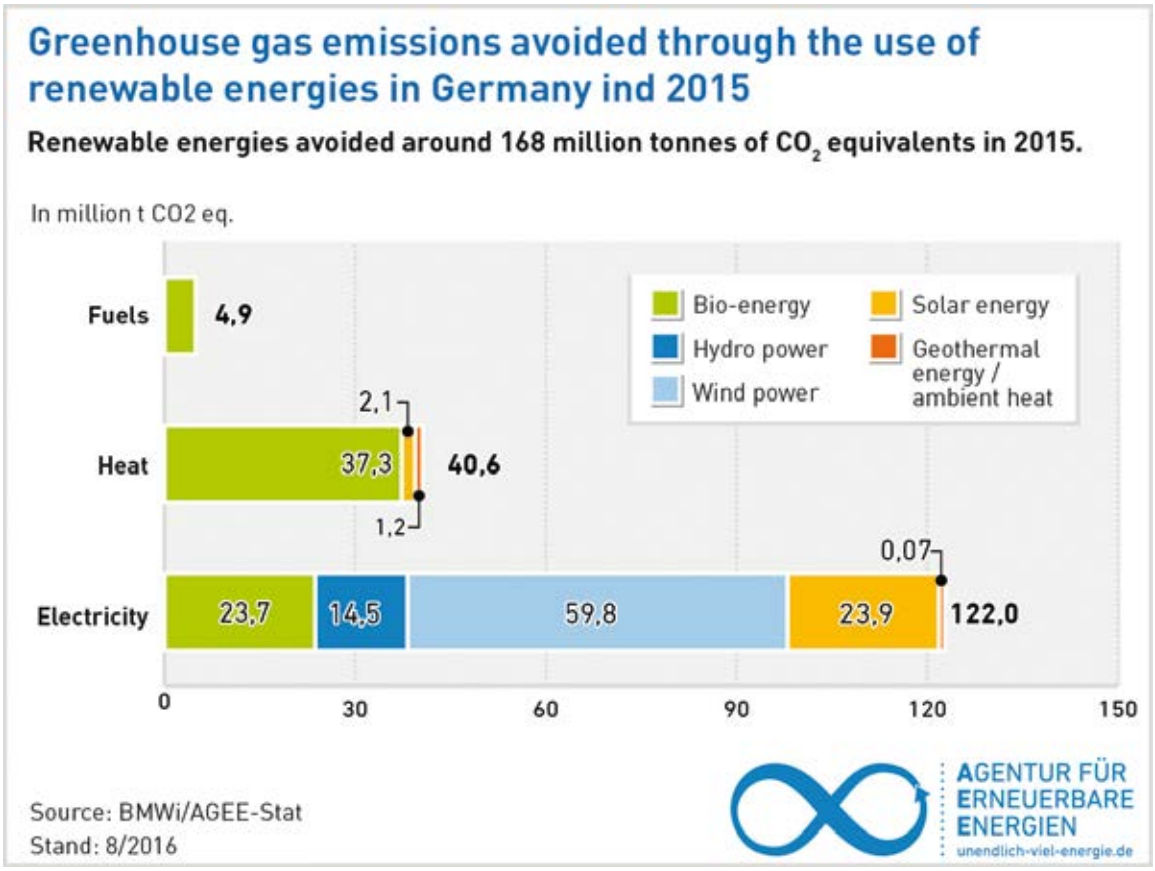
The courage to take action

The electricity market was liberalised in 1998. Since then, every electricity customer in Germany has had the right to decide where to buy their electricity. And EWS was one of the first companies in Germany to offer green electricity. Many campaigners from previous citizens' movements immediately joined the "power rebels", and today more and more people are choosing non-nuclear, green energy in order to make their contribution to the energy transition. To date some 150,000 households and hundreds of small and large companies and institutions have switched to EWS. In February 2012 the German consumer organisation Stiftung Warentest confirmed the company's strong environmental commitment in a green electricity test.

From a small operation with a handful of employees, EWS is now a medium-sized company with 100 staff. Elektrizitätswerke Schönau is a company that demonstrates its civic engagement. It works hard towards the decentralisation and democratisation of the energy business, nuclear phase-out and climate protection. EWS grew out of a citizens' initiative, so it is perhaps not only Germany's most unusual electricity supplier, but also the one that is most committed to wide-ranging objectives. EWS wants to make it possible to switch to clean energy, but it also wants to encourage people to take things into their own hands in order to create change and shape the future. And it is succeeding: all over Germany more and more people are not only choosing green electricity, but also setting their own goals and instigating change.



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A sustainable energy future

Over the years an ever-growing circle of campaigners, initiatives and environmental organisations in Germany have been working with EWS to come up with new ideas and projects and turn them into regional, grass-roots actions. In this way, the vision of a sustainable energy future is being made tangible, such as through the 2,575 green civic energy plants that are already being supported by EWS. The success of the project and the media interest it has attracted is also good advertising for the energy transition because it sends a simple yet effective message: it's up to every one of us! Everyone can get involved in restructuring the energy business to create a sustainable energy supply structure that is fit for the future. EWS is providing opportunities for everyone to play a more active part in creating change. EWS helps people to invest in their own power plants, become co-operative shareholders in electricity and gas networks and get involved in a wide range of actions and campaigns in support of the energy transition.

So the success of EWS can only be partially measured by customer numbers and the amount of plants it supports. It is not possible to put a figure on the huge levels of motivation that radiate out from Schönau, triggering activities all over Germany and beyond.

I did not plan to become an energy supplier. But today it is a wonderful feeling to run EWS



© Netzkauf EWS eG

and do work that is really meaningful: contributing to the energy transition; creating an energy supply that is independent and green for the generations of today and tomorrow; playing our part in preventing climate change; and inspiring people to pursue similar goals. I never dreamt that my work would take me to Barack Obama's White House in the USA, or that after Fukushima Japanese groups would come to Schönau on an almost weekly basis to seek our advice and encouragement. Now my dream is that the energy transition will really happen – and I am committed to playing my part to achieve this.

LEARN • UNDERSTAND • ACT

1. The Parents for a Nuclear-Free Future group did not initially have the aim of being an energy supplier. Describe the stages that the group went through before it founded the Elektrizitätswerke Schönau (EWS).

2. Who opposed the power rebels in their plans, and who supported them? Discuss.

3. EWS is a company that emerged from a citizens' initiative.

a) Why does this provide a good model?
b) What messages can you formulate from the example of EWS?
c) What personal benefits do these contain for you?

4. The vision of a sustainable energy future has been realised in Schönau. Why is EWS more than just a precursor for the energy transition?

5. Schönau has also taught us to have the courage to take action.

a) Organise an energy forum in your school.
b) Think about the following aspects: setting goals, choosing spokespeople, moderation, specific topic, invitations and PR work, possible supporters etc.
c) Evaluate your campaign and publish the results.

6. Green electricity?

a) How is "green electricity" different from the "eco-electricity" that is offered by Germany's four major energy companies, E.ON, EnBW, RWE and Vattenfall? Do some research!
b) Which energy suppliers in your region offer certified green eco-electricity? Persuade your family and fellow students to change their electricity supplier.
c) Where does your school get its electricity? Find out!

EWS guiding principles

- Democratise electricity generation
- Nuclear phase-out
- Climate protection
- Energy justice
- Building a regenerative energy economy
- Civic engagement
- Transparent corporate policies
- Bringing together economy and environment

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THE GERMAN ENERGY TRANSITION – A BOON FOR EXPORTS?

By Dr Christian Hübner

In other countries the mammoth "energy transition" is viewed with a mixture of curiosity, scepticism and awe.

One main challenge in the fight against worldwide climate change is the cost of converting energy supply. Industrialised nations are particularly afraid of losing their competitiveness. That is why the international community is observing with great interest how Germany will execute its energy transition. Of particular interest are the overall costs for German society – if they prove to be less than the benefits of the energy transition, then more countries will follow the German model. The energy transition Germany is not yet an economic sure-fire success. The energy sector and energy-intensive industries in particular are facing some major challenges. However, it is already clear that there is a growing number of new businesses with innovative business models that want to earn money with the energy transition.

OUR AUTHOR

Dr. Christian Hübner (b.1981) joined the Konrad-Adenauer-Stiftung (KAS) in Berlin in 2010 as Coordinator for Environment, Climate und Energy Policy. In 2015, he took over as head of the Regional Programme on Energy Security and Climate Change in Latin America.



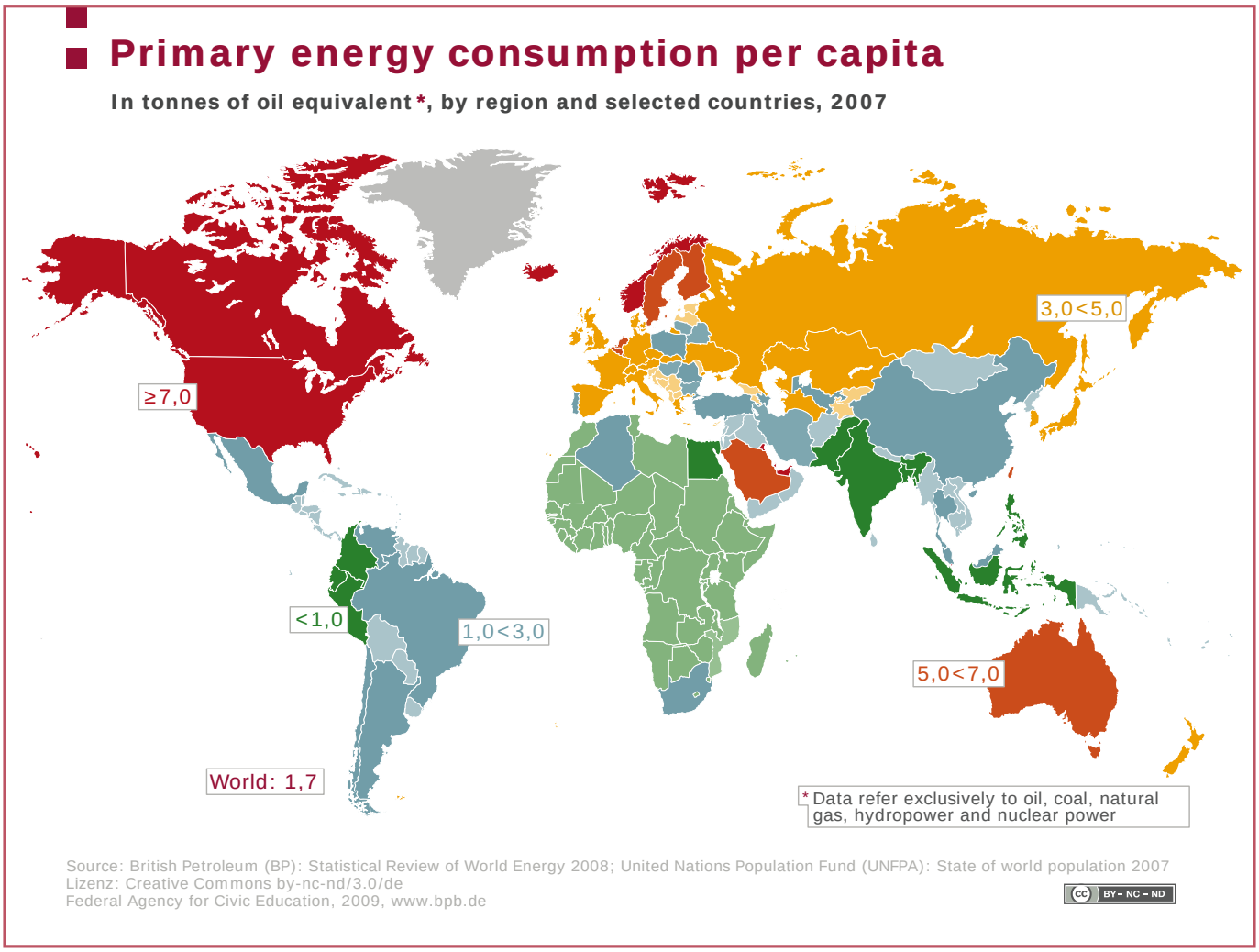
Global Developments

The German energy transition will need to address international trends. Currently the global energy question is characterised by continual growth. Significant factors for this are population growth, the effects of urbanisation, and the economic aspirations of emerging economies such as China and India. Furthermore, the industrialised countries are slowly recovering from the effects of the financial and economic crisis. These processes go hand-in-hand with a rapidly changing energy policy throughout the world: little by little the majority of industrialised countries are gaining greater autonomy over their energy supply through the following measures:

1. Improving their energy efficiency in the building sector or through more efficient use of fossil fuels.
2. The use of domestic resources such as natural gas.
3. The expansion of nuclear power.

On the other hand, emerging economies are becoming massive consumers and are increasingly dominating the global energy demand for fossil fuels such as coal, gas and oil.

Internationally the USA, as both a consumer and supplier of oil, gas and coal, has a strong influence on the global emissions of harmful greenhouse gases. The intensive use of domestic natural gas and oil resources will further strengthen this. Today the USA has already significantly lowered



© BPB

its demand for energy from abroad, and as a result the price of gas and oil has gone down. For renewable energy in particular this has resulted in a new competitive position. From the perspective of environmental protection, shale gas takes on a somewhat ambivalent role: on one hand it replaces climate-damaging coal, so that the USA's CO_2 levels have already significantly improved. On the other hand the process of fracking has negative long-term effects for the environment, due to the chemicals used in the process that can contaminate ground water.

As an economically and politically significant emerging economy, China is of particular importance in international energy policy due to its extremely high demand for energy. The country buys gas, coal and oil from all over the world. The economic boom in China and the associated increased demand for fossil fuels in the recent past has resulted in coal becoming the major emitter of harmful greenhouse gases. China recognises this is a problem and is taking steps to address it. However, traditional environmental problems, such as air pollution in the cities, are a much more acute problem in Chinese politics. In the meantime, renewable energy has also become an important pillar in China.

How emerging nations view the energy transition

International trends in the energy sector shows us that today it is particularly the emerging economies, along with the USA, which are drawing



Emissionsin Rio, Brazil © Thomas Frick

up the energy policy map. Brazil, Russia, India, China and South Africa as members of the BRICS countries have a particularly important position.

Whereas in the internal German debate the problems, cost and risks are discussed, the BRICS countries recognise the economic and political potential of the energy transition. A two-part survey on awareness of the German energy transition in BRICS was carried out on behalf of the Konrad Adenauer Foundation. The results showed that although the energy experts who were questioned recognise that the energy transition is an ambitious project with many challenges, they trust that Germany as a "country of planners", will quickly address any problems that arise. In the long term, the challenges in the area of energy supply security and cost are barely seen as relevant.

Brazil, China and South Africa

Brazil, China and South Africa in particular view the energy transition as being part of Germany's desire for more environmental and climate protection, for a long-term increase in German competitiveness and long-term improvement of the security of the energy supply. The survey respondents interpreted the energy transition as a comprehensive environmental and climate project with an economic dimension. With regard to economic growth, those surveyed expected to see even more favourable conditions for developing and marketing new technologies, bringing competitive advantages in the global market. As a result of this, in their estimation new ideas could spring

up for other business sectors. There could be a global ripple effect from the German energy transition. Mature German technologies that have reduced costs through series production could lead to an even stronger transfer of German technology.

On the other hand they also see the negative effects of the energy transition. High start-up costs caused by high electricity prices and investment in grid expansion could, in the opinion of those surveyed, lead to short-term risks for industry, employment and competitiveness. In addition, they think the timetable is too ambitious, which may create conflict with regard to climate goals. The respondents also mentioned the technical problems that still have to be resolved, for example, the fluctuation and storage of renewable energy.

Overall, the respondents rated Germany as energy policy pioneers in the use of renewable energy. The energy transition is regarded as a unique project because of its scope, cost, timetable and the lack of examples to follow. But they also believe Germany has a positive framework for it, particularly in terms of its industrial strength and the pressure of increased dependence on energy imports. Moreover, the decision to make the energy transition fits into a global energy trend, which, particularly in Europe, is characterised by an ambitious climate policy. Germany is taking on the role of a predestined pioneer.

An important aspect of the survey concerned the effect of the German energy transition on the respondents' own countries. One positive effect that was noted was that it had encouraged a desire to learn, a great interest in solving technical problems, planning and processes. Also mentioned was the hope of a technology transfer that would, for example, lead to the development of joint production facilities. There was also a clear hope that it would have a motivational effect. The German energy transition could help the elites in the surveyed countries take more steps towards sustainability.

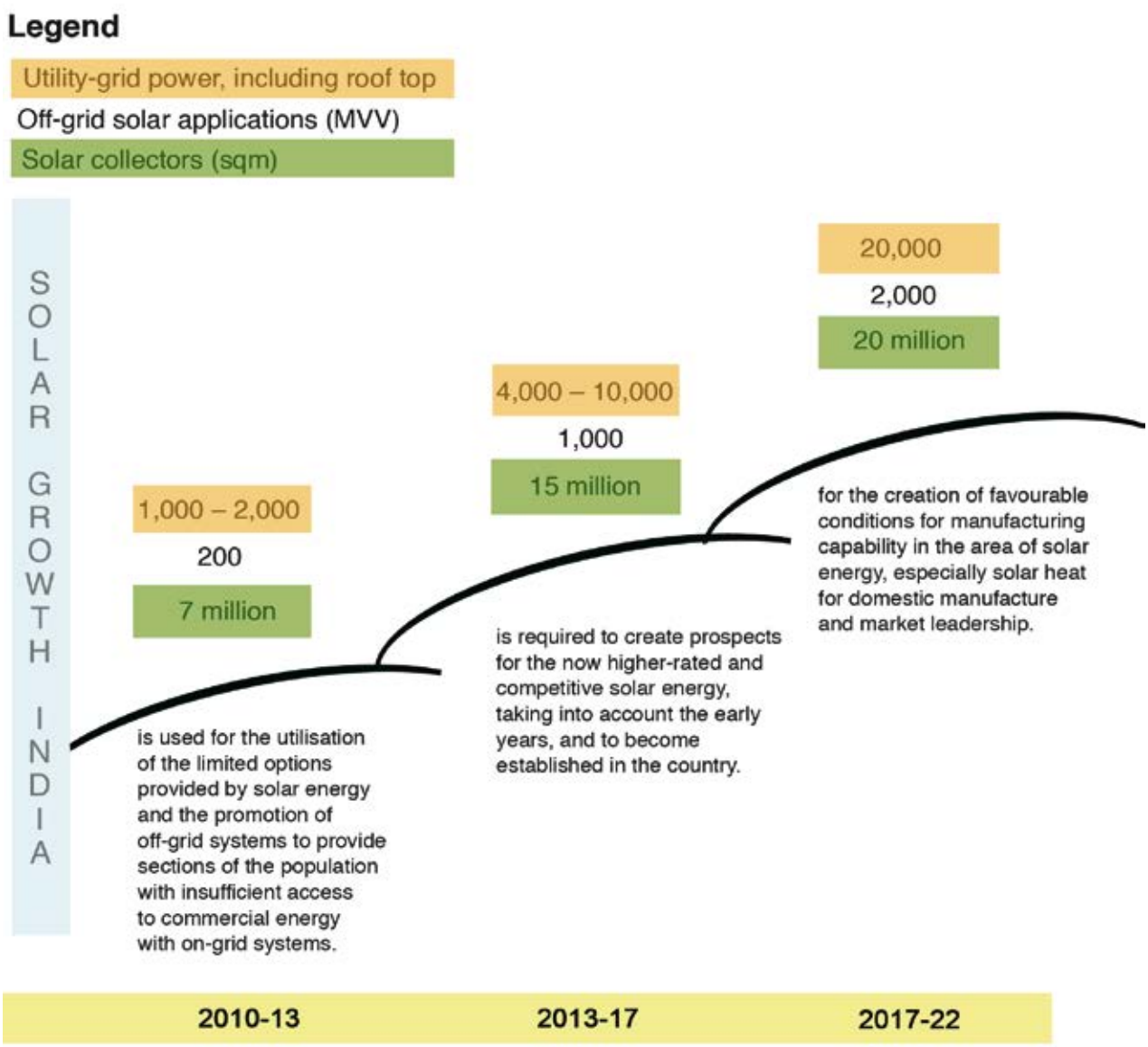
It was also pointed out that a direct transfer of the energy transition model is hard to conceive, because their countries are very different. The absence of domestic expertise and lack of technical personnel could lead to particular problems. The survey showed that the respondents believed the transfer of individual elements of the German energy transition made sense, but directly copying it would be counterproductive.

Russia and India

For India the results of the survey are quite similar to those of Brazil, China or South Africa. However, for Russia they deviate considerably due to its geopolitical significance as an energy exporter. All in all, the German energy transition is perceived by those surveyed in India and Russia as a programme to expand renewable energy and phase out nuclear power. As primary goals, the energy transition is associated with decreasing dependence on energy imports as well as environmental and climate protection. For those surveyed in Russia the energy transition is an expected and logical long-term step toward reducing energy imports. This is seen as a strategic decision to strengthen the political and economic independence of Germany. Furthermore, they point to the danger a successful German energy transition will represent for Russia because in the long-term it could mean losing an export market.

However, for those surveyed in India the energy transition represents a unique undertaking. It is seen as an expression of political determination and a response to a majority viewpoint in society. Those surveyed from both countries voiced criticism of the high costs and the high short-term risk for energy supply security. Like their counterparts in Brazil, China and South Africa, Indian and Russian respondents hoped to profit from Germany's experience in implementing the energy transition. The focus here is on support, for example through technology transfers in the areas of modernisation and diversification of the energy sector.

Directly copying the energy transition is not seen as a viable option. However, the energy transition could be useful as a guide for expanding renewable energy and for energy efficiency.

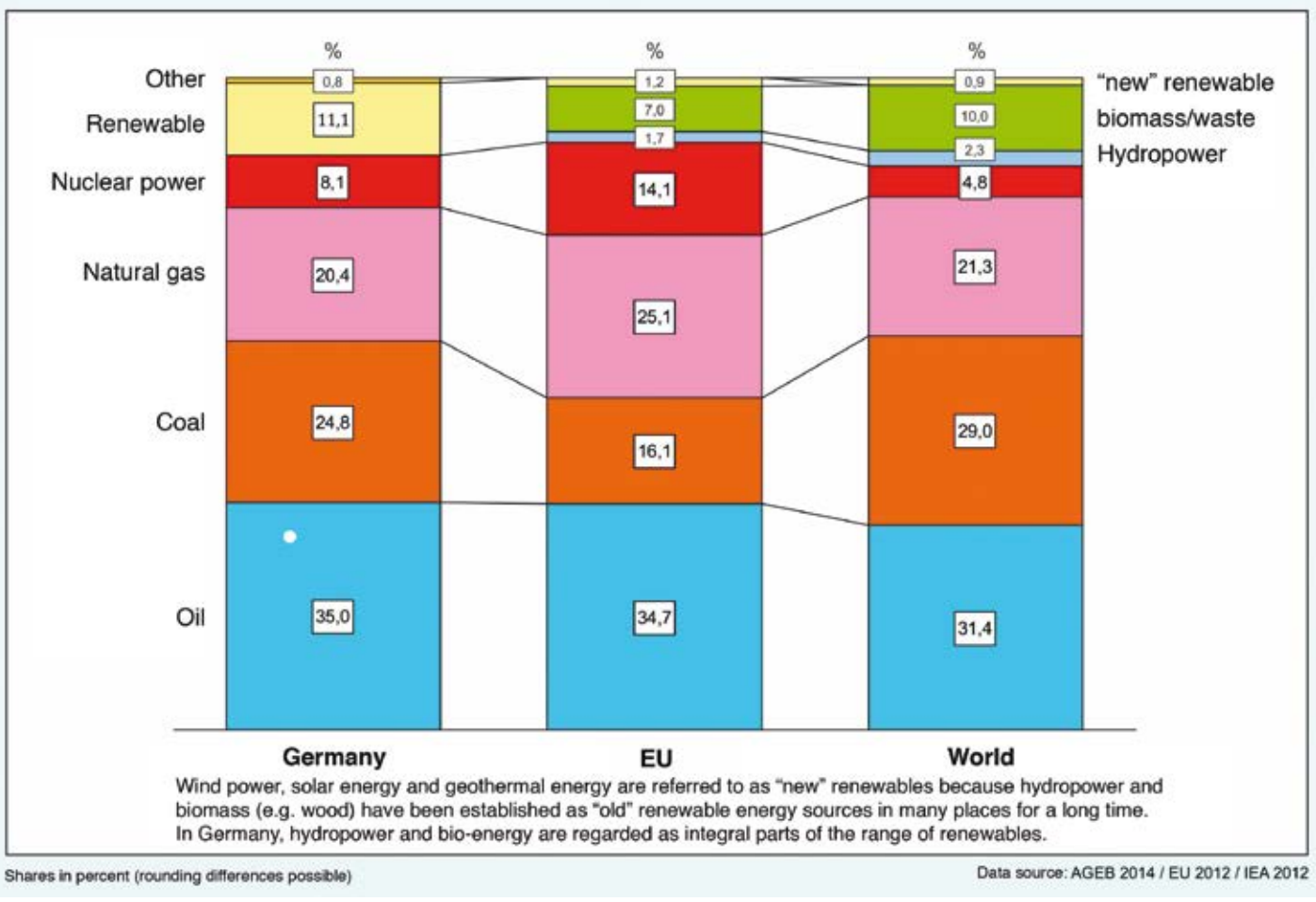

Legend
Utility-grid power, including roof top
Off-grid solar applications (MVV)
Solar collectors (sqm)
SOLAR GROWTH INDIA
1,000 – 2,000
200
7 million
is used for the utilisation of the limited options provided by solar energy and the promotion of off-grid systems to provide sections of the population with insufficient access to commercial energy with on-grid systems.
4,000 – 10,000
1,000
15 million
is required to create prospects for the now higher-rated and competitive solar energy, taking into account the early years, and to become established in the country.
20,000
2,000
20 million
for the creation of favourable conditions for manufacturing capability in the area of solar energy, especially solar heat for domestic manufacture and market leadership.
2010-13
2013-17
2017-22

© Solarishi

SUMMARY

To successfully fight climate change, it is necessary to have a culture of openness to new technologies, an innovative spirit and the willingness to understand the energy transition as an economic opportunity. Today we are already seeing that the energy transition in Germany has initiated large-scale investment in some totally new industries and economic sectors. An economic modernisation of Germany could contribute to long-term international competitiveness for Germany. This could result in new export markets, since the efficient use of energy and the conversion to renewable energy is a global trend.

If the German energy transition is to be adapted for other countries, then the emerging nations are of particular importance because they recognize its economic and political potential. Lastly, for them the geopolitical consequences of increased use of domestic renewable energy are of great importance. The potential reduction in energy imports and the diversification of domestic energy supplies are paramount. New opportunities could also emerge from this for global climate protection.



Energy mix in comparison, Stand 01.01.2015 © Richter-Publizistik (www.crp-infotec.de)

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1. What is the relationship between worldwide climate change and restructuring energy supply? What are Germany's positions with regard to energy supply?

2. The author analyses current global energy demand and describes how energy policy is rapidly changing around the world.

a) Which countries have a particularly large influence and why?

b) What global factors other than climate change speak for the use of renewable energy? Discuss.

3. How is the USA currently trying to meet its energy needs?

4. What impression do the experts from the following countries have about the energy transition project in Germany?

a) Brazil, China and South Africa?

b) Russia and India? Gather materials to illustrate this.

5. Analyse the author's results. In what way could the approaches of the German energy transition be interesting to other countries and how could they be implemented?

6. "The Energy Transition – Opportunities and Risks" is to be the subject of a panel discussion.

a) Why should you be invited onto the panel?

b) Think about and research the different views and attitudes held by German citizens with regard to the energy transition. What are their hopes and fears? What aspects of the energy transition affect each of us in our every day lives?

c) Rehearse the event in a role play. This will help you find out the opinions of the other panel members.

7. The energy transition is not a sure-fire success.

Everyone needs to play their part.

a) Under the slogan "Ready for the energy transition", start a poster contest at your school.

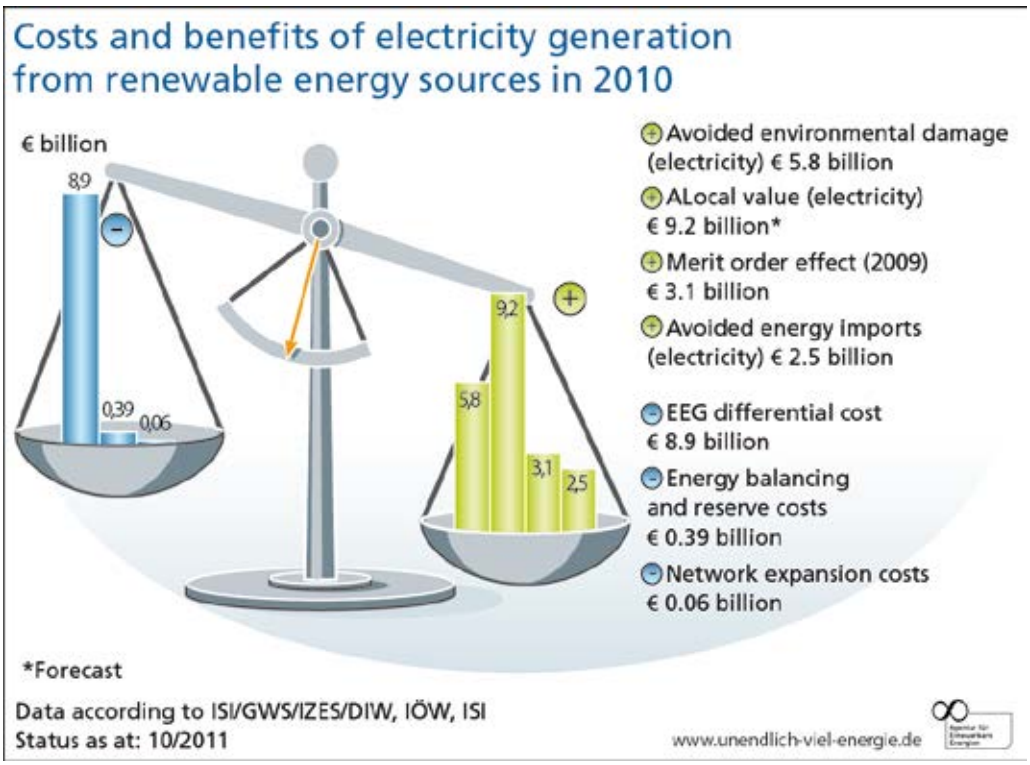
b) Present the results at an event, making it as interactive as possible.

c) Think about what contribution your school can make to the energy transition and form a club. Develop a quiz about the energy transition or think about whether your school should do something like installing solar panels on the roof.

d) Make use of audio and visual media to arouse the interest of your fellow students. Recommended online game: Powerado. Recommended film: The 4th Revolution — Energy Autonomy.

Links:

www.ufu.de/de/projekte/lehrerbildung/themen%C3%BCbersicht.html
www.ufu.de/de/projekte/lehrerbildung/skripte.html



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In Wuhan, China
© Thomas Frick

CHINA: GREEN REVOLUTION IN A STINKING BOOM?

By Lea Deuber

The environmental situation in China is a catastrophe. A third of all cultivatable land is polluted, waste water sinks untreated into the ground, and smog is choking the country. Up until now, China has fought against international environmental requirements from the UN and abroad. Now the country is investing billions in renewable energy – a little green revolution. How China wants to create an energy transition and stop destroying the environment.

Living somewhere where you can see the blue sky – Jing Wang has dreamed of this this for years. He is a businessman in Xinjiang, a province in western China, and when questioned about his retirement he answers without hesitation. "I am going to move to Canada, because the air there is good and you can see the sunshine". Unbridled growth in his province has ruined the environment, polluted the air. But he has heard that in Canada there is blue sky.

Environmental pollution in China is dramatic, but only very few people ever escape it. Since China's opened up to the West in the 1970s the economy has developed rapidly. In mainland China alone, GDP per capita rose from 118 euros in 1970 to 2,106 euros in 2009. But the aging infrastructure and the population's lack of awareness of conservation has led to an environmental crisis of epic proportions. Until now, people may not have noticed this in their day-to-day lives, but the Chinese government has recognised the problem. In 2013 alone, the country invested almost 56 billion euros in renewable energy – more than any country on earth. In Germany it was 16.3 billion euros.

Growth and Sustainability

Wu Changhua is one of the people who is working for this change. She is director of the Climate Group in China, based in Beijing, and has been active in the area of environmental protection for more than 20 years. The international organisation works primarily with business executives

because they need to learn why environmental protection is important and how to finance it. "It is about creating a balance between growth and sustainability," says Wu, who worked with Tony Blair at the 2009 UN Climate Conference in Copenhagen to move ahead with climate protection. China is rapidly industrialising. In 1978, according to the WHO, 530 million people in China lived on less than 1 US$ per day. Today it is only 130 million. The country is not going to sacrifice this strong growth.

But this progress has claimed many victims. In many cities the smog darkens the sky. In some cities people never see the sun. More and more Chinese buy houses outside of the city or in the countryside if they can afford it. Many don't leave the house without a facemask. In some cities, when there are particularly high amounts of particulate matter in the air people are allowed to stay home rather than going to work. This happens in Beijing when the particulate matter in the air is more than 300 micrograms per cubic meter, 12 times the level that the WHO rates as problematic for health, for three days in a row. In the meantime the CO_2 emissions per person are 7.2 tons according to the Global Carbon Project Report – almost as high as the average EU amount of 7.5 tons.

Polluted Water, Smog and Desertification

The water in many rivers and lakes is poisoned. In many areas the groundwater is contaminated with heavy metals, chemicals, oil and nitrogen. Wastewater in the countryside is rarely treated and is just put back on to the fields. In 2013 a governmental committee announced that some 43 percent of rivers in China are seriously polluted. These include the Yangtze River, which the Chinese call "Mother River". Once the pride of the country, now it has almost disappeared from the public's consciousness. Today from its banks one can see not only ships, but also millions of plastic bottles and other trash as it flows towards the East China Sea.

Polluted water and the application of pesticides mean that large areas of agricultural land are in danger, because this is what is used to irrigate them. China must feed one fifth of the world's population with one seventh of the world's cultivatable land. In 2013 it was announced that one quarter of cultivatable land is so badly polluted that it can no longer be used for growing food.

On top of this there is uncontrolled deforestation, flooding, erosion and desertification. At least 400 million people are affected by progressing desertification, which comprises almost one third of China's total land. According to a study by the UN Nutrition and Farming Organisation in 2013 the desert in China is growing every year by 1,717 square meters. That is larger than 240,000 football fields.



Emissions in Beijing © REUTERS/China Daily

These problems do not only affect the Chinese. If China doesn't have sufficient land under cultivation, then the high demand for food must be met with the aid of imports. This leads to higher prices for many basic foodstuffs on the global market. If China cuts down fewer trees in order to protect the environment, more trees are cut down in other countries because demand for wood remains the same. And of course air pollution doesn't only affect China's cities but can spread to Japan, Korea and the Himalayan region.

These are not problems that suddenly arose overnight. The reason that China is no longer ignoring them is not international pressure. There

are people in the country who are no longer prepared to tolerate the current situation and recognise that the country will ultimately have to pay a high price for this level of pollution. According to the World Bank, almost six percent of China's annual economic output is spent on dealing with the effects of pollution. In the USA in 2006 the figure was closer to 2.7 percent. The price the country is paying for the "war on pollution", as Premier Li Keqiang called it in 2013, includes the cost of cleaning up polluted waterways and agricultural land and the cancellation of flights due to smog alarms. Added to this is the growing expenditure on medical care. According to the Global Burden of Disease Study 2010, more than one million people die in China every year due to the effects of air pollution.

Investing in the environment

With an annual investment of approximately 91 billion dollars, China is currently the country that spends the most on protecting the environment. This amounts to 1.3 percent of its GDP. By comparison, Germany invests 0.5 percent, according to Federal Environment Ministry figures. Wu too believes that "The new generation of leaders has put environmental protection high on their agendas." They really don't have any alternative.

Wu, who studied Law and Environmental Policy,believes that the expansion of renewable energy programmes in particular is a clear sign of a shift in policy. In 2030, China is expected to consume twice as much electricity as today. So far, the majority of China's energy has been produced

OUR AUTHOR



Lea Deuber (*1991) studied Journalism, Economics and European Studies and works as a freelance journalist for several national daily newspapers in Germany. Her reporting focuses on developments in East Asia. http://deuber-lea.de



Emissions in Beijing China © Nora Jakob

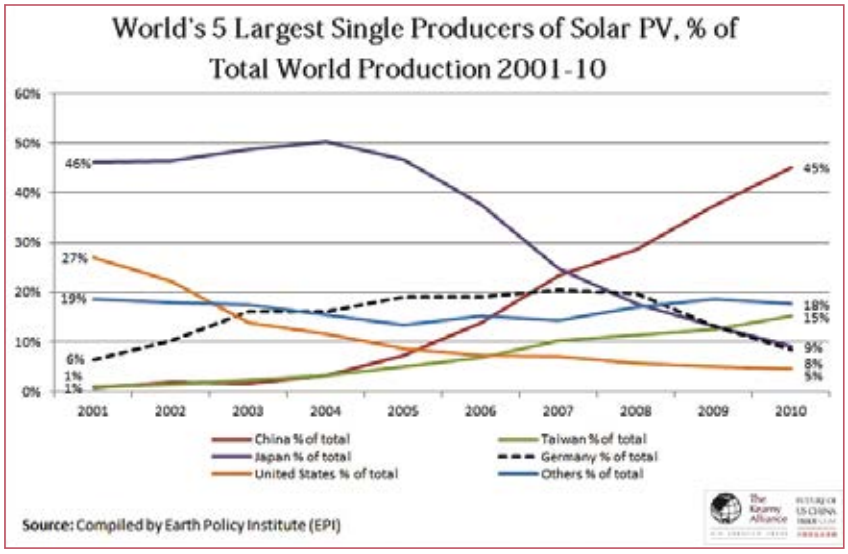
from coal, of which the country has more than sufficient reserves. Most of the power stations produce huge quantities of carbon dioxide. Like volcanos, their chimneys spew out clouds of black smoke that can be seen for miles around. China is the country with the highest carbon dioxide emissions in the world, producing 26 percent of all emissions. Germany produces only 2.5 percent. However, China is now removing more and more outdated power stations from its national grid. And in 2014, the first zero-emission coal-fired power station was opened in the port city of Tianjin in northern China.

Energy from solar and wind power

The country is also committed to developing solar wind power and between 2010 and 2013, China's photovoltaic power plants increased their total capacity from 0.8 to 18 gigawatts. According to the National Development and Reform Commission (NDRC) and the National Energy Administration NEA) in China, capacity will be further increased to 40 gigawatts in 2015 and 70 gigawatts by 2017.

Ordinary citizens are also benefiting from solar power. Although their roofs are often fairly rudimentary affairs, sometimes made up of no more than a handful of tiles or a few beams with some stones loosely piled on top, many families also have a solar panel on the roof. The people of China have clearly recognised the benefit of producing electricity in this way, whether they live in a major city like Shanghai or in a Tibetan village in Northern Sichuan, a relatively poor region. The rows and rows of wind turbines that are now a familiar sight across China are also helping to fuel this change. In 2015 wind power has already produced around 100 gigawatts of energy, and more major projects are in the pipeline. In the first six months of 2014, China produced 30 percent of its electricity from renewable energy sources. This is more than Germany, whose green power stations produced approximately 28 percent of the country's electricity.

China is equally ambitious when it comes to the huge number of cars on its roads and is committed to electric vehicles. Many of the country's motor scooters are already powered by electricity. And while you have to search long and hard to find a charging station in Germany, they are everywhere in China. “A lot has changed already”, says Wu. Many people think of smoggy cities when they think of China, but she believes this is no longer a fair reflection of the actual state of the country. “Air quality is getting better and better, pollution levels have been falling for years.”



© Uschinatrade

However, a genuinely clean China is still a long way off. A report by the Chinese government suggests that the country needs to invest a further 243 billion dollars in protecting the environment and expanding renewable energy – every year. The government's annual budget for 2013 was 1.12 trillion US dollars. But Wu remains optimistic. “The next ten years will be decisive”, she says. The challenges will be enormous, “but by 2020, China will have changed out of all recognition.”

Our journey to becoming a green champion: an interview with Peggy Liu

Peggy Liu is convinced that the battle against climate change will be won or lost in China. In 2007, she founded the non-governmental organisation Juccce (Joint US China Collaboration for Clean Energy) in Shanghai to teach Chinese politicians about the green revolution. She and her team work on national and international campaigns from a modern high-rise building in the centre of Shanghai. She lived in the USA and China for many years before setting up Juccce, but she won't give away her age. The organisation is financed by donations.
By Lea Deuber

youthinkgreen: Ms Liu, when they think of China, most people think of cities blanketed with smog. Why is that, do you think?

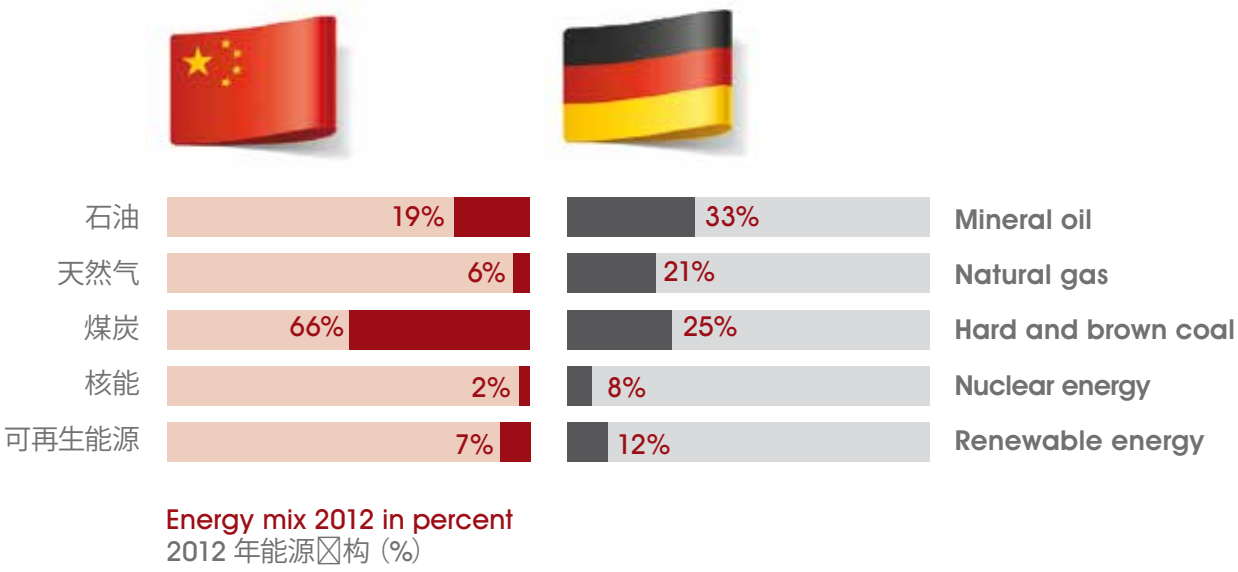
Liu: The images of smog-ridden cities tend to stick in people's minds. But they no longer reflect the reality of the situation in all Chinese cities. China has seen significant improvements in this area since 2007. Of course, most people outside China aren't aware of this because they don't speak Chinese. But China is one of the leading countries in the fight against climate change, and I believe it is already a "green champion". At the moment, life in China can be difficult. People in the cities still don't feel that much has changed. They are forced to protect themselves against the environment rather than enjoying it. And in the next few years it's unlikely that we will be designated a Green City, like Freiburg in Germany. It's a huge undertaking that will last at least 20 years.

youthinkgreen: What kind of initiatives has the Chinese government undertaken in recent years?

Liu: Well, among other things, they've expanded and developed the rail networks and underground systems, set about greening towns and cities and started to switch over to renewable energy. There is a growing demand for organic foodstuffs and strict laws have been introduced to protect threatened species, which can no longer be consumed. Improving air quality is also high on the agenda.



© REUTERS/Jason Lee



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youthinkgreen: So why is the situation in China still so serious?

Liu: China's industrial revolution didn't really start until the 1970s. The USA and England were much less densely populated when their own industrial revolutions took place. And these two countries also needed 40 years to clean up the polluted environments that were the result. London still hasn't fully completed that task.

youthinkgreen: Why do politicians and business executives come to you?

Liu: So far, we've provided training for around 800 mayors in China. They come to us and say: we want to make changes. I don't have to convince any of them. People can see every day what is happening to their local environment. They have children and live in towns and cities themselves, so they have a personal interest in instigating change. But we have to give ideas for projects that they can actually implement during their time in office, that can be financed and that they can take a photo of at the end. For this reason we like to show them projects from other countries and explain how they can implement them here. The use of bicycles as a mode of transport in cities, for example.

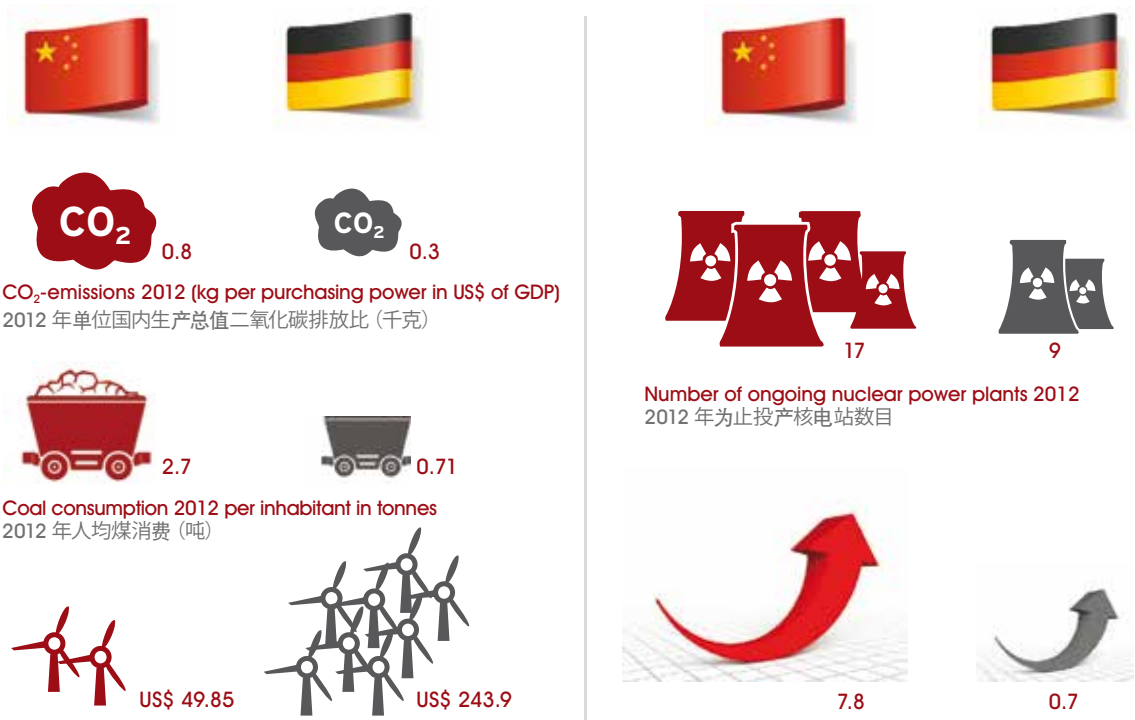
youthinkgreen: What lessons have you learned over the years in your work?

Liu: We have given up trying to appeal solely to people's heads – now we also appeal to their hearts. It's not all about figures and data, but about creating a China that we and our children can be proud of. And these days we talk less about "saving the planet". For example, we have one programme where we teach children how to eat healthily. The focus is on food, but if we eat a balanced diet we are also protecting our planet.

youthinkgreen: What is the message you want to get across to young people?

Liu: It's no longer a question of whether climate change exists or not. Today's young people will have to adapt to the challenges of climate change much faster than previous generations. It's important that young people don't waste their time arguing about why the previous generation got it wrong. They have to do something about it themselves.

China and Germany - an energy comparison in figures
中国与德国——能源数据比较



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The *youthinkgreen* group in Wuhan

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1. When it comes to the environment, China seems to be in a hopeless position.

a) Describe the extent of its catastrophic environmental destruction. What caused it?
b) Explain the global consequences of this for China.
c) How can the Chinese get out of this difficult situation?

2. The Chinese government has recognised the scale of its environmental problems.

a) What is the Chinese government doing to tackle these "environmental sins"?
b) What long-term plan is it following to break out of this spiral of destruction?

3. How does Liu justify her initially somewhat questionable view that China is one of the leading countries in the fight against climate change?

a) Do you think she makes good arguments, and do you think her statements are credible?
b) Do some research online and discuss it in your group.

4. Liu calls on young people to act rather than spending their time thinking about the mistakes made by previous generations.

a) Can fundamental environmental problems be solved by simply passing the baton to the younger generation? Discuss your proposal.
b) What can make young people in China feel that their ideas and actions are restricted and inhibited? What role does the Chinese education system play in this? Do some research online (keywords "Generation fly" and "China").
c) Investigate the situation of environmental NGOs in China. How much scope do they have to act? Think about political and financial aspects. What are your conclusions?

5. Think about how you can help young people in China to initiate projects to tackle climate change and protect the environment. Find out about potential school partnerships or existing joint projects (e.g. Mercator School Partnership fund Germany-China, the youthinkgreen group in China, etc.).

a) In small groups, draw up action plans with potential contacts. Outline your goals and project ideas. You can get some ideas from the German government's Action Plan for Germany-China Cooperation.
b) Present your plans to the main group and discuss.
c) It should now be your aim to work with external partners to implement some of your action plans.

4.3 LIVE SUSTAINABLY MOBILE, BUT HOW?

Introduction

Deep within us, we all feel the desire to be able to call somewhere "home". Self-determined living ideally means arriving in a place, setting it up comfortably and enjoying security and freedom. The question of how we (want to) live, of course, greatly depends on your individual life situation (education, occupation, marital status, etc.) But social developments, such as urbanisation, demographic change, economic factors, trends in the property sector and communal settlement policies all affect our living behaviour. Consumption of resources, energy efficiency and comfort will play a growing role.

Felix Simon has tracked down three very different projects for sustainable building and living: a small, low-energy woodland house, which was built by hand by a family in West Wales, container buildings for students in Amsterdam without a home, and a technologically and architecturally ultra-modern "Efficiency-Plus House" in Berlin which produces more energy than a family of four consumes on average in electricity and hot water per year.

As Gerd Würdemann presents in detail in his text, the issues of housing and mobility are inextricably linked. Similar to housing, mobility is the key to an active, self-determined life, and, as a basic human need, is just as important as human rights. And there is enormous potential for reducing CO_2 emissions and protecting the environment in this area, that is to say our everyday choice of transportation and the routes we (have to) take on a daily basis. According to Würdemann, harnessing this potential not only requires technical innovations, but also a better balance between closeness and distance in the way we live our lives, more active forms of mobility using the strength of our own bodies and a more relaxed attitude to how long we spend travelling from place to place.

Municipal politicians and citizens in the major cities in countries in the Global South are facing similar questions along the path to this post-fossil fuel era. Hanna Marzinkowksi has worked on mobility concepts for sustainable urban planning in Brasília and has found environmental activists who are rebelling against the chaotic traffic and exhaust pollution through bicycle caravans.



YTG-climate ambassadors from Wuhan (China) present their ideas on the climate summit in Wolfsburg.

The issues facing the topic of "sustainable living and mobility" are so complex within just this one city, one region and one country that we are only able to present a few excerpts in our articles

Y AND BE



The Eco-house from Simon Dale
© Simon Dale for www.SimonDale.net

here. Approaches we had to leave out due to space restrictions include mobile accommodation for people who move often, people seeking refuge and the homeless, for example, as well as socio-environmental initiatives involving freight transport and holiday traffic.

Housing and mobility are two issues that are neglected in public debate, but will ultimately help determine the success of the energy transition (see 4.2). But all of these issues raised involve more than just environmental constraints and our individual needs for comfort, nor are they just about carbon footprints and environmental protection; they are also a matter of issues that are central to social justice. This includes considerations of how we can make housing and mobility affordable for all people, making neighbourhoods more mixed and thereby increasing our overall quality of life in the process. The topic would like to encourage you to discuss the issue of how public (urban) living space can be better designed and used by the community.



Herbert!
An abyss!

So what?
None of the others is braking either!

© Johann Mayr



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ALTERNATIVE HOUSING CONCEPTS – FROM HOBBIT HOLES TO CONTAINERS

By Felix Simon

Getting a chance to live like Bilbo Baggins and his hobbit friends from *The Lord of the Rings* would really be something, wouldn't it? A cosy house built into the earth itself, surrounded by blossoming landscapes in the midst of nature. A fire blazes in the fireplace, spreading its comforting warmth in the winter, whilst in summer the smell of flowers flows through the open windows. Who could resist such a temptation?

Briton Simon Dale has fulfilled this dream and can now call such a dwelling his home. A photographer by trade, he had initially only intended to build a conventional residential building for himself and his family. But he did not have enough money for a new-build house. In addition, the progressive destruction of the environment attributable to the wasteful lifestyle rampant in Western societies has long been a source of worry to him. So he asked himself what he could to combat this in a way that would allow the earth to provide sound, habitable living space for his children and even his grandchildren.

One day, Simon and his family met a Welsh landowner who offered them the opportunity to build an "eco-house" on his farmland in West Wales. Eco-houses, or "zero-energy houses", are buildings that are built in an environmentally friendly and efficient manner from the foundation up, allowing its residents to protect the environment by efficiently using resources, such as electricity, water and heating materials. Against the backdrop of anthropogenic climate change, dwindling natural resources and rising energy prices, the very low energy needed for eco-houses is covered by renewable resources.

Together with his father-in-law, Simon Dale began planning an eco-house in 2005 without having any prior knowledge or experience in building a house. Among the environmental aspects taken into account when designing sustainable buildings are area needed, the building materials, construction methods, insulation and heating, efficient systems technology, renewable energy, water use and water technology, as well as the ability to be able to efficiently dismantle it, meaning the recyclability of materials used.

Living in the midst of nature

They completed nearly all the work by hand, which took more than 1,500 hours – from excavating the construction pit to cladding the external walls with straw and clay. They used renewable, natural materials almost exclusively. It was built on a foundation made of compacted clay and stones. Branches and tree trunks form the basic framework, whilst clay and straw were used for waterproofing and insulation. A few pipes, cables and a small furnace came from demolished buildings and junk yards. Solar panels generate electricity, and a composting toilet saves water. In winter, the small wood stove radiates a comfortable warmth. It took four months to build the small eco-house, which was finally completed in December 2005.

Looking at the overall results, the house is truly reminiscent of one of the homes in which Tolkien's fictional hobbits spend their lives. When viewed from a distance, it resembles the buildings constructed by the first human settlements in the Neolithic Stone Age. It is fairly densely surrounded by trees and bushes. Simon has partially dug the house into the hillside that lies to its rear. "The earth to the back provides natural insulation," he says proudly. The roof is covered with grass and blends almost seamlessly into the surrounding landscape.

For Simon, it is important that his project is not merely seen as a dream house for hippies or burn-outs, but as a contribution to climate and environmental protection and the conservation of natural resources. 40 per cent of energy consumption in the European Union comes from existing buildings. Some 85 per cent of this goes towards heating and hot water provision, whilst 15 per cent goes towards electricity. Together, these are responsible for around one-third of all CO_2 emissions. According to the EU's "Green Paper on Energy Efficiency", the energy efficiency of buildings is only "approximately 50 per cent". Simon was looking for a particularly inexpensive variation on an energy-efficient new-build home. The house only measures approximately 50 square metres and cost around 3,000 pounds to build.



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of life in ways that are more community oriented and energy efficient. Aspects of sustainability – such as recycling of materials, the use of renewable materials and modern methods of energy production like solar panels – are increasingly being taken into account by architects, politicians and urban planners. One interesting urban housing project can be found in the Netherlands. After all, Simon Dale's woodland house does not offer the billions of people who live in cities a realistic alternative.

OUR AUTHOR

Felix Simon (b. 1993) studied film and media studies and English in Frankfurt and completed a training course in cross-media journalism at the Konrad-Adenauer-Stiftung.



Enquiries from around the world

During construction, he documented his progress with his camera to add to a small website online, together with pictures and blueprints of the finished house. In the months that followed, he received a flood of enquiries from like-minded and curious people from all over the world who wanted to undertake similar projects. In the meantime, Simon and his family have moved on – the small woodland house now serves as temporary accommodation for migrant workers. Simon and his wife continue their work in support of a sustainable and environmentally conscious way of life as members of the Lammas Project, a self-sufficient commune founded in 2009 in Pembrokeshire in western Wales.

There are many people all over the world like the founders and members of the Lammas Project who are starting to think differently and are gradually making their living and shaping their way

Living in a metal box

Amsterdam on a gloomy autumn afternoon in September 2014. It's drizzling and a weak wind is whistling through the H.J., the Henri-Johan-Eduard-Wenckebachweg in the southern part of the city. Here, hundreds of shipping containers are piled atop one another five storeys high. The red containers – all exactly 2.4 metres wide, twelve metres long and 2.6 metres high – form twelve large buildings along the road, separated only by small green spaces, which are overgrown with young birches and bushes. One of the world's largest container towns has stood in an industrial area near the port since 2005.

It all started with 60 residential containers. There are now around one thousand. Each container provides some 30 square metres of floor space and a volume of 75 cubic metres. They feature small balconies and are fully equipped with a bathroom and kitchen – just like a small flat. They

are primarily inhabited by students. Like many other university cities in Europe, Amsterdam is suffering an acute housing shortage. And speaking of new containers in Amsterdam, disused shipping containers could theoretically also be converted into small buildings with little effort. Its construction is designed to withstand harsh conditions like the salty sea spray on the high seas, and their standard size simplifies planning and transport. At the same time, they can easily be connected to larger buildings or settlements like giant building blocks. A container building can be expanded horizontally as needed – the o nly limits are the number of containers that can be stacked.







© www.tempohousing.com

Containers are inexpensive options compared to flats – discarded models can be purchased for just under 5,000 euros. While the approach of self-sufficient living in the countryside advocated by Simon Dale and his colleagues may seem too radical for many, the transformation of containers into housing may be a very practical variant of resource-efficient construction, albeit less romantic, in which existing materials are intelligently reused. But the pioneers of sustainable and environmentally friendly construction still have much more to offer.

Power plants – the house of the future

The house of the future is not in Silicon Valley, but in Berlin-Charlottenburg, very close to the train station for the Zoo. Surrounded by office buildings and directly across from the Universität der Künste ("University of the Arts") is an architectural glass building that just refuses to blend with the area's other architecture. Reflective panels on two exterior walls disguise the building, make it look a bit like a mixture of shoebox and spaceship. The façade, however, conceals the latest technology and a clever concept. The owners dubbed the building, a prototype by civil engineer and architect Prof. Werner Sobek, "F87", which stands for its street address, Fasanenstraße 87.

The German Federal Ministry of Transport and Digital Infrastructure promotes the planning and construction of these kinds of "Efficiency-Plus Houses" through competitions; these buildings produce significantly more energy than is necessary for their operation. The energy generated in these climate-neutral buildings is then made available for use for your own electric car, for example. Energy efficiency is a key starting point in the search for climate-friendly and resource-efficient solutions, both in transport and construction. These two sectors combined currently account for approximately 70 per cent of energy ultimately consumed in Germany, and around 40 per cent of all of its CO_2 emissions.

Dialogue and technology

F87 is therefore much more than just a large, 130-square-metre single-family house. It is also a small power plant, a research project, a meeting place and a space for dialogue for interested citizens, entrepreneurs and politicians, as well as an important contribution to contemporary architectural culture.It can be completely dismantled and rebuilt elsewhere. Large solar panels are mounted to the exterior walls. The glazed south-eastern and north-western façades soak in the greatest



The efficiency house F87 in Berlin © Prof. Ulrich Schwarz, Berlin

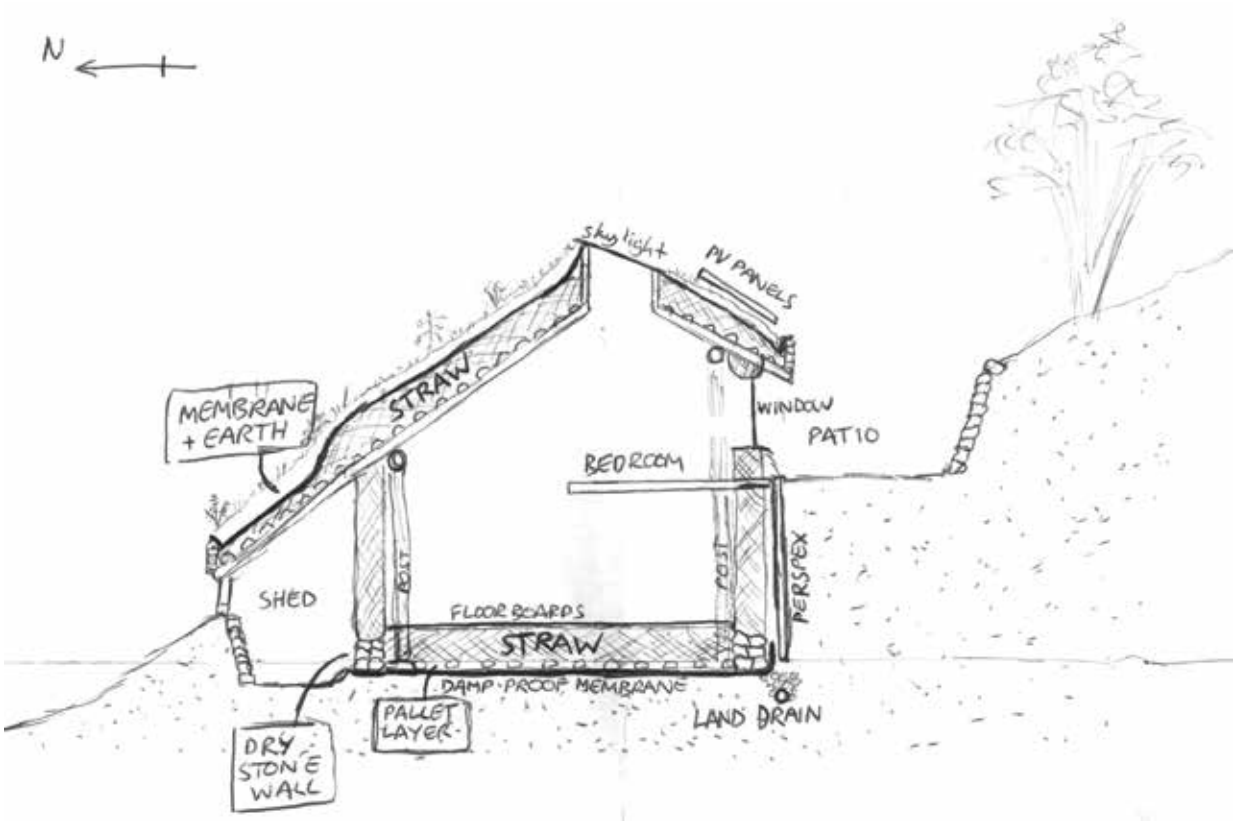
possible amount of daylight, conveying a generous sense of space to the interior. At the same time, its compact shape minimises the areas where heat could be lost. In the building's interior, the latest technology ensures the comfort of the residents. For example, an air-water heat pump extracts thermal energy from the outside air and heats the interior and provides for the hot water needed on a daily basis.

All of these processes are controlled by a computer, which adjusts the heating and ventilation systems depending on weather conditions. If it gets too warm, it automatically lowers the heating, and the solar energy that is no longer needed for heating then flows into the house's energy storage system. The eco-friendly house "thinks" for itself. On sunny days, it produces significantly more power than its residents need. The builders expect an annual energy surplus of 6,000 kilowatt hours; this is the amount of energy still remaining after deducting the building's total consumption and can be used to recharge electric cars, for example.

Berliners and visitors alike are invited to view the building's on-board monitors and displays in the publicly accessible part of the house, the so-called showcase, and from there can follow the building's energy footprint, learn about the house of the future and draw inspiration for their own houses. Nevertheless, these kinds of houses are still much too expensive for most people. The new-build house in Fasanenstraße cost two million euros – a steep price for a four-person house. But with scientific progress, the technology needed is expected to become cheaper and may therefore be available to many people in their everyday lives.

What we can do

We've now learned about three very different, pioneering and sustainable housing concepts: Simon Dale and his woodland house using renewable materials and energy supplies thanks to solar power, the container flat in Amsterdam with their recycling approach and the "F87" efficiency-plus house, which combines energy-saving ideas in the construction and mobility sectors and unites many existing technologies and building techniques under one roof. Of course what ultimately arises is the question of what we can learn from these projects and what, if anything, can we incorporate and implement in our own everyday lives.



© Simon Dale for www.SimonDale.net

The responsibility for resolving the major problems of climate change and resource depletion certainly does not lie with politicians, administrative staff and companies alone, but also with each of us. We must all try to live lives, build houses (or have houses built) that are more environmentally friendly and energy efficient. Solar panels on the roof, whether for power generation or producing heat, have become affordable for the entire working population; and, depending on the location of the house and the amount of sunlight it gets, they often pay for themselves after only a few years. And building materials from recycled or recyclable materials or natural materials, such as flax or hemp, are being used for insulation on a growing basis.

Last but not least, we should get used to the idea of reducing the amount of space we take up and living more frugally, putting on a jumper instead of the heating, or investing in refurbishing buildings. Small but well-designed buildings can be just as beautiful as large houses with vast amounts of space, which we don't usually need. In contrast to a large house (or a large flat), you need a lot less raw material to build a smaller version. Heating costs also go down because small rooms heat up much faster than large ones, and they don't lose heat as easily. And the less heating you need, the lower your total energy consumption and therefore the lower your emissions. In addition, less space needs to be sealed with smaller buildings.

A beautiful life is possible, even in a small space; the popular container buildings in Amsterdam are proof of that. Of course, the goal is not to feel cramped. "Downsizing" is the key word here. We can also characterise this as healthy shrinking – getting rid of the surplus, most of which we do not need. Even slightly reducing the space we use will ensure that the environment is protected. "Good things come in small packages" is not merely a figure of speech when it comes to climate and environmental protection; rather, it may be the principle we should follow to be able to protect our planet from even greater damage.



© Simon Dale for www.SimonDale.net

Nine billion people will inhabit the earth by 2050, but we will not find more room or more living space – at least not without destroying what's left of our forests and depleting our natural resources. The ideas and models for energy efficient living, housing and construction are nothing new. And the question of sustainable building concepts is also arising within communities, for example, upcoming refurbishments of school buildings and public facilities, such as libraries and municipal hospitals. As citizens, we are not only tasked with designing our own living and residential spaces in a way that is more energy efficient, but also with the duty to demand sustainable concepts and projects from our politicians, architects and urban planners, and to participate in discussions on sustainable construction and housing in urban contexts.

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1. What standards must an eco-house meet? Research this.

2. Simon Dale's woodland house has been met with a great deal of interest worldwide.

a) What environmental factors in particular were taken into account when bringing this house to life?
b) What objectives did he want to satisfy in terms of climate and social policy?
c) What factors encouraged him when planning his house?
d) What changes did Simon Dale himself undergo through this project?
e) Why can't this construction project be used a model for alternative construction concepts? Exchange ideas on this and seek out additional opinions.

3. One of the world's largest container towns has stood in an industrial area of Amsterdam near the port since 2005.

a) What makes these residential containers unique?
b) Why are these especially popular with students?

4. F87 is a small power plant, a research project, etc., as well as an important contribution to contemporary architectural culture.

a) What clever concept is masked behind F87's façade?
b) What role does the latest technology play in this building?
c) Discuss the author's statement that the eco-friendly house "thinks" for itself.

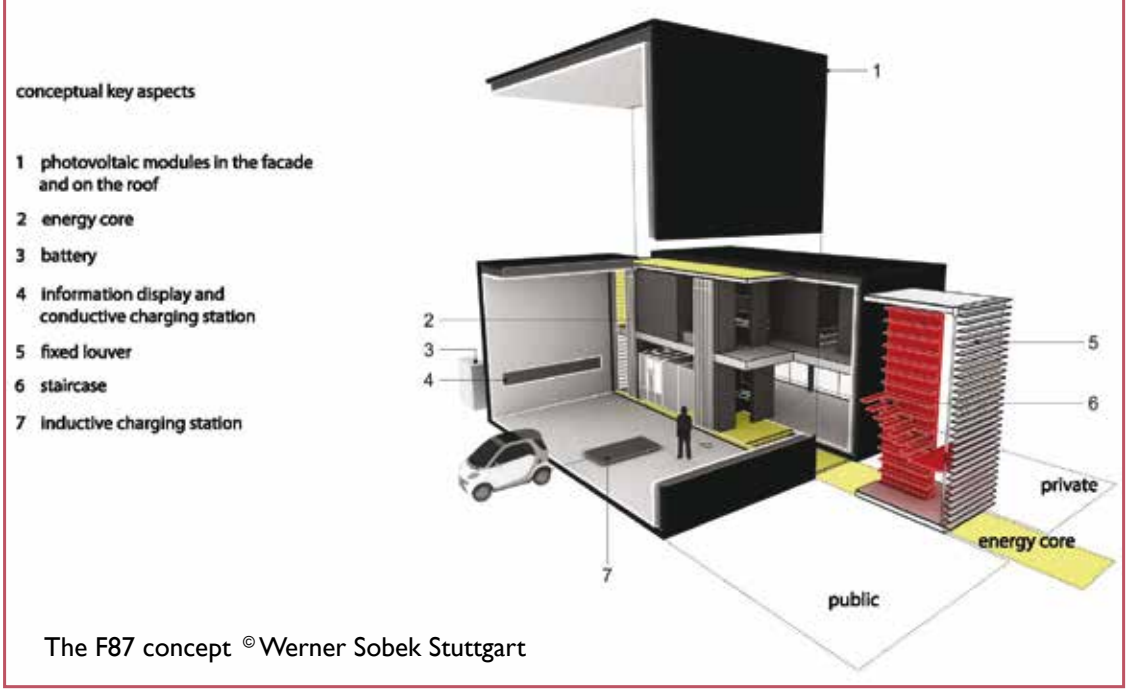
5. The author challenges us all to rethink things and to act in his summary, "What we can do".

a) Make a list of his proposals and suggestions and discuss them with one another.
b) What does the author base his call for downsizing on with respect to the housing sizes? Can you get on board with this appeal?

6. The author says, "As citizens, we are [also] tasked with the duty to demand sustainable concepts and projects from our politicians, architects and urban planners."

a) Discuss this and develop ideas to meet this challenge and take responsibility for your community.
b) If possible, put some of your ideas into practice.
c) What experience have you gained? Who supported you? What would you do differently?
Send your reports to us at the *youthinkgreen* office in Berlin.

Links and suggestions:
www.bpb.de/apuz/183450/zum-wandel-des-wohnens
www.bpb.de/apuz/183456/urbanisierung-megastaedte-und-informelle-siedlungen
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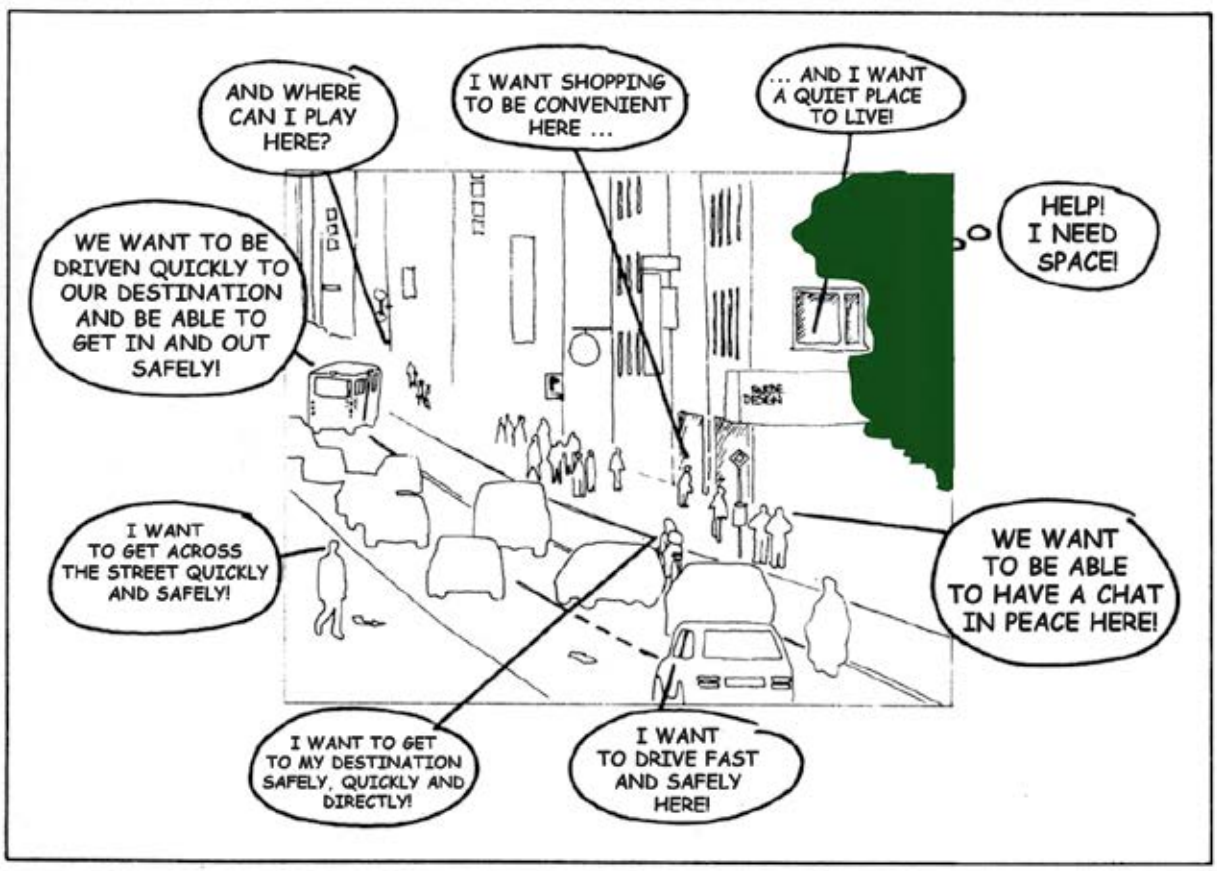
The F87 concept © Werner Sobek Stuttgart

MOBILITY – A HIGH-QUALITY ASSET!

With input from Gerd Würdemann, Lena Kasper and Prof Dr Peter Seeger

Anyone looking to explore their surroundings and engage in a social life must be mobile – both spatially and socially. The term "mobility" comes from the Latin mobilitas, meaning portability and locomotion. It is the key to an active, self-determined life and, as a basic human need, is just as important as human rights. But how can we ensure mobility in Germany and around the world as part of sustainable development in the face of climate change and environmental limits, the end of cheap oil and the other environmental impacts associated with a growing human population?

But these growing pressure to act are not just the result of environmental problems. As more and more people move to cities and metropolitan regions around the world, transport systems are reaching their limits more and more often. These systems can only be expanded selectively, and often in the face of residents'



Choir of claims at main artery roads © BSV Office for city and traffic planning Dr. (engineer) Reinhold Baier PLC

objections. This particularly applies to road networks, but also for new airports and flight paths as well as rail infrastructure. When tackling the issue of the sustainability of transport systems, we must always be sure to address socio-political issues at the same time: How and for whom should what form of transport and mobility be made possible? And under what conditions should this happen?Anyone hoping to change transport systems in a particular direction must take the right technical, political, economic, legal and so-

fossil-fuel mobility policy needs to start now. The challenges of using oil extremely economically in terms of the interplay with climate change goals will only be exacerbated by the phasing out of nuclear power.

The energy revolution posited needs to be accompanied by a transport revolution, meaning that this widely cited rethinking, re-routing and action needs to be happening TODAY! This is key for the future.

OUR AUTHORS



Gerd Würdemann (b. 1944) is a traffic planner, scientific policy consultant and journalist, reporting on issues relating to theenvironmentally sustainable design of mobility and transport in cities. Among other things, he has worked as a project manager for transport and the environment at the German Federal Office for Building and Regional Planning in Bonn.



Lena Kasper (b. 1990) studied online journalism and media development in Darmstadt. She works as a freelance journalist and her roles have included editor for the online research platform "Grüner Journalismus" ("Green Journalism").



Prof. Dr. Peter Seeger (b. 1956) founded the media portal "Grüner Journalismus" in 2013. He has been a professor of communication studies at the University of Darmstadt since 1996 and conducts research on quality journalism and the representation of sustainability issues in the German media.

cio-cultural steps in doing so. Of course, there is enough responsibility and room to manoeuvre to go around for each individual.

Source: Lena Kasper and Peter Seeger (2014): gruener-journalismus.de/grundlagen-neue-mobilitaet

This list of questions and answers provided by Gerd Würdemann can be used to start the discussion and provides some initial, thought-provoking answers.

1. Will mobility be a luxury item in the future?

No, if our current transport policy is ready to accept that non-sustainable, fossil-fuel-based transport will come to an end and that the transition from fossil-fuel-based transport to a post-

2. What specifically will sustainable mobility look like?

Mobility is a multifaceted issue. Private transport, public transport – including mass transit, regional transport and long-distance travel – each only denote part of the wealth of technical concepts at play here. The term is much more far-reaching. The basics of sustainable mobility are:

- good, easy and reliable accessibility of places and buildings in
- a variety of different settlement/supply structures,
- corresponding to an attractive, affordable and environmentally sustainable means of transport including ample pedestrian areas.

To achieve **sustainable mobility,** we need to forge new paths in both senses of the word, carefully handling the finite resources we have and using

space, time and speed in a socially just and environmentally friendly way. A fundamental social transformation process is required to change direction towards a future free from fossil fuels.
This post-fossil-fuel mobility can be defined as movement and mobility of people, goods and information between different places enabled by renewable energy sources, energy efficiency and physical strength.



© dontworry

3. What is taken into account in sustainable mobility concepts?

Over the last decade, mobility concepts have emerged in Germany that aim to redesign transport in a way that better conserves resources by replacing transportation by car with the combined use of the more environmentally friendly network of transportation facilities (bus/train, cycling, walking). The term for this is "mobility management". This includes innovations and services such as pedicabs, public bicycle rentals, fare information, timetable information and reservation systems for mobile devices such as smartphones, call-a-bus services, car sharing, social transport services, group taxis, mobility centres, etc.

Taking a critical view of these so-called mobility concepts, they merely serve to optimise inherent aspects of the system to address the transport status quo. This makes long-term objectives easier to achieve. Changes that effectively reduce traffic in these target destinations through attractive local mobility, i.e., a diverse infrastructural services, are not associated with these concepts in most cases. However, the urban planning model of the "city of short distances" must be implemented if we are to have sustainable mobility concepts. We therefore need multi-functional neighbourhoods with as many "locations of choice" near residences or workplaces. In addition, smartphones allow for the routes to be planned intermodally, be they routes to get to shops, medical care centres, etc., all using a mobile application (app) that provides a selection of different sustainable transport options with the corresponding times to the desired destination.

INFO 1

Aspects and approaches to the mobility revolution (cf. Kasper/Seeger 2014):
- minimise distances (transport performance in terms of passenger and tonne-kilometres)
- attractive and diverse supply structures in urban regions of short distances
- the modal shift to environmentally friendly transport
- networking and optimising transport systems and
- re-evaluating active mobility (cycling and walking).

4. Can policy limit private motorised transport?

Thanks to cheap and abundantly available oil, the triumph of fossil-fuel-based transport has enabled us to accomplish a lot in recent decades. Travel-intensive lifestyles on the one hand and labour market flexibility on the other require extensive commutes between different locations. We live by the principles of “time is money" and “more opportunities through higher speeds”. “Quick” traversal of distances seems to be how we measure all things. Limiting the quick option of private motorised transport has so far been met with considerable reservations among the population. We have become accustomed to the principles mentioned above and this car-based mobility, but the many are still in denial about the flip side of this behaviour – noise and air pollution that endangers our health, lack of exercise and concomitant diseases, the destruction of our environment, climate change and loss of biodiversity. Add to this the looming shortfall in oil supplies ("peak oil”), energy supply risks, rising costs of transport, shortages of space and empty pockets. But local communities’ investment needs for roads in Germany alone are estimated to reach 160 billion euros by 2020 (mainly for maintenance). In short: These external costs must be paid by society, particularly those who do not use private vehicles.

Against this background, calls to limit the private motorised transport are absolutely justified. However, this requires us to demystify transport, economic and political myths, gain a new understanding of mobility and a new policy for spatial development and transport infrastructure.

5. Should we have to pay to park in front of our houses, at work and when shopping?

Development and maintenance costs are incurred for parking or for public land use. These costs must be recouped from single-car drivers, for example, at least in the amount of public transport tickets sold. This also applies for the use of charging stations for electric vehicles.

6. My thoughts turn to the near future: What happens when the price of petrol rises to five euros per litre?

Rising oil prices, for example, the five euros per litre mentioned here, will lead to a greater financial burden on the population unless these costs are offset by increases in efficiency in automotive engines. This burden increases both through higher fuel costs, but also by shovelling the elevated freight transport costs on to the consumer. The current policy relies on solutions attained through new, alternative drive systems in motor vehicle transport, for example electric vehicles. However, there is a danger that society and politics are depriving us of the opportunity to follow other efficient solutions at an early stage by setting an explicit course towards a purely technology-oriented approach. Because even the most environmentally friendly cars will not solve these familiar transport problems, including traffic congestion, space requirements, accidents and noise emissions (at high speeds over 30 kilometres per hour). Added to these problems is the high consumption of resources when producing batteries that don’t last particularly long.



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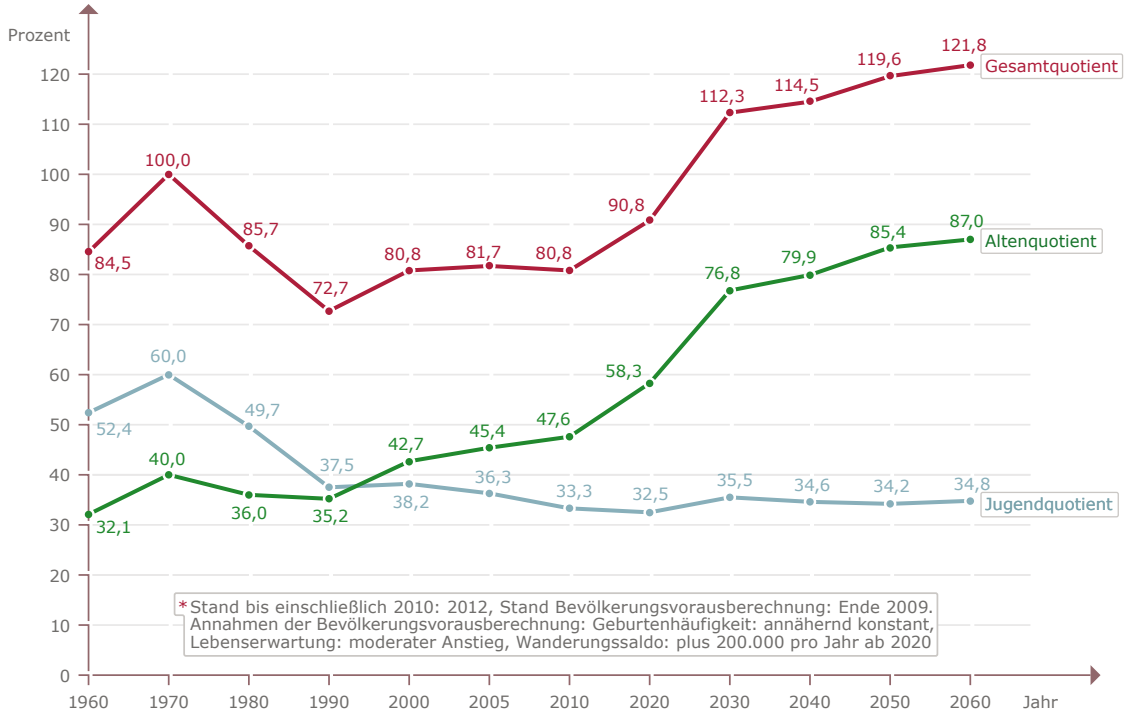
In the face of an ageing population and declining pension incomes, rising fuel costs in settlement structures that primarily rely on automobiles tends also to threaten mobility for all population segments, even in poorer societies. But the clearer it becomes that the world in currently facing the end times of fossil fuels, the greater the resistance, so it seems, to recognise and reverse this. I'd like to highlight the industrial policy publicity and discussions surrounding fracking (hydraulic fracturing of rock strata to extract the gas and oil trapped within) as an example of this business-as-usual thinking. But the use of fracking to obtain light tight oil and shale gas/oil is simply not a sustainable and future-proof solution.

7. Should public transport be promoted more for lower income earners?

Public transport should enjoy planning, legal and social priority in everyday traffic. If politics and society are not willing to provide this for free, they should at least ensure that everyone has access to socially acceptable, affordable rates to cover the transport costs. Demographic change is bringing new challenges with respect to the elderly and public transport.

Entwicklung der Altersstruktur

Jugend-, Alten- und Gesamtquotient, 1960 bis 2060*



Quelle: Statistisches Bundesamt: Lange Reihen, 12. koordinierte Bevölkerungsvorausberechnung
Lizenz: Creative Commons by-nc-nd/3.0/de
Bundeszentrale für politische Bildung, 2012, www.bpb.de

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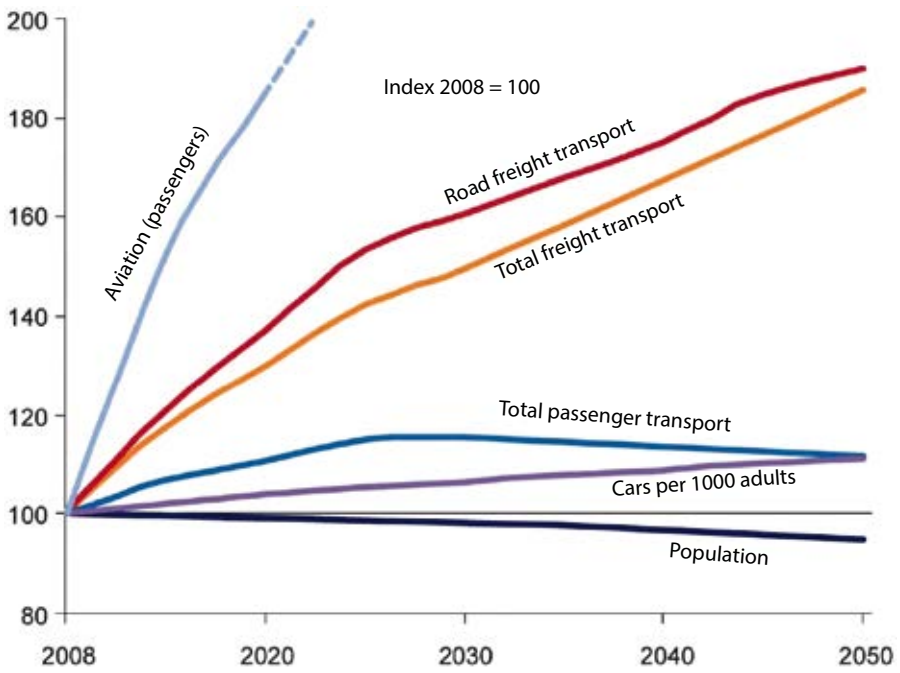
8. How mobile can we be in the future and how mobile do we want to be? How can we successfully break through into a post-fossil-fuel system of mobility?

Ever since Star Trek crossed our screens, the dream has been to be able to "beam" ourselves places. The current version of "beaming" is performed either by putting heavy pressure to the gas pedal (whether this involves a combustion engine or the carbon neutral drive technology of the future, be it through electricity, hydrogen or fuel cells), through high-speed trains (TGV, ICE) and/or through the expansion of super-cheap airline travel, even though this is destroying our planet.

But the key question here is, "Can the Earth's population, or 'squanderers of fossil fuels', even still afford to expand this global transport? And what is considered 'standard' and what is considered 'progress'?" We should remember that these steps towards "progress" are coming at a leisurely pace. Instead, we dream about technologically equipped "smart cities" and digital infrastructure that enable transport users to get from point A to point B must quicker with intelligent systems in our highly developed service and information-oriented society.

Before any kind of transportation were available, people would walk around five kilometres a day; with the transportation facilities we have today, the average adult covers approximately 40 kilometres. The high speeds that enable us to live such distance-intensive lifestyles – as long as this remains affordable – are therefore key to transport as we know it today (Cf. Kasper/Seeger, 2014; MiD, 2008).

The history of speed and speed limits makes it clear that it was never solely a matter of technical issues, but that societal interests are so intimately linked with these benchmarks. We therefore need new mental maps that better balance proximity and distance. The post-fossil-fuel era



Database: Land use planning forecast BBSR, BMVBS 2006, BMVBS 2009, ProgTrans 2007, Air Initiative Luftverkehr 2006

© Annika Koch

calls for different energy, transport and production structures and therefore changes to spatial structures as well. These should focus on greater proximity, on a colourful, green and lively urban district, on high-quality public spaces and an innovative planning and architectural culture, a wide range of post-fossil-fuel mobility options and on conserving energy. This includes road design that encourages active mobility and that supports "transferring" relatively agreeable means of transport onto our own two feet. Electric bicycles and decentralised bicycle rental systems are taking over urban and rural areas. Electric public transport needs to undergo a massive renaissance. Railway networks must be thoroughly upgraded and electrified. Trams must take back our cities, and buses offer a good supplement to this.

One thing is ultimately clear: cities and regions should no longer be run down and blemished as a result of street noise. Cars must be more resource efficient and environmentally friendly – meaning smaller, lighter, slower – and drivers must start thinking more flexibly. The status symbol of the future may be an affordable "MobilityCard100", a new and expanded version of an unlimited Railcard. It would include the use of all public transport, including bicycle rental, and could offer options for car-sharing and public-use cars as an integrated feature.

To put it bluntly: We must reorient ourselves, live in a way that is less travel intensive, permit our journeys to take longer yet all the while remain mobile. Wheeled walking frames, tricycles and quadricycles will be the yardstick of the future vehicle. Social innovation is the realization that this is the **start of something new,** of ensuring mobility and movement are sustainable and attractive. We should be prepared for the transition from fossil-fuel based transport to post-fossil-fuel mobility. This transition needs to be made. This requires actors, all actors. Only then will we be able to afford mobility. Nevertheless, we should not forget about the dream of being able to "beam" ourselves wherever we want..

Selected literature for more information

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- Würdemann, G.: Schaffen wir eine zukunftstaugliche Mobilität! (?), In: Verkehrszeichen, Mülheim an der Ruhr 2014, 3rd edition, pp. 4-10.

Online links:

- The blog "Future Mobility" was awarded the 2012 Grimme Online Award in the Information category: www.zukunft-mobilitaet.net
- Smartphone app: www.moovel.com/en/DE
- Stories surrounding the issue of sustainable urban design: thisbigcity.net
- Media portal for sustainable journalism: gruener-journalismus.de

SEVEN GUIDELINES – TO GUIDE US ALONG THE PATH TOWARDS POST-FOSSIL-FUEL MOBILITY

(1) Energy efficiency in motorised traffic

In the future, our scarce energy resources will be economised. Energy efficiency is therefore of vital importance, starting now.



© Monkeyboy 1933

In terms of energy efficiency (1) for passenger traffic, we must consider:

- driving style: lower speed limits, lower acceleration, etc.
- vehicles: lower weight, optimise vehicle dimensions in terms of seats and carrying capacity
- lifestyle: choosing where to live, changing our destinations of choice to reduce distances (shopping and leisure activities), combining trips for multiple purposes, carpooling)

But that's not all. It's not just a matter of minimising energy consumption in private motorised transport. Rather, it is important to minimise the total energy consumption of the transport sector to fulfil all individual mobility needs. By substituting car rides with cycling and walking, a combination of cycling, driving and public transport, etc., we can reduce our energy consumption even more (see also Guideline 5).

The classification of approaches set out for greater efficiency also applies to freight transport, such as shipping, which forms the backbone of the global division of labour.

(2) Increased use of renewable energies

n the long run, energy for transport will come solely from renewable sources. The transition path we ultimately take also has to do with the fact that the production of hydrogen as fuel in a renewable electricity context can lead to further synergies.

(3) More efficient spatial and settlement structures with a new balance between proximity and distance

Instead of asking, "How can I get to this shop or facility that is far away from me even faster?" the principle we should be following in terms of our planning and action is, "How can we make use of space and transport infrastructure so that we can reach our destination easily and comfortably and increase our quality of life in the process?" Ostensibly slow methods of transport, such as bicycles, can lead to higher mobility given the right spatial structures.

→

(4) Increase mobility options for everyone (equivalence)

This barrier can be illustrated using the example of a very old man who is still able to walk but is dependent on a walking frame (just as many people need to wear glasses as a visual aid). According to this principle, if the environment is designed so that these people can move independently without outside help, this is just as important as the infrastructure projects that currently dominate our fossil-fuel-based transportation policy. This claim of equivalency formulated here with respect to post-fossil-fuel mobility, for example, means the a priori fast movement that is preferred becomes harder to justify in the face of "slow" mobility. The movement of working adults will therefore no longer be automatically more important than the self-mobility of children.

(5) Use of physical power for mobility, health and well-being



© KAS / Shanghai office

For people to remain healthy, they need regular exercise. At least one hour of moderately intense exercise on an almost daily basis is recommended. What motorists save in time compared to their cyclist counterparts is then spent on physical exercise (e.g. by driving to and spending time at the gym). At the individual level, it follows that physical activity is particularly important in everyday life. Instead of taking the lift, you should take the stairs. Footpaths in the city should not necessarily be minimised, but should become part of everyday behaviour. All this is an important advantage for our well-being, healthy sleep and general health. Over the course of time, sedentary lifestyles will be transformed into a wealth of movement.

(6) Flexibility by combining digital services and transport services

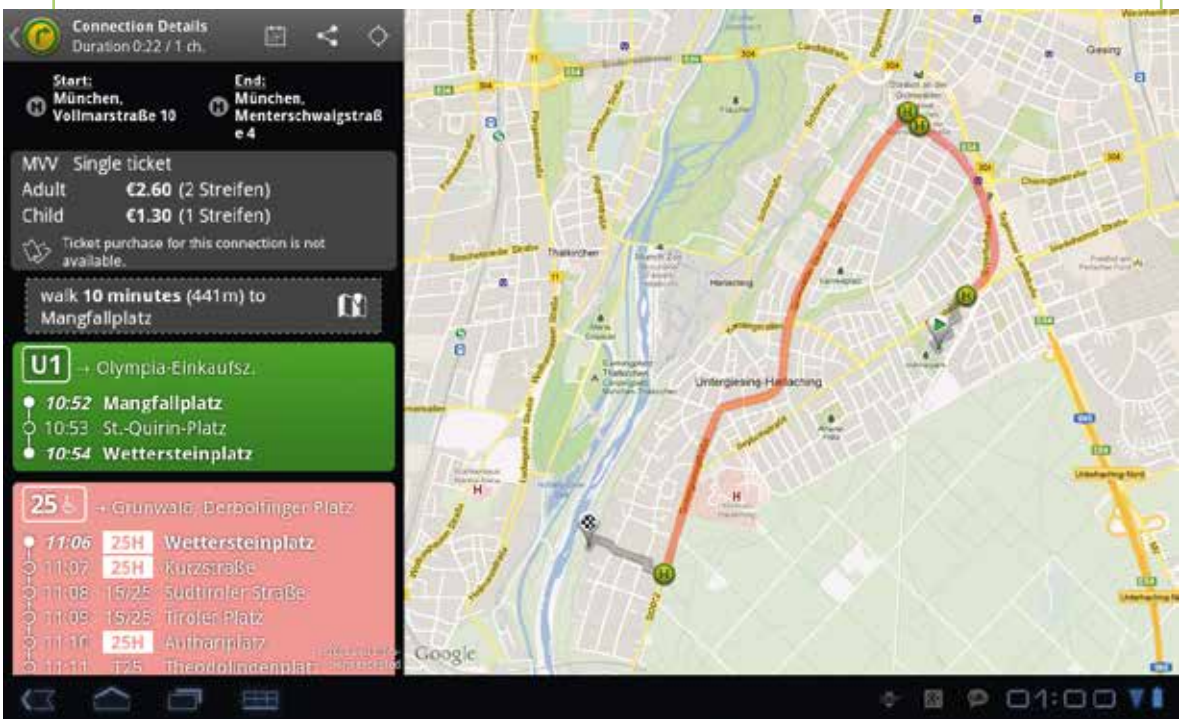
Digital services can replace physical transport, but they can also generate it. This digital infrastructure allows transport users to "manage" their journey from A to B multimodally. This opens up the possibility of space for mobility and makes a wide range of mobility options available. At the same time, however, this requires robust, user-friendly, error-free and affordable digital services. Nevertheless, criticism cannot be lacking here because these electronic methods of communication require rare metals, such as indium and lithium, whose wasteful consumption is incompatible with economies that aim to conserve resources, with the worst case being the encouragement of the exploitation of emerging countries, where despots mine these metals for industrialised countries at the expense of their own population.

(7) Emotionally appealing design of post-fossil-fuel mobility

The attraction of transport fuelled by automotive engines that run on oil will slowly subside. It is therefore important to ensure the rapid deployment of new and attractive features alongside the guidelines featured here. Only by doing so will we develop and promote

sustainable forms of mobility and land use that promote acceptable consumption and production patterns, allow for opportunities to participate, provide for freedom of choice between low-cost transport options and will not affect future generations.

Source: J. Schindler, M. Held, G. Würdemann (contributors):
"Postfossile Mobilität – Wegweiser für die Zeit nach dem Peak Oil".



Local traffic on the Smartphone © oeffi.schildbach.de

INFO 2: CARS – WHY IT'S SO HARD TO ADJUST …

The social value of the cars is closely linked to post-war German history. The car was the most important symbol of the economic miracle, or *Wirtschaftswunder*, and the close-knit road network continues to shape everyday life and the living environment of many people, even today. For many, the increasing prosperity in the decades after the war was primarily due to increasingly larger and faster cars. But the car also influenced spatial and urban planning. Based on the model of the "car-friendly city", many tram networks were dismantled in the 1960s and 1970s, some of which have be rebuilt today with great effort.

The first doubts as to the future viability of the car came with the first oil crisis in the 1970s. Changes relating to the car as we know it (speed limits, environmental zones, parking management, etc.) are still emotionally and politically highly charged, especially in Germany, with many even considering these issues taboo subjects.

Interesting facts: After property, cars are second on the list of things people spend the most money on in Germany. The average person will buy three new cars and five used cars. People spend an average of 332,000 euros on purchasing and maintaining their cars (without subsidising follow-on costs caused by the car, which are borne by the community). And the entire population of Germany could fit in the front seats of all registered cars (2012: population 81.9 million; cars in Germany: 41.9 million). It is also remarkable that holiday and leisure traffic makes up the largest portion of passenger traffic by far at approximately 43 per cent, coming in ahead of rush-hour traffic, shopping trips, business trips and chauffeured trips.



In addition, with more than 700,000 employees (for domestic manufacturers), the automotive industry in Germany remains the largest industry to have more than two-thirds of production go abroad. Meanwhile, the number of registered passenger cars worldwide has passed the one billion mark. And demand is growing – anyone who can afford it wants to drive a car. Estimates suggest that there will be 2.7 billion cars worldwide by 2050, provided there is still enough affordable fuel by then. In addition, many other economic sectors indirectly depend on cars. The industry has powerful association and lobbying structures in both Germany and at the EU level. Of particular note here is the German Association of the Automotive Industry (Verband der Automobilindustrie [VDA]). Equally strong is the political and media influence, as is becoming clear as part of the discussions surrounding future CO_2 limits.

The interest of German luxury car manufacturers in an ambitious reduction in consumption by downsizing their entire product range (i.e., smaller, lighter cars with less powerful engines) or a rapid changeover to electric mobility is limited for the majority of manufacturers because it threatens their high-profitability business models. However, individual manufacturers like BMW are boldly forging new paths with new developments, such as the BMW i3, a compact electric car with a carbon-fibre body to compensate for the additional weight of the battery. And German manufacturers have already been setting trends internationally. In the electric vehicle sector, however, other manufacturers continue to dominate worldwide: in the luxury segment, Toyota/Lexus hybrid cars and Tesla's (California) purely electric cars.

Source: Lena Kasper and Peter Seeger (2014): gruener-journalismus.de/grundlagen-neue-mobilitaet/2

LEARN • UNDERSTAND • ACT

1. "As a basic human need, mobility is just as important as human rights."

a) Discuss this statement and compare it to other human rights you are familiar with.

b) Under what conditions and limitations would you be able to fully agree with this statement? Decide on a brief summary of the human right to mobility and research social actors or institutions fighting for this right.

2. Describe the problem area that these questions of "sustainable transport systems" will inevitably lead to.

3. What do sustainable concepts to expand or make accessible the cultural asset of mobility for everyone look like? What aspects should these concepts ideally take into account?

4. What are the reasonable limitations of mobility opportunities with respect to our planetary boundaries? For example, would it be useful or necessary to be able to immediately transport goods in any direction from A to B, no matter what time of year it is? Discuss this question and be sure to consider private motorised transport.

5. Explain the aspects and approaches to the mobility revolution (see Info box).

6. What policy options are available to control the mobility behaviour of people in a specific country?

7. The authors state that there is a growing link between technical and administrative issues and social interests and evaluations.

a) What conclusions do the authors draw from this? Discuss these.

b) What would your position paper look like?

8. The authors invite you to help shape the transition from fossil-fuel-based transport to post-fossil-fuel mobility. "Our journey to post-fossil-fuel mobility" is the motto of a public limited company at your school.

a) Develop principles and guidelines that could form the framework for post-fossil-fuel mobility for students and teachers at your school; get help from experts (from municipal areas such as urban planning, transport, etc.) and decision-makers (from the fields of business, politics, etc.).

b) Try to anchor your results in specific concepts. You can also find inspiration in Topic 2 of this book (Field work, bike-bus Namibia).



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THE BATTLE FOR SUSTAINABLE URBAN DEVELOPMENT: MOBILITY IN BRASÍLIA

By Hanna Marzinkowski

50 years of development in just five years – this promise was made by Juscelino Kubitschek during his term of office as president of Brazil, when he announced the building of the new capital city, Brasília, in 1956. Brasília should connect the rural, poorer north with the more urban and wealthier south-east, promoting decentralisation. It was considered a symbol of the new, modern Brazil – a Brazil without poverty. Amongst these visions of the future in the 1950s was the idea that, in a country with a lot of wealth, everyone has their own car. But today, the city is no longer able to cope with daily traffic.

When we take a look at the issue of mobility in Brasília, we need to consider its overall urban planning and history:

1. *Brasília is a special case.* The Brazilian capital was designed on the drawing board – and built in just 41 months[1]. This image of the future, complete with a car-based society, has resulted in broad, sweeping streets, few traffic lights, but lots of overpasses and underpasses and long detours to get to the next U-turn.

2. *Brasília is an example.* At the same time, traffic there is just as much a problem as it is in many other major cities around the world. This is also because the city is not large enough; after all, it was originally planned for approximately 200,000 inhabitants: Over time, the new capital has attracted so many people, both through

construction and later through the jobs created there, that satellite cities have cropped up around it where more than two million people live today[2], a large number of whom work in the small core city and therefore commute into the city daily. Logically, the result of this is congested roads at peak times on a daily basis.

Motorists in the majority

This combination of a special case and example make one thing clear to us: Even completely redesigning an urban infrastructure does not protect against the city not being able to cope with daily traffic. Today we know that emissions from cars are harmful to the environment, responsible for climate change and are also burning through our limited fossil fuel resources to a large extent. In Brasília, there are an estimated 700,000 or so cars that emit 2.8 million tonnes of CO_2 annually – equivalent to the destruction and burning of almost 10,000 football fields in the Amazon rainforest[3]. Not to mention stress, nervousness and diseases emanating from congestion and accidents. In 2007 there were 1,139 accidents involving bicycles, with an average of 56 cyclists dying per year[4]. According to a study, the streets designated for automotive traffic in the big urban centres of Brazil take up 70 per cent of public space on average, but only transport 20-40 per cent of inhabitants[5].

Nevertheless, thanks to the comfort and other privileges that are (purportedly) associated with travel by car, cars remain the status quo of transportation – all the while, the indicators of urban traffic are rising steadily around the world[6]. This is also connected with the fact that, for most cities, road planning is always initially designed for car traffic – and in this respect, Brasília is ***the*** prime example. A main traffic artery consisting of a six-lane primary axis and two four-lane secondary axes runs through the city – this means that 14 lanes run throughout the entire city, connecting the northernmost point to the southernmost tip. If you want to get to the other side of the city as a pedestrian, you must travel through three consecutive underpasses, which are often poorly lit and never smell nice. There are no designated pedestrian crossings at some intersections or junctions, whilst you need to go through a total of three stages of traffic lights at others. It therefore seems the simple and obvious choice to travel by car. Anyone deciding to ride a bike in Brasília is still considered avant-garde – bikes are seen much more as sporting equipment than as a means of transport; although 700,000 cars are on the roads there, as mentioned above, there are only approximately 280,000 bicycles[7].

Cyclists looking for consideration

Policy's role should be to create incentives for the use of sustainable transportation methods and to provide the necessary infrastructure for it. In 2009, a law for the construction of bike lanes was supported by the government of the Federal District of Brasília, which includes the core city and the satellite cities surrounding it. By 2011, this had not yet been implemented. Over time, therefore, various groups have emerged who are fighting for more bike paths and fewer cars in Brasília. They are going about doing so using various campaigning forms and are appealing to different target groups:

On the one hand, they direct their criticism directly to the government of the Federal District of Brasília. The NGO *Rodas da Paz* ("Wheels of Peace"), the largest and most well-known bicycle NGO in Brasília, runs a monitoring programme

1) www.cultura.df.gov.br/historia-de-brasilia.html
2) www.cidades.ibge.gov.br/painel/painel.php?codmun=530010&search=distrito-federal%7Cbrasilia%7Cinfograficos:-dados-gerais-do-municipio&lang=
3) www.rebasdocerrado.com.br/indexInterno.php?url=artigos/textos/BikeseoAquecimentoGlobal.htm
4) www.wwf.org.br/informacoes/?27522/ONGs-de-Braslia-se-mobilizam-pela-construo-de-ciclovias
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6) www.antaq.gov.br/portal/pdf/meioambiente/emissaoco2efeitoestufa.pdf
7) vejabrasil.abril.com.br/brasilia/materia/grandes-mas-com-problemas-1482

for the existing bike paths and publishes its analyses online[8]. By doing so, they are promoting a political dialogue, creating transparency and generating data that can be used as a basis for discussion, passing the ball to policy-makers. In addition, they and other active participants write open letters to the government calling upon them to implement the reforms they have actually already passed to extend the bike paths in Brasília.

On the other hand, they carry out campaigns aimed at bringing about a change of consciousness amongst the population. One group engages in demonstrations of power, something cyclists must endure on a daily basis, and blocks off part of the roads during rush hour once a month. The concept of *critical mass* follows the hypothesis that cyclists travelling as a group are able to develop such a large momentum that they will make a noticeable impact on the road.

Other campaigns want to bring greater attention to sustainable transportation options through a more positive example. So, once a year, a large bicycle demo is held with creative side campaigns, which now attracts thousands of people every year. This is also organised by *Rodas da Paz*. The NGO has also been running a bicycle repair shop since 2003; at the end of each year, it always accepts donated bicycles and passes them on for social purposes. At the same time, young people get the opportunity to learn how to repair bicycles in this workshop. On a car-free day in 2014, several bicycle NGOs organised an all-day picnic in a large car park in the city centre to illustrate just how much space cars take up in our lives and urban landscapes.

This year was the sixth year that a 13-kilometre race was held to find out which means of transport is the most efficient. This has been tested on a weekday during rush hour. The motorcycle

OUR AUTHOR

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was the fastest, but beat the bicycle by just under two minutes; of course, the bicycle manages to do this without burning fuel and *Rodas da Paz* has rated it a more efficient means of transport[9]. All the other means of transport tried took longer to cover the distance because of the tough traffic. Of particular concern was the result seen by the public bus, which took nearly an hour to cover the distance and was only 20 minutes faster than the person who walked it.

Sport – Fun – Strategy

The NGO *Bike Anjos* ("Bike Angel") offers free training once a month so people can learn to ride a bike. In addition to these organisations, there are also many small, more informal groups, for example, *Passeio Noturno* ("Nocturnal Ride"), which meets at night several times a week to go cycling – if traffic has calmed down – for exercise purposes. Or *De Bike em Bar* ("To the Bar by Bike"), which originally started as a group of friends who arranged to meet up after work and cycle to a pub together.

There is also visible networking with groups and individuals from other sectors. This means bike racks, of which there are few, can be found in front of vegetarian restaurants and organic supermarkets. Some restaurants even give customers a discount on their meal if they come by bicycle. Every year at the start of spring, the local daily newspaper, *Correio Braziliense*, organises a large communal bike ride celebrating the end of the dry season. It also draws attention to the variety of vegetation in the region, and an environmental NGO from the Cerrado, the savanna region located in Brasília, distributes seed from typical plants in the area in concert with this ride. Some 1,300 people participated in the bike ride in 2014.



© Rodas da Paz

Another actor comes from the private sector: For a few years now, a Brazilian bank has been funding bicycle rental stations in large Brazilian cities, and these have now been available in Brasília since 2014. Due to Brasília's unique urban planning and the distribution of cycling paths, however, these stations are mainly distributed along the political institutions and tourist attractions in the city centre, and are only gradually being expanded to the residential neighbourhoods – which is important if bicycles are to be used in everyday life and not only during weekend outings. These bicycles have been well received and the rental stations are often empty at weekends.

Since 2011, more and more cycle paths have been being built[10], with some 430 kilometres of paths now completed[11]. These are, however, lacking in many places – the priority there must always be given to cars. In addition, these cycle paths are not always well lit and are primarily suited to bike rides on Sunday because they often involve long detours and curves. A study in January 2014 found that 17 of 33 administrative regions in the Federal District had bike paths. In addition, criticism has been levelled that the government has not carried out any campaigns on this matter to raise awareness[12].

8) www.rodasdapaz.org.br/transparencia/analise-da-contrucao-das-ciclovias-do-distrito-federal
9) www.rodasdapaz.org.br/vi-desafio-intermodal-do-df-veja-os-resultados
10) www.wwf.org.br/informacoes/?27522/ONGs-de-Braslia-se-mobilizam-pela-construo-de-ciclovias
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The author in front of the Catedral Metropolitana de Brasília

Conclusion

The large number of campaign participants and rental bike users, as well as these initial policy achievements over the past few years, demonstrate that the issues these NGOs are focusing on correspond to a great deal of interest amongst the population. The step-by-step success achieved, but also the still-persistent dominance of drivers show that it is necessary to take a multi-dimensional approach if you want to effect change from the civil society outwards. The approach taken by the activists in Brasília is comprised as follows and can be used as a model for other contexts:

1. *Exert influence on decision-makers.* Large interest groups must be faced when dealing with the subject of mobility, for example from the automotive industry, which often greatly influences the political process. As an actor in this process, it is therefore important to appear self-confident and to always make clear that it is the political will of the people that the urban landscape change, and that it is this will upon which politicians are dependent.
2. *Bring about a change in awareness.* Especially when it comes to mobility, this can only happen if a broader transformation takes place within the population. In this regard, these projects in Brasília are currently undergoing a suspenseful phase – even though their influence continues to grow, the overall numbers of motorised individual traffic is also steadily increasing. In this case, it is necessary to persuade even more people of the alternatives in the coming years.
3. *Think holistically.* Living life in a way that conserves resources does not only involve the issue of mobility. At the same time, cycling is very closely linked to health issues. Attempts should therefore be made to form alliances with groups from other areas, and to support each other in the process – through joint events, mutual distribution of informational materials, forming networks and joint mobilisation, conducting studies or offering



Appeal from activists to a day of action

incentives like the discount at the restaurant. The more urgent the global challenges become, the more the subject of mobility will play a role in everyday life, and the more we will have to think about our own lifestyles. In any case, mobility is a good example of how the sum of many individual actions can bring great consequences – and intervention transforms individual actions into social action.

Online links

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- www.rebasdocerrado.com.br
- www.wwf.org.br
- www.antaq.gov.br
- www.vejabrasil.abril.com.br/portal
- www.rodasdapaz.org.br
- www.copa2014.gov.br

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1. What idea was the overall urban planning for Brasília based on?

2. Does this preoccupation with the subject of mobility in Brasília indicate that urban planning is a (typical) example or even a special case? Justify your views. Be sure to also describe the extent of the negative side effects of this.

3. Chaotic traffic is part of everyday life in Brasília. What challenges does this produce for policy-makers? How are they addressing these challenges?

4. Parts of civil society were no longer willing to hear empty promises from policy-makers. A complex scenario has now emerged surrounding the topic of bicycle use.

a) Record the various groups and campaigns, including their objectives and areas of activity in a table.
b) What initial boosts and far-reaching consequences has the involvement of individual groups brought with it? To what extent are private sector actors also participating?
c) Look for similar campaigns and associations in your region or country.

5. n her conclusion, the author considers the approach taken by the activists in Brazil to be pioneering and worth imitating. Together, discuss the three key points that should be observed in order to initiate developments in society as a whole as actors in civil society.

6. "On foot or by bike"

a) In co-operation with school administration and the student council, organise a CO_2-free mobility school day for your year or the entire school community under the slogan, "On foot or by bike."
b) Evaluate this special experience, and publish your results.
c) You want to set up a student company. Offer a regular bicycle repair service or negotiate favourable rates and discounts for repairs for students with a local bicycle repair shop.

4.4 FULLY EMBRACIN THE CONSUMER REV

Introduction

When you bite into a juicy apple, does it matter to you whether it came from your local area or from New Zealand, possibly having been flown 10,000 kilometres around the world? And did you ever wonder where the thousands of tiny individual pieces that plug into your smartphone come from, or who assembled them? Who could possibly be able to keep track of all these things and still have time in their everyday lives to question their own purchasing and eating behaviour?

Well, no one! But we will try to do this, at least in very rudimentary form, in this section. After all, it is not only unfair working conditions in countries of the Global South, the mountains of waste and environmental pollution that raise questions of alternative forms of consumption and use. What we buy where is what initially personifies our consumerism, but, in any event, this also has an impact on our personal quality of life. Shopping stress and single branding, discount goods and fast food addiction – more and more people are tired of this and are looking for ways out of this society of excess.

As in the areas of housing and mobility, we will broach "consumer change" on this topic as well, and will not be focusing primarily on "practising doing without". Instead, we will start searching for alternatives – for example, for healthier, enjoyable consumption of foods that have been produced sustainably and fairly. In her interview with us, Sarah Wiener talks about cooking together as an act of creativity, communication and love, and warns us against letting others, such as large corporations and fast-food chains, decide what we eat. Instead, meals we prepare ourselves are important for developing our taste memory. We also found forms of consumption that are bringing the value of community as well as the durability of the goods back to the forefront and are at the same time leading us to protect the environment, reduce waste and slow down climate change. In her article, Maike Gossen examines trends in the use of consumer products, which can be summarised under the core idea of "Using instead of owning" – an idea that is actually very old. More and more people want to use items they do not need every day as a community by trading and sharing, conserving both natural resources and their own pocketbooks in the process.

By contrast, Christian Wölbert has examined how smartphones can be produced and used more fairly and sustainably. And Catherina Rust, who grew up in the Brazilian rainforest, tells us about her experiences in very different consumer worlds: from the love of nature she experienced living with the indigenous Aparai to her spending spree in the US to conscious consumption in Germany.

All of the articles in this section make it clear that we actually can compromise when taking a stance – finding a balance between wasteful, self-centred consumerism and unconditionally frugal ascetics who forego any enjoyment. Instead, the possible answers to the question of alternative forms of consumption can combine social responsibility with greater personal well-being!

G
VOLUTION



Right, a big broccoli burger with maxi spinach and carrot juice light.

Oh man, everything is getting healthier.

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WHAT REALLY NOURISHES BODIES AND SOULS

An interview with Sarah Wiener

Even when she was at school, Sarah Wiener would get worked up about hormone residues in meat and strictly avoided sugary soft drinks. She preferred to drink water and would destroy mountains of fruit, bread and semolina pudding. Shortly before finishing her A-levels, she dropped out of college, travelled across Europe and took small odd jobs until she discovered her passion for cooking in Berlin. She is now a successful entrepreneur and runs a catering service and several restaurants, and is often found as a guest on German cooking shows. In an interview with *youthinkgreen*, Wiener explains what makes for enjoyable food and cooking, and why this is not just a question of cultural tradition, but also a controversial socio-political matter.

By Sandra Kirchner & Ariane Missuweit

youthinkgreen: Ms Wiener, do we actually instinctively know what foods we need and what foods are good for us? To put it another way: Is good taste innate?

Wiener: No, I don't think so. We're omnivores after all. Taste is something that needs to be trained. Today, we eat hundreds of laboratory substances without our tongues really noticing. If you have ever experienced the healing power of chicken soup – it strengthens the immune system and reduces inflammatory processes – this is something you can intuitively fall back in moments of weakness. But if you've only ever eaten chicken soup out from a can or a packet, you'll lack this experience. If you are not familiar with any fresh fruits or vegetables and have never eaten wild herbs, then you will certainly notice the difference compared to canned and frozen foods, but you will still prefer the processed flavour because that's what you've grown up on. It is important that we try as many different foods as possible, which allows us to create a "taste memory" upon which we can always rely. However, this is becoming increasingly rare in Western society.

Industrial food

youthinkgreen: Is this mainly due to the constant availability of ready meals and the ubiquity of fast-food chains?



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Wiener: It starts with the fact that entire generations grow up with incredibly processed products and may hardly even be aware of the wide range of varieties and breeds available. Here's an example: The milk from the supermarket will now no longer go sour because it hardly contains any lactic acid bacteria. Milk is actually a living organism and the taste can vary depending on which wild grasses the cow has eaten, what breed the cow is, the cow's age and the time of year. But who among us still knows the natural taste of raw milk? Farmers in Germany are not even allowed to sell raw milk. The milk you can buy in normal shops is sterilised to death, homogenised, separated, frozen and then heated up. It does not even deserve to be called "food".



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In addition, many products are enriched with artificial vitamins, flavourings, flavour enhancers, preservatives and additives, something our metabolism cannot possibly handle. These kinds of substances were not found in our food until just a few decades ago and we do not yet know the long-term effects this will have on our health, nor will this be investigated.

youthinkgreen: Fresh fruits and vegetables are important, but what does "fresh" really mean? What is the difference between an apple from a private orchard and apples that can be purchased quite conveniently from the supermarket?

Wiener: I'd like to answer the question not from a scientific perspective, but from my own experience of life. There are apples that keep and apples than can only be enjoyed for a very brief period of time. The world of apples is incalculable. If you have ever harvested different apples from trees or consumed untreated apples from the region in which they are grown, you know how different these can taste and look. From the very first bite, you recognise whether or not you like

the taste of that particular variety. I used to treat my stomach by stuffing it full of semi-sour apples directly from the apple tree – what a dream. I loved it since that first tart bite was still followed by a certain sweetness, which always gave me a noticeable sense of energy in that moment. Each "freely grown" apple is different, has its own shape and ripeness, bruises and unique colouration.

However, you'll often only find sprayed and polished hybrid apples in our supermarkets, mostly from spindle trees that have been standardised to the lowest common denominator of taste, shelf life, appearance and size. These trees are downright exhausted and stop producing after ten years, and are then cut down. A real apple tree can live to be roughly 80 years old. What a loss of respect for nature, taste, joy and diversity.

To me, "fresh" means the degree of naturalness. But it also involves short distances between the produce's place of cultivation and people. Instead, we eat foods and no longer know what's in them, how they were harvested and whether they have been flown 10,000 kilometres around the world. And I think that also is accompanied by feelings ranging from a sense of uprooting and loss of control to powerlessness.

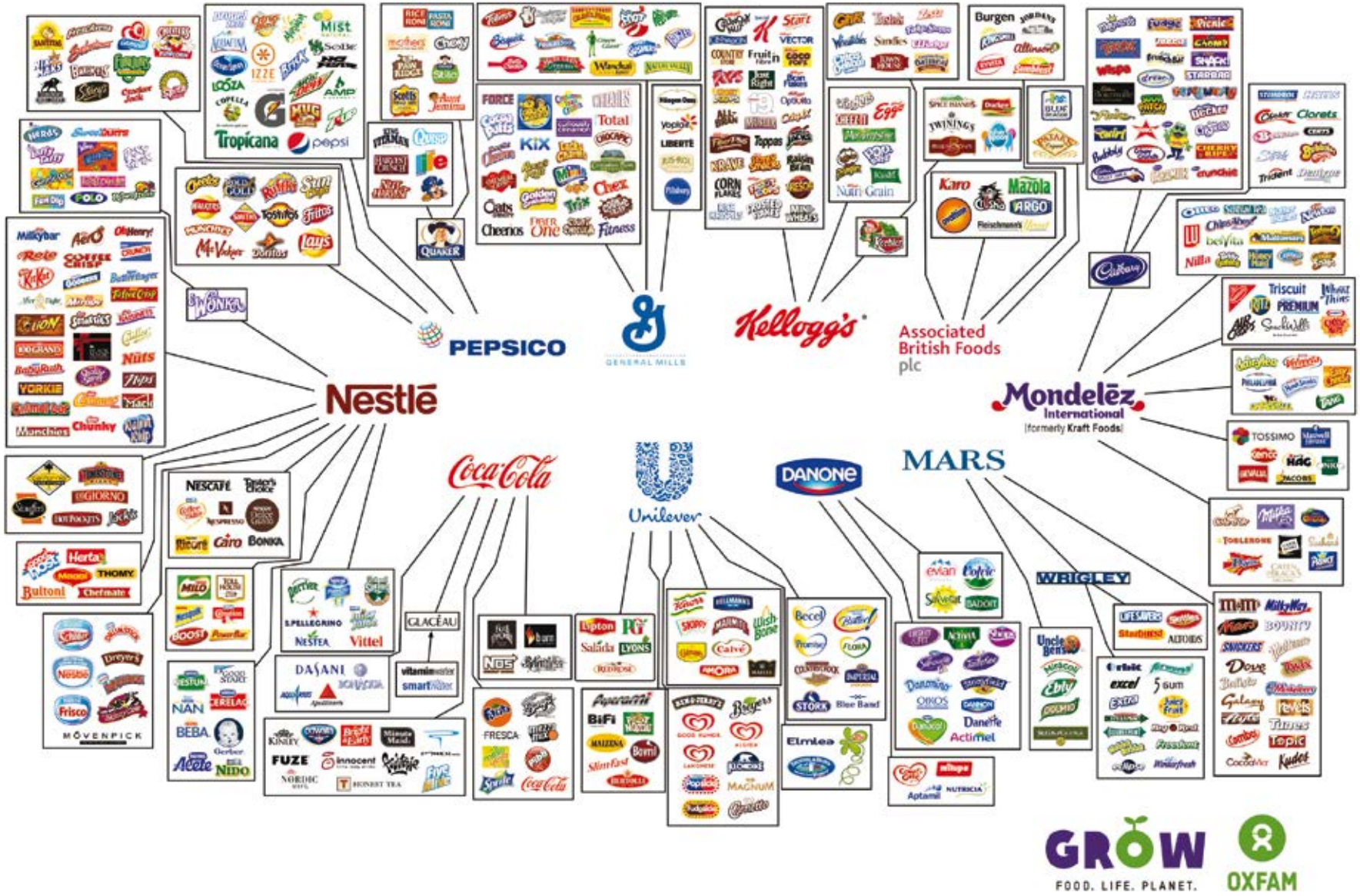


Not much is better than your Grandmother's cooking

***youthinkgreen*:** But most people do not have the time or opportunity to grow and harvest fruits themselves, or even to investigate exactly under which conditions their supermarket food is produced. The theme seems to be that it comes down to whether the price is right. People's interest is only piqued when something goes well and truly wrong, i.e., rotten meat. How could that be changed?

Wiener: I think that more and more people understand the relationship between health and nutrition and that more and more people are also taking a critical look into how our food is produced. It must be clear to us that our organism will not be spared when we eat food that comes from diseased soils, diseased plants and diseased animals. For me, health has a lot to do with enjoyment and awareness, and this is not something I experience when I bite into extremely processed industrial biscuits that are sugary-sweet and smeared with trans fats, with a list of ingredients I do not understand.

And then I'll taste citric acid, for example, and I'll cringe from the metallic after-taste. In our society, we must have noticed that chronic inflammatory diseases are being seen more often, that allergies abound and that so-called adult-



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CHEESE © Rita Kohel

onset diabetes, type II diabetes, is suddenly affecting small children. This kind of thing would not be happening with Gran's home-made plum cake! But instead of working on the causes, we always just treat the symptoms. It's remarkable to me that we don't all stand up and say, "This is not how we want to live!" I don't eat anything if I cannot clearly recognise what it is and who has made it.

youthinkgreen: What exactly should we be standing up against? Supermarket chains? Conventional livestock farming? The production conditions used in industrial agriculture?

Wiener: Ten large corporations now control more than 80 per cent of total available food. And the diversity supermarkets are trying to signal to us with their 80,000 different products is a lie. Take a moment to read the labels: they always contain the same things. It's just the physical state of the sugar content and the type of sugar, the colourants or flavourings used that are different.

Do we need global corporations that rake in their billions, that only think about maximising their own profits and only pay taxes in the cheapest possible place? That are destroying smallholder farming structures in rural regions, including our own region and our own economy? I don't think so! What we need is a systemic change. Industrial agriculture based on monocultures using tonnes of chemical agents is not sustainable, neither for us as human beings nor for nature.

60 years ago, our diet overall was environmentally friendly and regional. Meals were cooked at home in all families. Each region had its own recipes, vegetables, fruits and cereals adapted to the area and their own culture. We cannot simply throw up our hands and give up our own food sovereignty, allowing ourselves to be fed by so much foreign produce. We should always ask ourselves, "Who is benefiting from these structures?"

"A war against ourselves"

youthinkgreen: What impact has industrial agriculture on the natural world?

Wiener: We are destroying fertile soil with pesticides, fungicides and fertilisers. An incomprehensible amount of water is consumed by agriculture, some 70 per cent of our freshwater supply worldwide. Biodiversity is decreasing rapidly. The seeds produced through human heritage are being patented by corporations and are being genetically manipulated on an increasing scale. Agro-industrial structures and large corporations determine what is grown and how.

We are destroying our rainforests and stealing land in distant countries to make room for the cultivation of soy, which we use to feed animals in factory farming. To put things radically, we are waging a war against nature because we believe we know better. But our very existence and our fate depend on na-



The emblem of the Protest movement

ture. Wherever we are waging this war against nature, we are waging a war against ourselves. But we also know that our resources are finite and we consume three times what the world has to offer us. You don't have to be an environmentalist to know that things cannot continue this way.

youthinkgreen: So what alternatives do we have? After all, in 2050 nine billion people will live on this planet and 60,000 will leave the countryside every day for the cities in hopes of eking out a better existence.

Wiener: The solution can only lie in organic farming and in decentralised, small-scale structures. These are less susceptible to stresses. This kind of agriculture is the only system that can grow top soil, making the ground more fertile. In principle, each country should be able to eat from scratch, or at least try to. And that begins with regions protecting their soil and their seeds! There are so many old varieties that are perfectly adapted to specific conditions, but unfortunately cannot keep up with high-bred hybrid varieties in terms of yield.

If farmers stop growing their long-standing seed varieties, they will die out eventually. Eventually, the farmers will recognise that they are unfortunately now dependent on seed companies like Monsanto because they must buy new "products" every year, including the fertilisers and pesticides that are particularly required by these plants. You cannot just pick up where you left of with hybrid seed varieties and plant them the next year, as has been done for thousands of years, because they are degeneratively barren. This means that they only have a high yield in their first year.

That's why I say down with these hybrid seeds that make us so dependent on the world market and destroys the existing diversity. I don't think the solution is for all of us to become vegans because we are frustrated and shocked about what takes place in industrial factory farming. But we do all eat too much meat, and only eat the filet and the back.

But instead of improving how we handle our livestock and honouring meat as the exception and something special, we prefer to consume imported products, products, such as seaweed from Japan and quinoa, an Incan grain from Peru, which the poorer people in that country can suddenly no longer afford to buy because of our demand for it. That's not a fair approach. Heavily processed industrial meat replacement products may not be the solution.



Cookery course for children with Sarah Wiener. © Sarah Wiener

The aim must surely be for us all to be able to eat organically and healthily and for us to maintain this food diversity. It is not enough for small groups of high earners with the socio-cultural backgrounds that accompany this status to make sure they buy local and seasonal foods, whilst the majority continue to be fed on industrial, highly processed discount goods from conventional animal farms and the agro-industrial complex. In addition, the other developing and emerging countries cannot live like this – our planet cannot sustain this. But in Asia we are already advertising for more consumption, more industrial food and, for example, for people to drink more milk because we are overproducing it here.

Cooking as an act of devotion

youthinkgreen: To what extent do you want to promote your work as a chef and political awareness of these connections in the production of food in our profit-driven global economy through your cooking classes for children?

Wiener: I see my foundation, the Sarah-Wiener-Stiftung, as a cornerstone of food sovereignty. By cooking together, we can learn to recognise the quality of food and to demand this quality. If you have no certainty and no self-esteem with respect to your own skills and your body, how can you analyse highly complex political contexts?

The old proverb says, "You are what you eat." The head does not act independently of the body. In other words: Our food is not only the driving force for our muscles, but also affects our thinking and our souls, how you feel about yourself and the world in which you live and how you gauge this. Our body has adapted evolutionarily perfectly to the food sources in our different regions over the last ten thousand years. That's what I want us and our children to have fun and make conscious decisions in practice to cook chicken soup together, for example.

youthinkgreen: Isn't cooking and eating together actually a traditional pillar of family upbringing?

Wiener: If parents are no longer able to teach their children how to cook, the State must take on this role, through schools, for example. I think this is a basic skill that every person needs: being able to feed yourself, knowing how to cook rice or boiled potatoes with herbed quark (a German staple meal), being able to tell when onions have gone translucent in a pan, when they are golden brown and when they are burnt. In my eyes, cooking is something to be enjoyed by everyone. Moreover, cooking is an act of creativity, devotion and affection; cooking is an act of love – love of yourself and love of others. We must not lose this.

youthinkgreen: You have travelled a lot to study the culinary traditions in other countries. Which social and environmental values are associated with food and its preparation in Asia, for example?

Wiener: In developing and emerging countries, people do not stuff their mouths with ready-made products like we do as a result of stress or boredom. Food is precious, you have to wrest it from Mother Earth or from your animals. Every meal is a welcome opportunity for communication; it is the unifying element in communities, in families, groups and villages, just how it used to be for us. But we have increasingly isolated ourselves in Western society. Has this made us richer, happier, more beautiful, more satisfied, more intelligent and more generous? That is the question we must all ask ourselves. And if the answer is, "No," then the follow-up question must be, "What is the true price we pay for this way of life?"



© Klaus Fahlbusch

A bit of advice



youthinkgreen: What ground rules do you want to give young people and families with regard to their food, so they end up with an environmentally friend and healthy meal table?

Wiener: Don't eat packaged products whose labels you do not understand. To put it another way: Don't eat anything your Gran wouldn't recognise as food. Instead, opt for staple foods and use them to cook yourself a wide range of dishes. Just think of the possibilities offered by a simple carrot! Eat a wide range of fresh foods offered in your reason on a seasonal basis. Seek out sustainable options to access these foods; perhaps you could visit vegetable gardens and farms in your local area and be only eat meat sparingly. Cook together with others – with your neighbours, friends, the elderly and with immigrants. By doing so, you'll learn to cook a lot of different dishes and experience different culinary traditions, band share your own in the process. Organise a leftovers pot-luck dinner party and invite others to attend.

If you're going on holiday, don't throw half of the contents of your fridge in the bin; ask your neighbours if they'd like to have the food. And here's another important point: It's not a competition to see who can conjure up an exotic dish every single day. If it's something you like, of course you can have pasta, but maybe have it every other day and preferably with different sauces or side dishes. When you're looking for a quick snack in between meals, simply munch on a few raw radishes or a bell pepper. Learn to eat with real joy again and to simply experience the taste of things as you eat them.

youthinkgreen: Can changing our diet be the first step on the way to an environmentally friendly and sustainable way of life, both today and in the future?

Wiener: We are sustainably nourished if we healthily and dedicatedly attend to all three levels of our existence: our bodies, our souls and our spirits. We also need to pay attention to our needs. To do this, try this simple experiment: first slowly chew and taste a piece of artisanal baked wholemeal bread and then try a piece of industrially manufactured bread. Some things you can't explain; you just have to experience them. And the things that do your body and soul good in the long-term are also compatible with our ecosystems. That's an idea I find very comforting. This is not a "man versus nature" scenario. We actually share a common home. If we heed these principles, it will encourage us to rethink and take action, both economically and politically speaking.

LEARN • UNDERSTAND • ACT

1. Sarah Wiener analyses and criticise how our society feeds itself. She provides her readers with specific concrete demands and has come up with a lot of advice. Research the following statements and discuss them as a group.

a) "Taste is something that needs to be trained. Having a taste memory is something that can be of valuable help to people."

b) "The milk you can buy in normal shops is sterilised to death, homogenised, separated, frozen and then heated up. It does not even deserve to be called 'food'."

c) "Many products are enriched with artificial vitamins, flavourings, flavour enhancers, preservatives and additives, something our metabolism cannot possibly handle."

d) Talking about apples/apple trees: "The loss of respect for nature, taste, joy and diversity is enormous."

e) On the topic of fresh foods: "I think that our purchasing behaviour is accompanied by feelings ranging from a sense of uprooting and loss of control to powerlessness."

f) "I think that more and more people understand the relationship between health and nutrition and that more."

g) "This is not how we want to live! I don't eat anything if I cannot clearly recognise what it is and how it was produced."

h) "We cannot simply throw up our hands and give up our own food sovereignty, allowing ourselves to be fed by so much foreign produce. We should always ask ourselves, 'Who is benefiting from these structures?'"



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i) "The solution can only lie in organic farming and in decentralised, small-scale structures."

j) "In my eyes, cooking is something to be enjoyed by everyone. Moreover, cooking is an act of creativity, devotion and affection; cooking is an act of love – love of yourself and love of others. We must not lose this."

k) "What is the true price we pay for this way of life?"

l) "Learn to eat with real joy again and to simply experience the taste of things as you eat them."

2. Putting actions to the test
Most foods contain many additives – sugar, colouring agents, etc. Check the food you have at home for additives. Created to a table, as shown in the example. The ingredient list on food packages is always sorted according to the quantity proportion.

Additives Product	Emulsifiers	Flavouring	Glutamate	Colouring	Acidifiers: citric acid
Nut nougat cream			X	X	
Sliced cheese			X		
Tomato sauce		X	X		X

a) What additives do you see most often? Examine these additives.
b) What foods have a form of sugar or sweetener listed amongst the top three ingredients?
c) Record your results and publish them in your school newspaper.

3. Debate on vegan diets

Organise a major debate about vegan diet in your year. Be sure to take into account the aspect of regionality highlighted by Sarah Wiener. Valuable support can be found at www.sn.schule.de/~sud/methodenkompendium/module/ansatz1/3_2_20.htm (German) on preparing for the debate, the debate process and evaluating the outcome.

Examples of possible positions for the respective sides of the debate might be:

- A: Moderator

- **B: Vegan for animal welfare reasons or activist:**
  You have been eating a vegan diet since childhood, mainly because of your critical attitude towards modern animal husbandry. In your opinion, no living being should have the right to imprison another – let alone to exploit it for its own benefit. In the past, you've already been involved in "freeing several animals from captivity" under cover of darkness, and have therefore faced problems with the law. But you also have a weakness: You still love the taste of meat and therefore try to replace your former enjoyment of meat with vegan substitutes made from seitan or tofu. Although you are aware of the far-reaching consequences for people and the environment resulting from of highly processed vegan ready-made foods and the dubious origin of individual commodities, such as soy bean oil or palm oil, you consider them an unavoidable evil.

→

- **C: CEO of a large meat processing concern:**
  You are in charge one of the largest German corporations in the chicken and beef processing industry and your company supplies supermarkets throughout Germany. Every week, your corporate group slaughters around five million chickens and 20,000 cattle. Your company is facing criticism as a result of numerous public scandals.

  Allegations of every possible wrongdoing have been levelled at your concern. Re-labelled foreign beef, serious violations of the Animal Welfare Act, corruption and erosion of workers' protections as well as a wage policy that stipulates that your workers, allegedly in Eastern Europe, are to be paid an hourly wage of less than three euros. You see yourself as a victim of a media witch hunt.
  In your opinion, the family business you are in charge of makes "huge social contributions" and allows each/every German citizen to eat a "good and affordable piece of meat every day". In your opinion, veganism leads to symptoms of deficiency. In addition, you dislike the self-image you have of vegans evangelising other people and discriminating against them because of the type of food they eat.

- **D: Politician**
  You are a representative of major and popular party in Germany and have a decent career behind you. Born in a small village, you're aware of the problems of factory farming and the issue is one of the reasons you got into politics in the first place. You try to at least minimise your own consumption of meat. However, the meat industry is responsible for a lot of jobs in Germany and represents the "luxury for all" mentality of the post-war generation.

  As a result, both a segment of your largely elderly constituency and the meat lobby do not look favourably upon your criticism of factory farming. You worry about upsetting both your party, a core voter segment and large corporations, and therefore try to express yourself as diplomatically as possible.

Other possible roles (panel members) could be:

- E: Chef
- F: Nutritionist
- G: Farmer

4. regional – seasonal – fair – economical

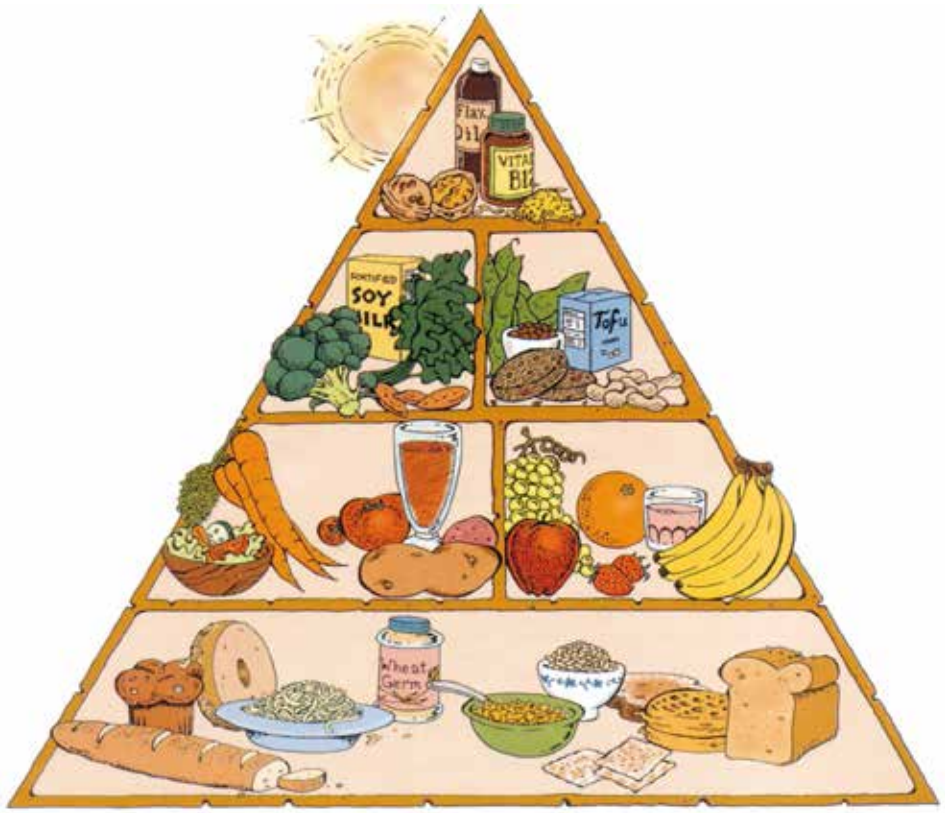
Sarah Wiener attaches great importance to regionally produced and processed foods.

a) Think about and research where you can buy regional foods within a five-kilometre radius.

b) Keep a list of your results, including a map and important information (contact details and opening times) on small organic shops, organic farms and eco-villages (they may even deliver to your home).

c) Also research whether there is a food co-operative in your area you could get in touch with.

d) Become a food hero: ask for donations of food at your local market or bakery and donate them to people in need or use it to cook something for your friends and neighbours. Take this opportunity to start a conversation about how much food is thrown away every day in Germany.



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ALTERNATIVE FORMS OF CONSUMPTION: SHARE, TRADE, BORROW

By Maike Gossen

Whether in libraries, launderettes or shared flats: people everywhere share items and resources. And being able to borrow items from friends or family – items such as blenders or even a bicycle – is really just a normal part of our lives. In many countries, sharing even extends to traditional food culture. Yet social or entrepreneurial initiatives under the motto, "Using instead of owning," are considered a new trend in Western countries. Some see it as an alternative to materialistic individual consumption. Others see it as a promising business model, and still others simply consider it a smart idea to save a bit of money in our everyday lives.

Today, most people in Western, industrialised countries live in material prosperity. But our style of consumption is increasingly reaching its limits: Pollution, the scarcity of raw materials and mountains of waste are just some of the acute environmental problems we are now facing.

Against this backdrop, more and more people are looking for ways out of this wasteful society and are trying out new forms of consumption. They want consumer goods to no longer be privately owned in the long-term, but for them to become community goods through trading and sharing. Why own your own car when you can borrow a car-sharing vehicle when you need it? Sporting equipment and tools that are only needed a few times a year anyway no longer clog your cellar – they can simply be borrowed online. And handing down used goods is making a comeback. It saves money and shelf space to buy used books, computer games or DVDs on online marketplaces instead of buying them new and then simply passing them on when you're finished with them. To distinguish between the numerous, sometimes very different examples, it makes sense to make a divide things up into forms of consumption that replace ownership and those that are based on ownership (Scholl et al., 2013, p. 4 et seq.).



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To own or not to own?

Concepts that replace ownership ("sharing") allow for the temporary use of a product without owning it yourself. The product remains the property of the owner. This is usually a company that requires a rental fee to use the service. The best known example is probably car-sharing, but libraries and tool rentals also work this way. There are now even services that enable borrowing between private individuals, for example, cars being used by multiple private individuals. The principle can be transferred to almost all conceivable



take it – for free: moneyless © Tobias Vogler

product groups and target groups. However, it is best applied to sharing products that are relatively expensive to purchase, are operated according to standardised operating principles and do not belong to the segment of short-lived consumer goods (Scholl et al., 2010, p. 18).

As the name suggests, products in **ownership-based services** remain the property of the user or ownership is passed on along with the property. Examples include online exchange platforms, for-free book shops, toys, DVDs, etc., or repair workshops that provide the tools and instructions for repairing damaged items. The advantage of these options: Instead of replacing any product that is broken or is no longer needed with a new product, it is returned to the cycle of use and is recycled in a way. This conserves resources and reduces waste volumes.

A representative study conducted by the German Ministry of Environment to raise Germans' awareness of environmental issues every two years proves the growing interest in alternative forms of consumption amongst the population. According to the study, more than half of respondents find rental or borrowing options for used products very or fairly attractive (cf. BMU and UBA, 2013). In another scientific study, respondents were divided into consumer types. According to the study, nearly one-quarter belong to the group "socially innovative co-consumers", i.e. people who already practise alternative forms of ownership and consumption (cf. Heinrichs and Grunenberg, 2012). They are highly educated and earn more than the average German citizen does.

Online portals and intelligent software

But why is this trend of "using instead of owning" experiencing such a surge right now? The Internet and social networks are making this possible! Previously, the effort and cost needed for similar types of trading or borrowing campaigns were often greater than their respective benefits. The variety of online services and the dissemination of intelligent software solutions means campaigns like this are easier to implement today. The Internet also speeds up communication and networking amongst people, allows for uncomplicated payment transactions and strengthens the confidence of external users through rating systems. Added to this are a growing popular awareness of the environmental and social consequences of our actions and pragmatic and financial motives (cost advantages).

From the perspective of sustainability and environmental research, environmental relief potentials are especially important. Fewer cars on the road will also lead to less emissions and pollutants in the air. A durable item of clothing that is put in another's closet instead of the bin ends up being used longer and more intensively, increasing resource productivity. In summary, collaborative and therefore longer and more intensive use slows down production processes and conserves natural resources (Hirschl et al., 2001, p. 15).

However, we need to examine this carefully. Not every form of collaborative consumption actually has a positive effect on the environment. If

OUR AUTHOR

Maike Gossen (b. 1984) has worked as a researcher at the Institute for Ecological Economy Research in Berlin since 2013, primarily focusing on sustainable consumption practices, social innovation and sustainability marketing.





Environment shop in Berlin © Thomas Bölke

used books are sold on online marketplaces like eBay and are subsequently sent across the country to the buyer by post, the positive effects that were originally created by extending the book's shelf life, so to speak, can quickly dissolve into thin air. Although we are conserving resources on the one hand, we are also increasing pollutant emissions through transport on the other, and packaging is not always environmentally friendly either. It is just as unfavourable to the environment, if we use the money we saved by buying cheaper used items to invest in other possessions and therefore consume more overall. These undesirable effects are called rebound effects and little scientific research is being conducted on this.

So, as impressive as the growing number of users of trading, sharing and borrowing services may seem, they are and remain niche phenomena. Nevertheless, they do hold great potential for changing our consumption patterns and lifestyles towards sustainability, although they raise many of the questions as well, for example, the question of only owning a car as an adult. In Brazil, the issue of "using instead of owning" is even being addressed in schools, and rooms for trading things are being set up where pupils can leave behind items they no longer use but are still in too good a condition to throw away for others to take with them.

Links to services for "using instead of owning"

- Clothing exchange and fashion blog, **Kleiderkreisel:** www.kleiderkreisel.de
- Deutsche Bahn bike sharing programme, **Call a bike:** www.callabike-interaktiv.de/index.php
- Overview of (similar) **bartering groups** in Germany: www.tauschen-ohne-geld.de
- **Ride sharing:** www.mitfahrgelegenheit.de
- Online **trading platforms**: www.netcycler.de, www.frents.com, www.klamottentausch.net

INFO 1:

Instead of "using instead of owning", we often hear about "co-consumption", "sharing" or "collaborative consumption". The idea is even sometimes described as a separate industry – a "sharing economy".

INFO 2: FACTS ABOUT RESOURCE CONSUMPTION

The world's resource consumption has increased by 80 per cent over the past 30 years. In the US, per capita resource consumption is 27.5 tonnes, while in Europe it is 14.7 tonnes and 13.8 tonnes in Asia. While 18 countries are responsible for the consumption of more than three-quarters of global resources, the 100 most resource efficient countries consume a mere 1.5 per cent of all raw materials (cf. Dittrich et al., 2012).

Waste issues: 100 million tonnes of plastic waste now float in the sea (cf. 3sat, 2012).

INFO 3: FACTS ON ALTERNATIVE FORMS OF CONSUMPTION

In 2012, nearly 500,000 Germans took advantage of **car sharing** – either as a member of an organisation that provides station-based car sharing or as a user of flexible offers by auto manufacturers (e.g., Drive Now or Car2go), something that has rapidly expanded over the past few years. By international comparison, Germany is in second place behind the US both in absolute terms and as a proportion of car sharing users against the total population (cf. BCS e.V., 2013).

The Internet-based **sale or exchange of second-hand goods** is also booming. At the start of 2014, eBay Germany had more than 5.4 million private sellers who offered more than 20 million items for sale every month. More than one million members are now swapping their used garments on the online platform, Kleiderkreisel (cf. eBay, 2014).



© givebox.net



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INFO 4:

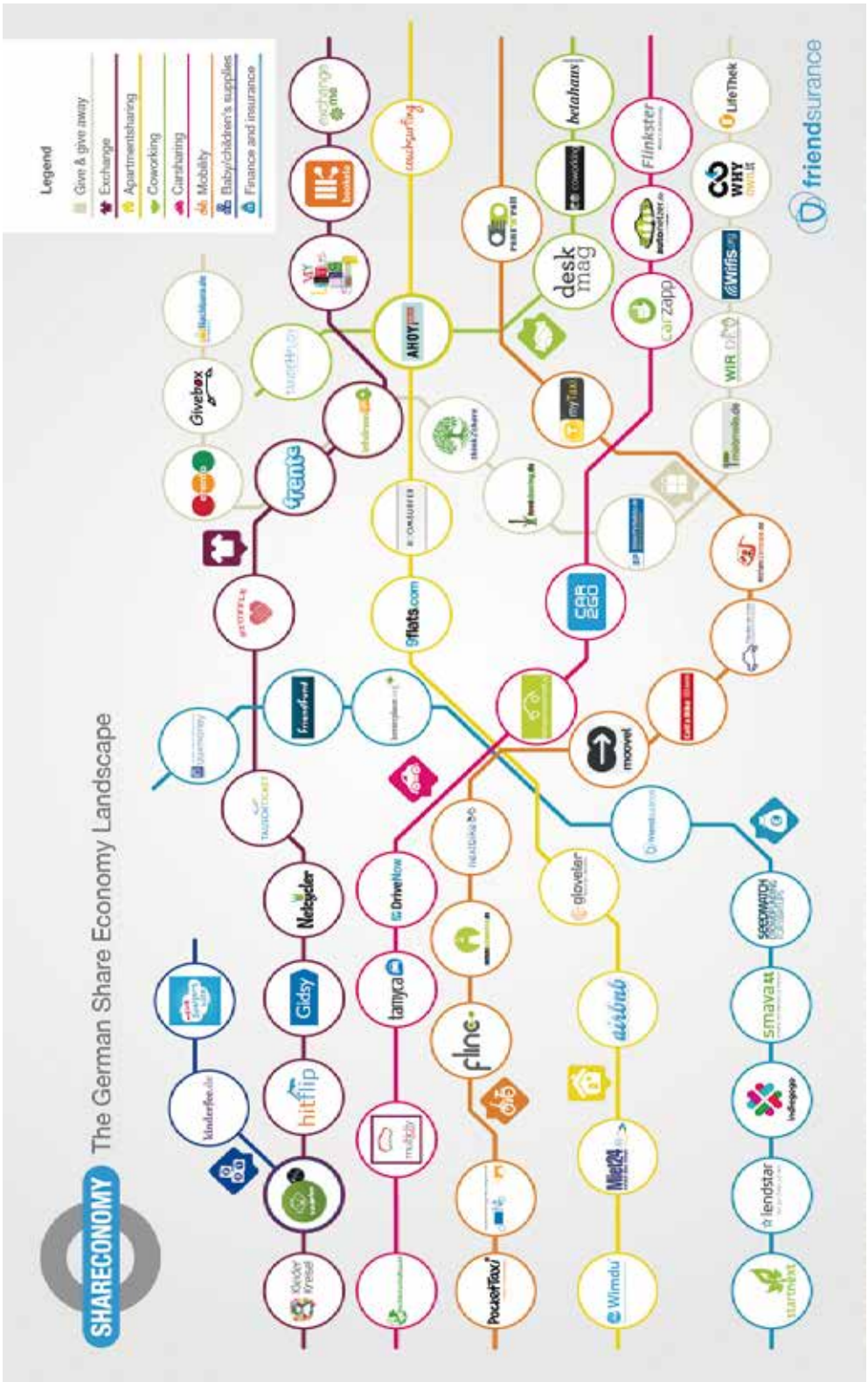
At an annual output of 30,000 kilometres, a **car sharing vehicle** replaces around six private cars. Car sharing customers release an average of 142 kg of CO_2 less per person per year than in a theoretical situation in which there is no car sharing (cf. Wilke, 2009, p. 114).

INFO 5:

The **Give Box** is a local donation box in which anyone can deposit unused things to take away. There is no operator or owner, and the idea lives off of people's commitment and responsibility. There are now publicly accessible donation boxes in many cities.

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LEARN • UNDERSTAND • ACT

1. More and more people are trying out alternative and often new forms of consumption.

a) Provide an overview of this in tabular form. Also be sure to research the keywords "social innovations", e.g., look at the German Environment Agency (Umweltbundesamt).

b) There is a close connection between consumption patterns and lifestyles. Ask questions at places in your local area where alternative forms of consumption are practised, and conduct interviews there. What findings (results) did you come up with? Write a portrait of your interviewees and/or write out the results in classic interview form.

c) What alternative forms of consumption are you most interested in and would you want to give them a try in the near future? Explain.

2. Explain the terms "ownership-substituting concepts" and "ownership-based offerings".



3. Forms of consumption following the motto of "using instead of owning" are currently experiencing an upswing.

a) What do you consider the reasons for this?

b) What potentials for environmental relief can account for this trend?

c) What rebound effects could be associated with this development? Research this.

4. Develop a campaign or project plan for your school or your community under the motto: "Alternative forms of consumption – getting out of the niche". If needed, gather suggestions from young people who already have experience with this, e.g., *youthinkgreen* "consumer transformation" project.

5. A place for swapping things is part of everyday life at many Brazilian schools.

a) Implement your campaign plan at your school.

b) Alternative forms of consumption are sure to rouse great interest at your school as well. Conduct a survey on the subject.

c) We at *youthinkgreen* will tip our hat to you if you succeed in establishing at least one alternative form of consumption at your school in the long term in co-operation with the school's management and the student body.



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FAIRLY AND SUSTAINABLY PRODUCED: THE LATEST SMARTPHONE TRENDS

By Christian Wölbert

Your favourite music, your photos and lots of different apps can be found on your smartphone. You can play games with it, use WhatsApp and go on Facebook. Your phone lets you survive even the most boring hours spent at school. Nevertheless, it is worthwhile to switch your smartphone off briefly every once in a while and consider it from all sides. This highly complex product consists of thousands of individual parts that come from around the world. If you know how your smartphone was produced, you also know a good deal about how the globalised economic system works and how you can improve it as a consumer.

Some two billion classic mobile phones and smartphones are sold every year. But in terms of production, things are sometimes rather unfair: Some people are earning a lot of money very quickly in the process, but most of those involved will remain poor their whole lives. Even environmental protection criteria are not always respected in production abroad. At first glance, your smartphone tells you nothing about how it was produced. When the screen is off, you can only see your reflection; on the sides just a few buttons and ports. But printed on the back are usually tiny letters reading "Assembled in China", "Made in China" or "Made in Korea". Most smartphones, for example, all Apple phones, are made in China. Some Samsung and LG phones come from South Korea. But no matter which brand and which country, smartphones are always assembled by hand. As of now, there are still no robots that could reliably produce such small and sensitive devices.

Assembly line work

The conditions in the Chinese smartphone factories are particularly bad – much worse than German or French car factories, for example. These devices wend their way through huge factory halls on a conveyor belt. Workers sit or stand on the left and right of the assembly line. Many are only 17 or 18 years old, still teenagers. Every now and then the police even discover a 15-year-old in the factories. This form of child labour is banned in China, but strict controls to enforce this are usually lacking.

Every worker must install a certain smartphone part, for example the battery. When they are finished, they put the phone back on the assembly line and install the battery in the next smartphone. In most cases, the installation of parts like this takes less than half a minute, sometimes only two seconds. Because of this, the young men and women working in these factories often perform the same task thousands of times during a single workday. In a factory for smartphone casing in Dongguan in south-east China, some workers glue a cover into a plastic part 15,000 times per day according to a report by an employee of the organisation China Labor Watch in late 2013 who secretly worked in the factory for several days.

Eating, drinking and speaking are not an option

Workers cannot eat or drink on the assembly line. It is either forbidden or impossible due to the high targets they must meet every day, for example, assembling 8,000 smartphone casings per day. If they do not complete this predetermined number of pieces, they earn less money and get into trouble. In some factories in China, the pace of work is so fast that workers cannot even talk to one another.

The workday is longer than it is in German factories. Seven to eight hours is normal for us, but in China it is closer to ten to twelve hours. Workers have a short break every three hours or so to get a drink. They have a meal break lasting 30 minutes to a full hour once per shift. They even work nights and weekends. The assembly lines never rest. Before Christmas, a time when many smartphones are purchased in Europe, many workers in China work for several weeks straight without a single day off. Although this is prohibited, it is hardly monitored.

Most workers in Chinese factories live in high-rise flats right next door, in rooms with six, eight or even ten beds. Just finding some time to be alone and enjoy a bit of peace and quiet is impossible there. Many have come to the city from the countryside solely to work and see their families only once or twice a year. Nobody here works 35 to 40 hours a week as is the norm in German factories. Only by working 50, 60 or even 70 hours a week are they able to earn enough to live on and save a little for the future.

At the smartphone casing factory in Dongguan mentioned above, the base wage at the end of 2013 was only 168 euros per month. By working overtime and earning bonuses – even though these are not guaranteed – workers there earned an average of 320 euros per month. Some dream of opening a small store in their home village with the money they have managed to save from their



© ARD / Tagesschau

factory wages. Many prefer to stay in the city, find a better job, move into their own apartment and start a family. However, these dreams are so difficult to achieve that many workers simply give up hope.

general population. Some are so desperate that they take their own lives. We then read of this in the news in Germany. You may have heard that a company called Foxconn even had to attach nets to their high-rise buildings a few years ago because so many workers have jumped from the rooftops.

OUR AUTHOR

Christian Wölbert (b. 1983), journalist, writes for the computer magazine c't, primarily about technology, consumer protection, working conditions in production and sustainability. He advocates using devices for longer and takes aim at smartphone manufacturers who peddle products that don't last.

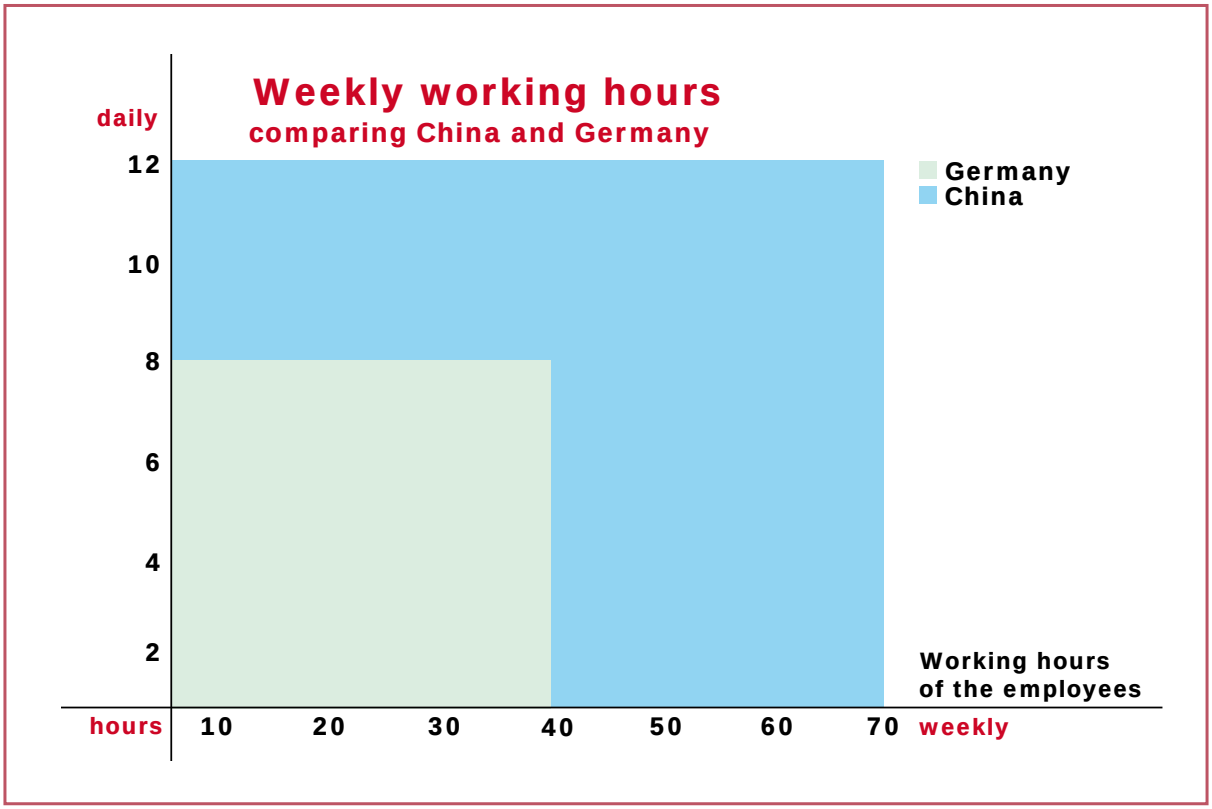


Nets set up for suicide attempts

One Chinese university found that 60 per cent of migrant workers in Shenzhen, the city with the most electronics factories, suffer from depression. This figure is only 20 per cent in the

Foxconn produces almost all of Apple's iPhones, but also produces smartphones and computers for other brands.

In short, this means that smartphones are so cheap for us to buy because the workers in China earn so little and have to share a room with seven of their co-workers, work 60 hours a week and are still barely able to save anything. In South





© FairPhone

But it's a different story with Apple and other major manufacturers. For example, market researchers estimate that the cost of parts for an iPhone 6 is 196 US dollars. Assembly of these parts by Foxconn in China costs four dollars. Add to this the costs of development, design, advertising and patent fees. Taking into account all of these costs, the iPhone is worth probably 300 to 400 dollars. Yet it costs 700 dollars when you buy it in the store – giving a profit of 300 to 400 dollars.

Korea, the workdays are shorter and there are fewer violations of the law (such as child labour). But working conditions there are still not nearly as good as they are in Germany. So those tiny words, "Made in China" or "Made in Korea", already reveals a lot about your smartphone.

What to do?

Is the answer not to buy smartphones any more? Well, that would not help the workers either because they would lose their jobs. It would be better to pay them higher wages. And this is precisely what a few young people from the Netherlands are doing already: They are having their "Fairphone" built in a Chinese factory and pay each worker a bonus of 120 euros – an amount that truly helps these workers realise their dreams. The bonus from the second round of Fairphone sales will be even greater. Add to this the fact that this is possible even though a Fairphone costs less than half as much as a brand new iPhone does now. This is because the young people from the Netherlands who founded Fairphone are only aiming to earn a narrow profit: They settle for five euros of profit per Fairphone. They spend 22 euros per unit sold on environmental protection and improved working conditions.

Is the battery replaceable or permanently built in?

But there is even more to discover: Can you remove your smartphone's battery easily by hand? If so, you'll save time, money and stress. And you'll be helping the environment. This is because batteries become weaker over time. Many only provide half of their original charge after two years. And they probably lose power right when you need it most. If the battery is easy to remove, you can buy a new one and install it yourself you for ten or 20 euros. If the battery is not easily replaceable by hand, you'll need to bring your mobile into a workshop or send it to the manufacturer. Battery replacement will then cost a lot more – maybe 50 euros, or perhaps even 80.

And how does a replaceable battery affect the environment? It's very simple: If you are able to replace the battery easily and conveniently, the more likely you are to use your smartphone longer. And the longer you use it, the better it is for the environment. After all, the production of smartphones pollutes the environment much more than their use does. Here's an example: Every iPhone



© MikroLogika

6 produces 95 kg of the greenhouse gas CO_2. A whopping 85 per cent of that is caused by its production. Only eleven per cent is caused by the power used to charge the battery if you use your iPhone for three years. So the longer you use the device, the fewer the number of new units that must be produced, meaning less CO_2 is emitted into the atmosphere. Luckily, there are a number of smartphones with easily replaceable batteries: not only the Fairphone, but also dozens of other models, such as those produced by Samsung and other manufacturers.

Gold, cobalt, copper, indium, tin ...

You'll need a bit of imagination for the next section. This is because the remaining "innards" of your mobile phone can only be found using special tools and a great deal of experience tinkering with things. But you can also simply search for "iPhone Repair" or "Repair Samsung Galaxy" on YouTube – then you see what your smartphone looks like on the inside: The largest part is a green plastic card (the motherboard). On it are a lot of wires, plugs and little black boxes (the processor and other chips). All in all, more than 1,000 small or even tiny parts come from modern factories in countries like Japan, Germany, South Korea, Taiwan and the US. The working conditions in these parts factories are better than those in the smartphone assembly factories. The most monotonous tasks there are done by robots.

These parts are made of plastic and around 30 different metals. Cobalt and lithium can be found in the battery, gold in the plugs, copper in the wires, tin in between the chips and the motherboard, iron in the screws, so-called "rare earth minerals" in the vibration motor and



© Amrith Raj



the speakers and indium in the display. The problem is that it is not possible to then remove these metals from these parts later on when you eventually dispose of your smartphone at the recycling centre. Copper and gold are easy to recycle – but it is not yet possible to recycle indium and rare earth minerals.

The metals that cannot be recycled will eventually grow scarce. In addition, the environment is suffering from this production of metals through mining: In Indonesia, Chile, Brazil, China and many other countries, entire mountains are torn down, forests are devastated and rivers are poisoned for tin, gold, copper, iron and rare earth minerals. This high metal content is therefore a further argument in favour of using smartphone for longer. The longer you use it, the less metal will have to be mined from the earth.

Fresh operating system

It may be the case that after two years you want a new smartphone because yours no longer runs as smoothly as it did when you first got it. But it's highly likely that you can do something about this: For many Android smartphones (for example, those made by Samsung and HTC), software updates are available from Cyanogenmod that allow your phone to run even more smoothly than before.

However, you should only install these updates if your phone is already at least two years old – otherwise you'll void the warranty. You can check whether an update is available for your mobile and how to install it oncyanogenmod.org. You should back up your data before doing so, so copy important items from your phone's internal memory to an SD card or a computer.

New battery, new operating system – it's like having a brand new mobile phone. And you've learned a lot about technology and saved some money along the way. Making a small contribution towards saving the world is so much easier than you ever imagined.

LEARN • UNDERSTAND • ACT

1. The production of smartphones is a highly complex process. To what extent does this provide insights into and conclusions about the globalised economic system?

2. The working conditions in many countries of the Global South can be analysed using the example of the production of smartphones.

a) Compare working conditions in Germany with those in China. What results did you come up with?

b) Create a list of criteria for humane and fair working conditions. For example, look at the demands issued by non-governmental organisations in your country or region that are focused on development policy for information that may be useful on this topic.

3. All about the "Fairphone".

a) What business idea and which companies are behind the name Fairphone?

b) On what financial basis were the first Fairphones produced?

c) Critics say that the Fairphone cannot bypass the existing problems and injustices of the world economy. To what extent is the Fairphone truly a fairer phone than other smartphones? Research this and form your own opinion. On this basis, what would be your purchase recommendation?

d) Will the (further) development of the Fairphone have an impact on the mobile industry as a whole? Discuss this as a group.

4. With some smartphones, it may be necessary to replace the battery after a certain amount of time. Why should this very point be considered when buying a smartphone?

5. Many environmental publications call on people to use their smartphones as long as possible.

a) What arguments can you find to support this request? Why do many people buy a new smartphone after one or two years, and how can we combat this? Discuss these questions with one another.

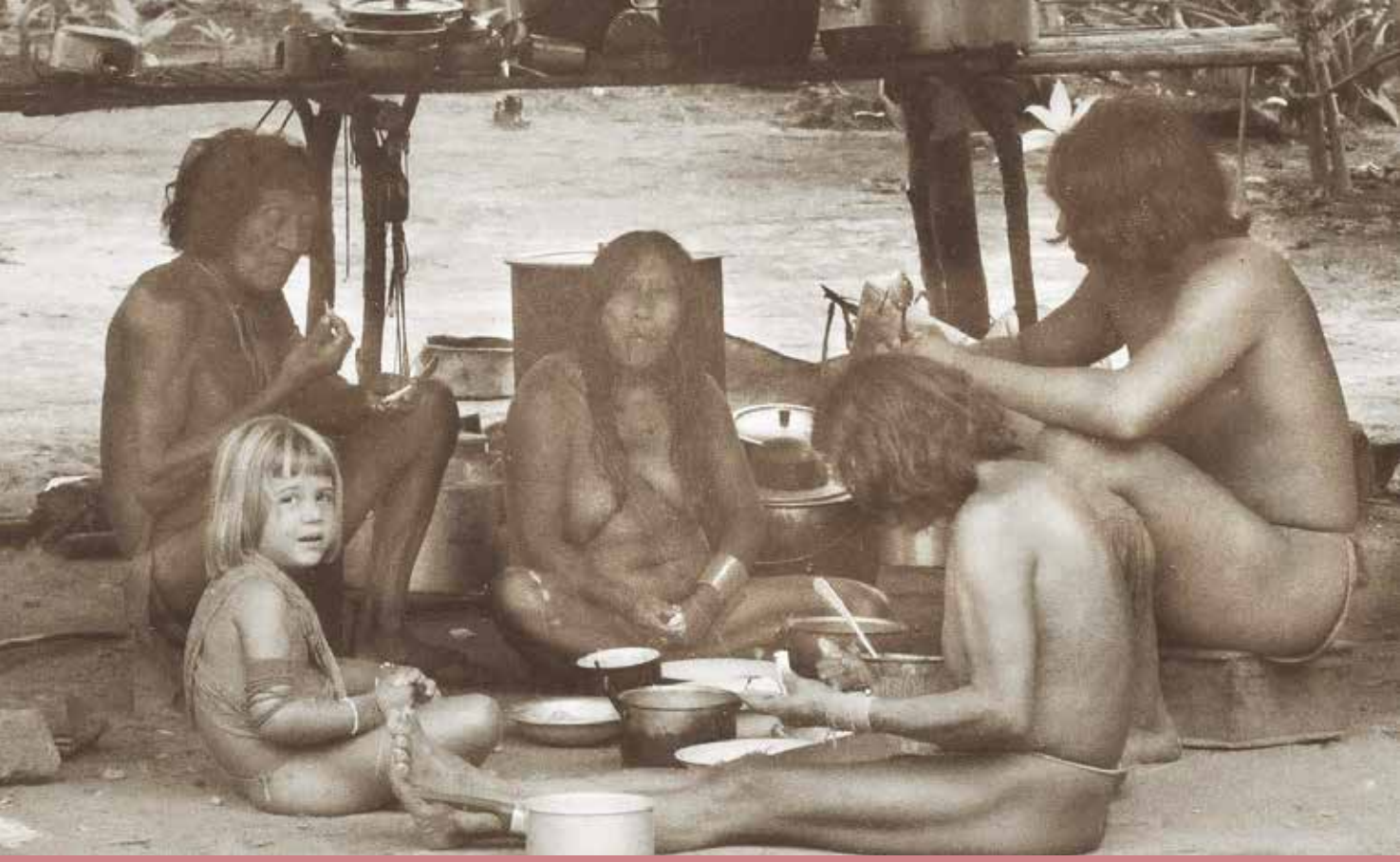
b) Pimp your smartphone: What options are available for "restoring" and upgrading smartphones?



6. You are starting a campaign called, "Environmentally friendly use of smartphones".

a) What would your directions look like? Research this.

b) Create a fact sheet for "Environmentally friendly use of smartphones" and distribute it at your school. Be sure to take into account the issues of "disposal" of non-functional smartphones.



Catherina Rust as a child with the Aparai

"EVERYTHING IS REPAIRED IN THE JUNGLE"

An interview with Catherina Rust

Pictures in black & white: © Catherina Rust

Catherina Rust lived in the indigenous community of the Aparai in the Brazilian rainforest, from the age of one until she started school, where her parents ran an ethnological research project. Far away from Western civilisation, she led a consumer-free life without supermarkets, electricity or a telephone connection, well protected by her chosen indigenous family. She learned the language of the Aparai and internalised their traditions and behaviours. Back in Germany, she suffered from culture shock, so foreign to her was this world of commodities and the quest for ever greater riches. The journalist has now found a middle ground and recorded her experiences in her book, Das Mädchen von Amazonas ("The Girl from the Amazon"). ***By Helmut Spiering***

***youthinkgreen*:** Ms Rust, how did you view these completely different "consumer worlds" you experienced as a child?

Rust: In my early childhood in the north-eastern Amazon region, I lived in a barter system; there was rarely any money if at all there. The Aparai in the Brazilian jungle made almost everything themselves. One indigenous tribe was particularly adept at making baskets and in the next village they were good at building boats, etc.

So there was a lot of bartering and trading with one another for what you needed at the time. From my childish perspective, that worked out well. When a new hut was about to be built, the residents from the surrounding villages would be invited to help and received the best food, for example tapir meat, cockle fish, spit roasted meat and drinks like cassava beer. When the new home was finished, a big celebration was put on to give thanks. This exchange currency – a kind of credit – was merely a willingness to help others



at an unspecified time in a similar situation in the future.

While I was at primary school in Germany, I found it very strange that everyone wanted to own as much as possible: my house, my car, my stereo, my clothes, my lawnmower, etc. were what they wanted. But the prosperity of one individual leaves little space for community. And the fact that you bought something new as soon as something broke was something I did not understand. In the jungle, everything was repaired until it fell apart. And after that it was recycled. When I attended high school in the US I frequently heard the phrase, "Money makes the world go round." Consumption and possession were considered the elixir of life there. As a result, people go into debt or become slaves to their own work in order to gain wealth or status. I don't think that this is a burden that pays off for anyone in the long term. Somehow I managed to experience both extremes in terms of attitudes towards consumption.

Peer pressure and the urge to shop

***youthinkgreen*:** How did you feel when you were young? How did you deal with peer pressure? You must have encountered it in high school with the battle to wear the most chic designer clothes.



Rust: When I arrived in the US, I had exactly two sweatshirts and two pairs of trousers in my suitcase. And that was at a time when teenagers there changed clothes multiple times a day and always kept up with the latest fashion trends. In order to be able to afford this, I worked like crazy in addition to going to school. Eventually, when it came time to return to Germany I realised that my closet was bursting at the seams. Most of it were things I had rarely or barely worn. That was a distressing moment.

***youthinkgreen*:** As an adult have you now found a compromise between doing without and wastefulness?

Rust: Yes, today it's more the case that I have to force myself to sort through things. I've had a lot of things for a long time and I cherish and care for all of them. I bring my shoes into the shoemaker and lo and behold: even after a decade, my boots still look just fine. I sometimes

dye faded items or refashion old clothes by altering them. This means I end up with very individual pieces that I could never buy at any store. Wobbly and worn out chairs are restored in a sheltered workshop of my choosing. Of course, I could easily use the money to buy a new chair, but that's just not me. Sometimes I have to laugh at people who tell me that shopping is fun. I now find it incredibly stressful. We should be calling into greater question what is more important: wearing only one brand (for show) or investing in particularly good quality items made in equitable and fair working conditions? Are we willing to pay a reasonable price for our consumption? Or do we truly find this kind of stinginess – of wanting to own as much as possible for as little money as possible – so attractive? For me, it's about quality, not quantity. That's a slogan I would like.

The secret to happiness

***youthinkgreen*:** How closely related do you think your life satisfaction, happiness, community and the protection of resources and the environment are?

Rust: Let's imagine two children. One who lives in the Western world and has parents who earn a good income. In his beautiful, large bedroom, the latest and most expensive toys pile up. This child is completely overwhelmed. He's never played with most of these toys. And the other child grows up in a poor suburb, for example, in an emerging or developing country. One of his few toys is a football sewn together from rags, and a whole gang of children from the neighbourhood play with it for hours at a time on the street. Which of these two children will probably have been happier on any given afternoon?

Generally speaking, I do not believe that deprivation and doing without alone are things that lead to enlightenment. Each one of us hopes for a good and healthy life with the appropriate safeguards in place because existential fears make us ill. But I think that the assumption that wealth and the unrestrained consumption that follows automatically lead to happiness is also a fallacy. Isn't it interesting how many wealthy people one encounters in the Western world who are deeply unhappy? Or bored and frustrated? What is the sense in wanting yet another thing when almost every material desire can be fulfilled? That would be like if every day were Christmas.



Catherina Rust watches the craftsmanship of Aparai



© Tobias Mittmann / jugendfotos.de

youthinkgreen: What tips and advice do you want to equip young people with?

Rust: I think that we should all think critically about what the advertising industry, politics and the economy are suggesting to us. Because of this, I want to provide my advice in question form: Do I really need a 60-hour job? And why? Just to be able to buy the latest Porsche or afford that weekend trip to New York? Will I receive greater social recognition as a result? Or would I prefer to work in an environment that fulfils me? One that allows me to divide my time better, where I can make a difference? Do I always need the latest things, designer clothes, electronic toys (a new phone every year, an iPad Air)? Or am I perhaps inventive and creative in terms of the way I live and how I use the resources at my disposal?

Be inconvenient and critical

youthinkgreen: I'll put it another way: Is it our Western system that is making so many in our society ill?

Rust: Yes, and this happens when we see ourselves as victims of a system. There will always be people railing against "society" as if we were forced to go along with things. But it is we ourselves that make up this so-called society. Each of us has the power to change the things in our own environment and set a positive trend in motion by doing so. But this requires independent thinking and a strong will. I need to be able to question developments, trends and hierarchies. And I have to be able to put up with sometimes being called "inconvenient". How many people who have initially been ridiculed, insulted or even threatened are now seen as role models? It's up to us whether or not we behave like lemmings that blindly follow every message and subordinate themselves to such a perfidious system as if we were under orders to do so, or whether we might want to be eagles instead. Independent and free. Fastidious and critical, with sharpened senses.

youthinkgreen: How do we achieve serenity and inner satisfaction?

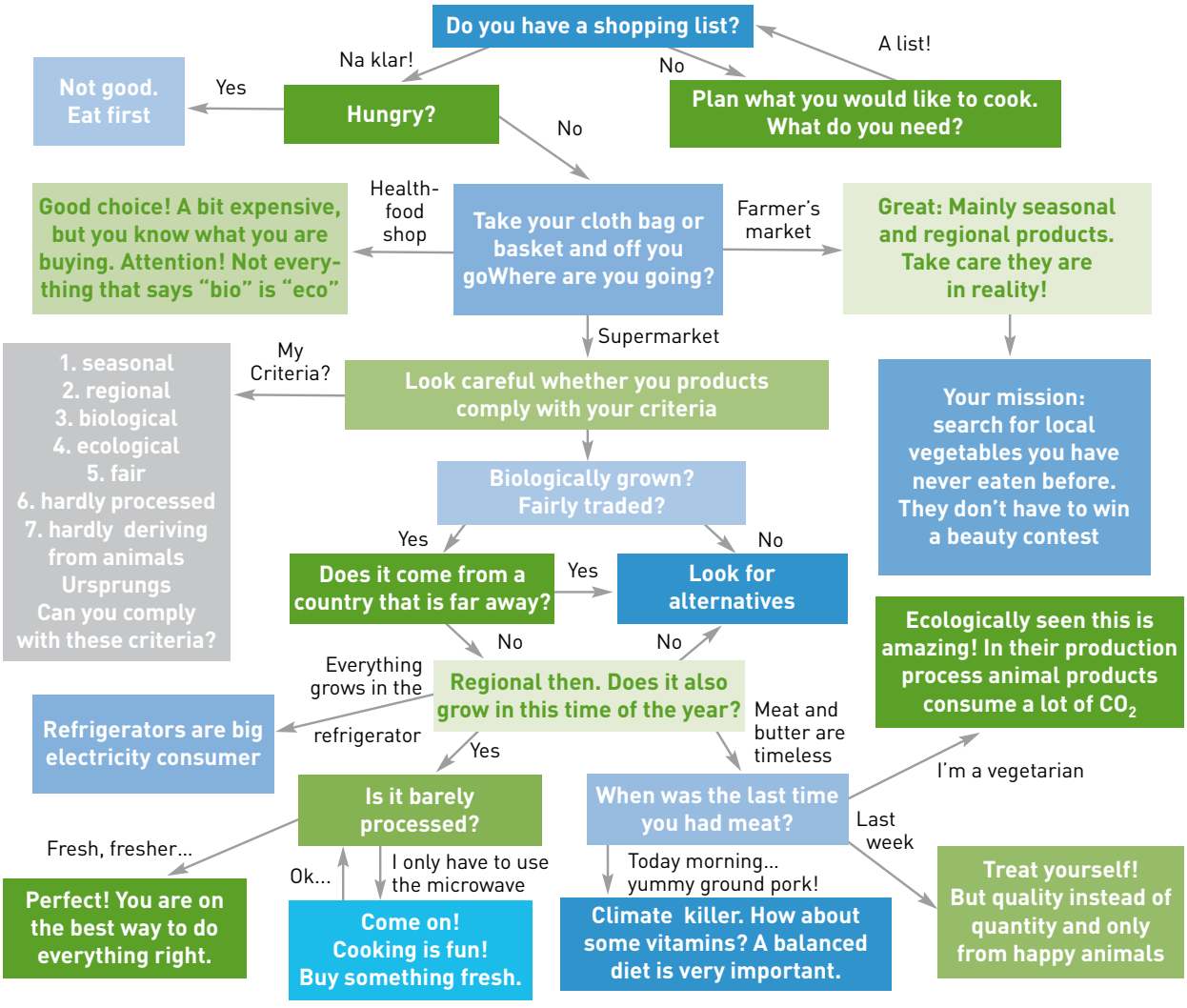
Rust: It would certainly be helpful sometimes if we were to mellow out a little bit and not react so emotionally to certain things. However, serenity can quickly lead to dullness. Personally, I have never met a serene person I found to be



Playmates of Catherina Rust

BUY GROCERIES

Do you quickly want to go grocery shopping, but the next bio-market is on the other side of the town? Maybe this guidepost helps you to take "the right decision" in the supermarket around the corner.



© *youthinkgreen* Osnabrück

pleasant. Cruel strategists may sometimes enjoy very successful careers, particularly in science, business and politics. But would you want to have this kind of person in your own circle of friends?

Inner satisfaction, however, is something I think is well worth pursuing; it's something you cannot buy for all the money in the world. It may even be heaven on Earth. However, I think it is foolhardy to long for a permanent state of inner satisfaction. That would hardly be human. You sometimes have to get upset about something and you are allowed to be sad sometimes. Only those who sometimes doubt themselves are able to evolve. For me, it's usually in these moments



© Neil Palmer/CIAT

that I suddenly realise that everything is actually okay right now. I very consciously enjoy those moments.

Looking towards the future

***youthinkgreen*:** To what extent are alternative forms of consumption, such as sharing and swapping, renting or borrowing and recycling and upcycling, promising solutions? Or is it only by systematically reducing our consumption of material goods that we can help in the long term?

Rust: Personally, I find all of these different trends we're seeing right now wonderful: bartering groups, repair cafés, give-and-take shops, couch surfing, car sharing, food sharing, upcycling and shops that don't use packaging any more – everything is moving in a very promising direction. You can also tell how much fun people are having by getting involved. However, I am also sceptical about whether we are actually only seeing a short-term trend where a lot of people are only participating because it's the "cool" thing to do right now. In the long run, it really only will be through reduction and temporarily doing without that we can help our situation. But that's something we may no longer be able to do. Future generations will pay a heavy price for our current lifestyle.

When I think of the fact that the Amazon, for example, that primeval landscape defined by the largest contiguous rainforest and with its complex ecosystem of which I have the fondest of childhood memories, could be gone in just twenty years – that fills me with horror. Excessive exploitation is currently happening there in Brazil, solely to fuel our Western lifestyle. There is no end in sight. It am speechless that we are willing to destroy our own existence on this Earth so that transnational corporations and governments can pursue their own greed without limitation. Are we really so ignorant that we only recognise what we have destroyed when it's too late to turn back?

Unspoilt nature as a cultural asset

***youthinkgreen*:** How important is nature to your life?

Rust: Personally, good forest air is very important to me, as is looking up at a canopy of leaves, their movement, and having organic soil under my feet. Even in the heart of the big city, I usually run on the turf because it hurts to run on asphalt. In the heat of the summer, the cooling shade of the trees provides us with some relief. I automatically breathe differently when I'm out in nature, and imagine that this makes me even more alert and focused. Living both in and with nature is really just a basic need that all people share. Nature has many functions: it provides us with places of contemplation and relaxation, and it is also a piece of cultural property. If we were to completely sever our ties with nature, we would fall ill.

***youthinkgreen*:** What could young people do to feel close to nature again and to learn to live in harmony with it?

Rust: We have to introduce babies to nature from their first day of life. We don't need large programmes to do this. Taking a walk through the woods every now and again, taking nursery school trips to the countryside, camping in the wilderness: that's enough to get little ones interested in nature in all its wonder. Have you ever observed just how long a toddler can maintain their interest in a beetle? Children are born little travellers and explorers. This spirit is often stunted because it is not encouraged.

It's more difficult for young people who have never had a relationship with nature. They often lack that basic confidence, appreciation and eye for detail. For them, connecting with nature maybe just be by spending time in a garden or a man-made park. I think opportunities for young people to participate in a voluntary social year are fantastic, for example, participating in conservation or reforestation programmes. By doing so, they also learn a lot about nature and take an active role in these processes. An appreciative and humble attitude towards nature then arises all by itself.



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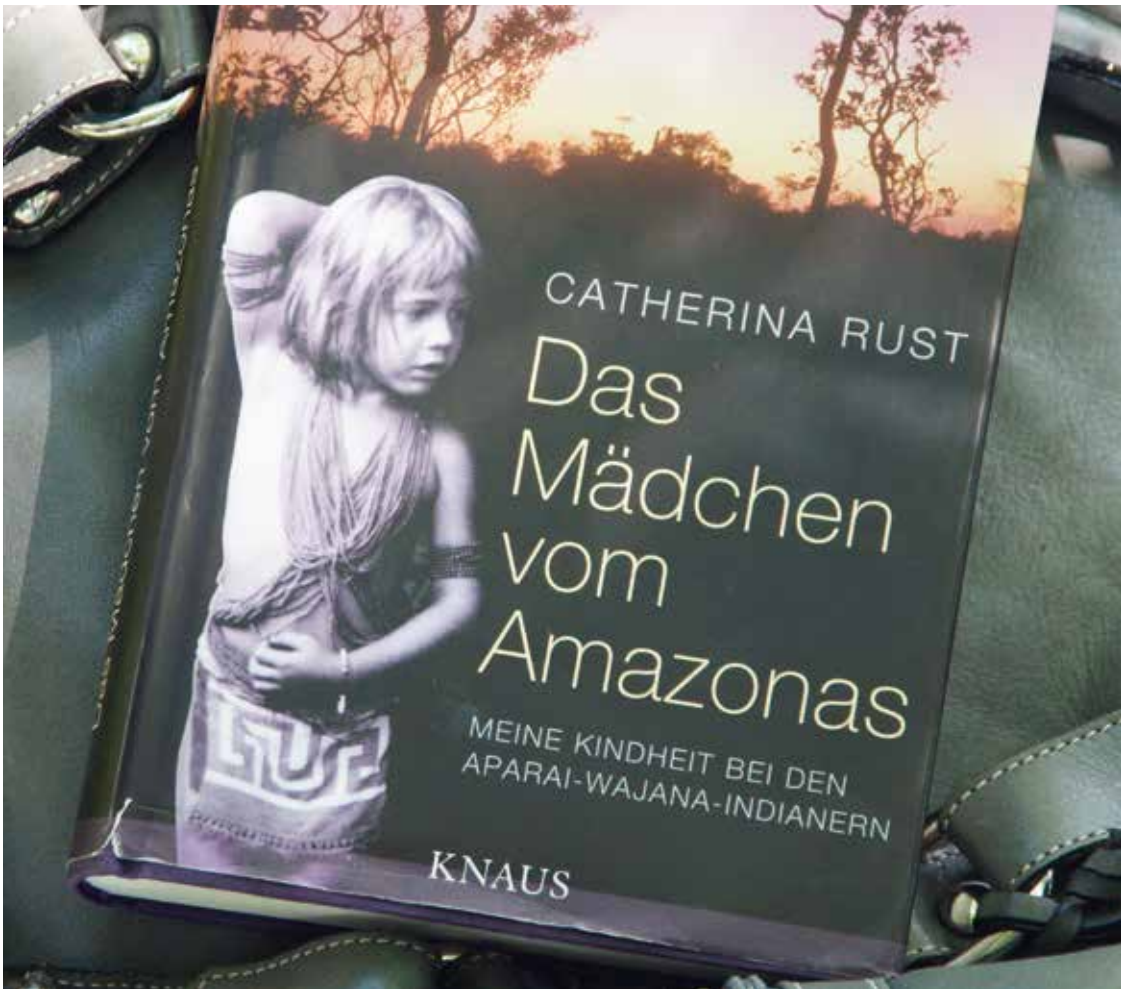
1. What extremes did the author experience in her childhood in terms of dealing with commodities, food and goods?

2. The author says, "For me, it's about quality, not quantity."

a) Examine the examples she gives for living according to this philosophy.

b) What other examples from your everyday life would underscore this slogan?

3. What questions has Rust aimed at you as readers in terms of your behaviour? What are your answers to these questions? Justify your answers.



Catherina Rust, The Girl from Amazonas. My childhood with the Aparai-Wajana natives

4. The author invites us to do without and reduce our consumption of material goods, and says that alternative forms of consumption help us to think critically about our way of life.

a) How does Rust justify her statements? Discuss this with one another.
b) What might your personal list of things to do without and things to reduce your consumption of look like?
c) What's stopping you from acting on this list? And how can you get around these obstacles or more easily break through these unsustainable routines?

5. Examine the author's statements on nature.

a) Write out a list of the various functions of nature. Research this.
b) Why do many of us lack an appreciation and humble attitude towards nature? Show ways to rectify this.

6. "It is in human nature to think wisely and act in an absurd fashion." (Anatole France, 1844–1924, real name Anatole François Thibault, French novelist, poet, critic and historian, winner of the Nobel Prize for Literature in 1921)

a) Discuss this discrepancy between knowledge and action in human life, providing examples that are familiar to you.
What results did you come up with?
b) It is worthwhile to illustrate the author's statement in pictures (e.g., the dichotomy or inner conflict present in people).
Design a concept to show this.

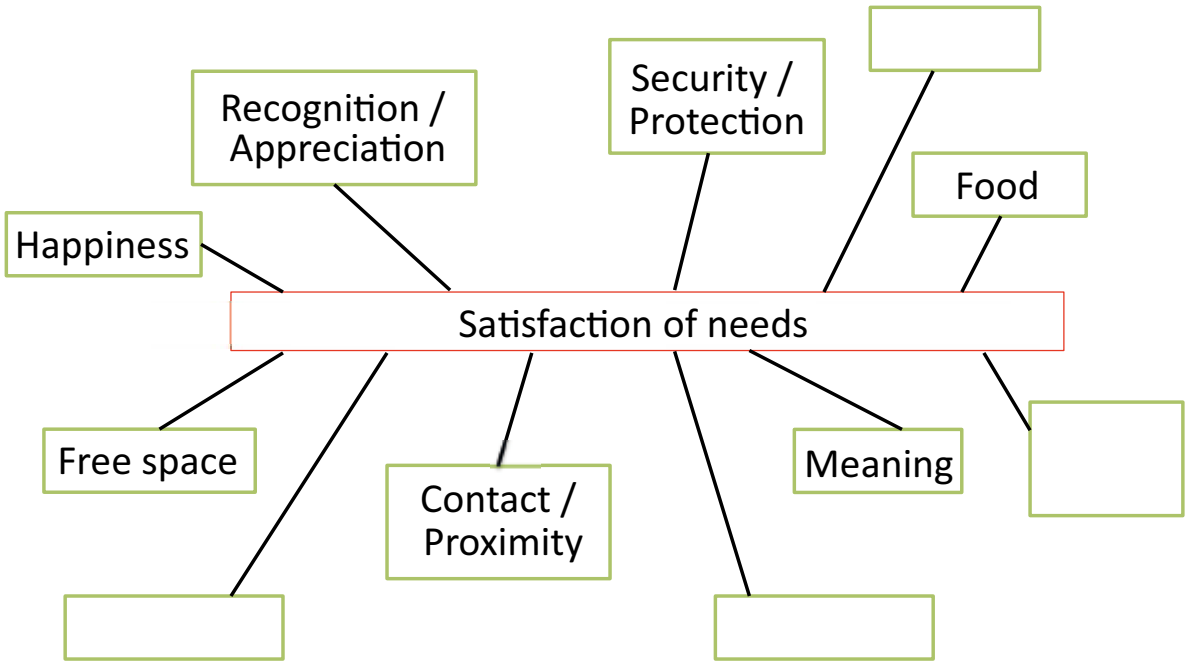
7. Activity: Critical consumer city tour

On a guided tour with different stops, you will inform other young people and citizens of your city about facts and background information concerning world trade, typical consumer behaviour and ways to be an ethical consumer. You must be sure to do your research before conducting your tour on which shops sell products that are produced in a manner that is not environmentally friendly or fair, and find alternative shopping options, for example. You can find more information and support here: www.weltbewusst.org

4.5. A NEW LOOK AT OUR NEEDS

Introduction

In the following articles we will once again be focusing on answers to the oft-asked question of how we can increase our inner satisfaction and personal sense of well-being whilst nevertheless respecting the Earth's environmental limits. When discussing possible solutions for more sustainable development, it's not just a matter of technological, economic and political super strategies, but also about a radical change in our culture. This includes a fundamental change in individual perspectives and habits. We need new forms of lifestyle and personality development that are marked by attentiveness, respect, the luxury of time and mutual respect, rather than going cross-eyed at our income levels and material status symbols. One question here is, "How can we change our mentalities to 'rethink' things in our everyday lives and persuade others to join us without swinging the moral cudgel?"



Boris Woynowski has taken a closer look at Niko Paech's model of a post-growth economy (see. 4.1) and tries to fathom the social psychology behind it. Which individual modes of thought encourage sustainable behaviours and which ones

inhibit them? What deep inner needs lie behind our consumption habits, and how can we recognise them and better fulfil them? Prof. Dr. Rainer Dollase also deals with the question of the concept of “happy frugality" and answers it by taking a look at his own life story. The researcher also explains how we can win over like-minded people in favour of our sustainability initiatives and projects – and which attempts at mobilisation attempts bear fruit, however little it may be.

In an interview, self-taught musician André Stern talks about how we can recognise and appreciate the needs of children and their natural dispositions easier instead of curbing their curiosity and wasting talent. Because one thing is indisputable: It is important to foster our potential for individual change processes, our love of learning, self-expression and tolerance for frustration, but also for a prudent and empathic attitude towards our fellow human beings and to do so from an early age. And, above all, that absolutely must include the ability to build and maintain pleasant and meaningful human relationships. Only by succeeding in this regard will we ultimately be able to sustainably change our social structures and social systems for the better.



POWER. GROWTH. HAPPINESS.

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WAYS TO GO FROM "WANTING TO HAVE MORE" TO "BEING ABLE TO HAVE LESS"

By Boris Woynowski

As early as 1987 in the so-called Brundtland Report, the United Nations had declared that we live in an "unequal, overpopulated, polluted and interference-prone world." The many environmental, climate and resource crises can leave no doubt that our current economy exceeds the capacity of our ecosystem. But are modern societies even conceivable without economic growth? What are the socio-ecological alternatives and how would these change our everyday life? One thing seems clear: If the transition from economic growth is to succeed, we must change our mentalities and social structures.

Unfortunately, my diagnosis of typical life lived in developed societies is this: "We rushed around in jobs we hate to make money to buy things we don't need to impress people we don't like." For me, this quote from the film Fight Club, which can sometimes be found on postcards, posters or t-shirts, pointedly expresses the fact that Western capitalism and our exorbitant approach to consumerism does not seem to make us very happy.

The central driving forces of our dependence on growth and "wanting to have more" can first be attributed to our work structure, second to our monetary and interest rate systems, third to consumption and fourth to social psychology. Generally speaking, this accumulation of objects and always wanting more is based on a natural need. Our perspective on our immaterial needs is fascinating, for example, recognition by others, safety, autonomy and tolerance, personal development and pleasurable and fun experiences. But the usefulness of our deeds and actions or our need for contact and closeness must not be underestimated are not to be underestimated in terms of their impact on consumer behaviour. As German band Tocotronic sang in their 2002 song, "Hi Freaks", "Our friendship is the currency we use to pay what we have to/ Everything must be available in abundance/Then we'll never be alone."

Fears of loss and going without

Over the past 50 years, the mentality of the "wanting to have more" had changed for many people. New consumer products satisfy our immaterial needs less and less. Here's an example: A smartphone with Facebook seemingly allows me to be connected to the world at all times. Although I feel it close to people, a smartphone cannot replace the physical or emotional closeness that exists between two people. I am attributing a significance to the device that it does not deserve. This is called psychological overcompensation. But that's not enough. This behaviour has even reinforced my natural fears of loss or missing out: I feel cut off from the world if I suddenly lose my phone or don't have it on me at all times. Now I can make the decision to do without certain functions on the device and try to foster greater closeness with my fellow man instead. But the question is, "How can we make such a personal decision easier for society to accept and how can we ensure that it is not confused with cultural pessimism or hostility to progress?"





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We still live in a society plagued by risk and uncertainty – a society that is trying to get to grips with its losses through overcompensation. Because of this, refusing to accept technological advances and an accelerated means of communication and work is often perceived as something that is not "future-oriented". Its effects on the social environment is fascinating yet comical – for example, if someone chooses to turn off their smartphone for just a few hours or even days, let alone do without one, or if

Anamnesis – causes of the growth paradigm

We are stressed out working in jobs that do not fulfil us to earn money with which we buy things that we do not need to impress people we do not like.

Central drivers of growth dependence:

- Job
- Monetary and interest system
- Consumption
- Social psychology

= **"Having to want more"**

© Boris Woynowski

someone opts to only work part-time, to take a year off or "decelerate" their life in some other way. The simply contradicts the logic of our economy and the internal and social constraints we face.

Less – different – better

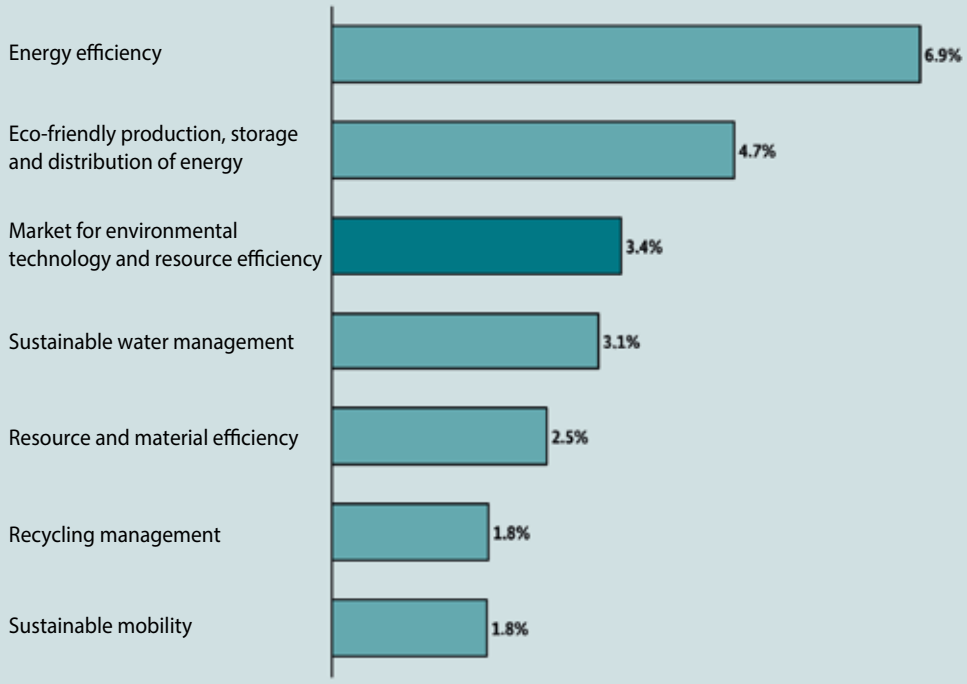
We can distinguish three different approaches that could result from the dilemmas described above (cf. Adler/Schachtschneider, 2010). The first approach would be to radically change the system, an approach that is based on criticism of power and capitalism like that espoused by representatives of what is known as eco-socialism, for example. The second option would be environmental modernisation, also known as the Green New Deal. The basic assumption here is that growth could continue through technological innovations that help to reduce environmental damage. By halving our consumption of resources, we could even double our wealth. One prominent proponent

OUR AUTHOR

Boris Woynowski (b. 1984) studied forestry science and co-founded "Wachstumswende", a registered association in Berlin. He has also worked as a strategy consultant for "Sinnwerkstatt", a media agency. Links: www.sinnwerkstatt.com and www.wachstumswende.org



Average annual productivity growth until 2018 focusing on key markets (in percent)



Source: Roland Berger, company survey

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of this approach in Germany is Prof. Dr. Ernst Ulrich von Weizsäcker. The third option, and the one I favour, is a shift in growth towards a post-growth society in which it is possible to "have less". It synthesises of the first two approaches. This shift in growth includes a systematic change that would takes place in phases and involves both technological and social innovations.

Taking mobility as an example allows us to clarify the difference between environmental modernisation and a post-growth economy is clarified. "Don't change how you drive! Change your car!" This is how Volkswagen AG is advertising its new VEW GTI (Grand Tourisme Injection), A model with a relatively efficient engine and lower fuel consumption. However, the car must still be manufactured and the old car may need to be disposed of somewhere. Instead, social innovations consist of new consumption concepts, such as car sharing. From the perspective of a post-growth economist, the question is this: How can we manage to drive the cars we already have less in order to economise on our remaining resources?! How we can use the sophisticated mobility concepts provided by public transport and optimal urban planning to be more independent cars overall.

Niko Paech, one of the most prominent proponents of the post-growth economy, says, "There are no sustainable products or technologies per se, only sustainable lifestyles." Niko Paech's post-growth economy consists of two dimensions (see Figure No. 528). On the one hand, it's all about the goal of "reducing to the max", or focusing on consuming the essentials and finding a middle ground between asceticism and opulence. This is also called sufficiency (from the Latin sufficere = to suffice, to be enough). On the other hand, it is important to regain economic sovereignty. This requires a balance between self-supply (subsistence economy) and external supply (globalised economy).

A journey into the unknown

For me, a post-growth economy does not mean that we should all live solely off of subsistence farming and our very own farms in the countryside. Yet it is irresponsible and unfair to future generations as well as to poorer countries for us to maintain this globalised consumption with all its negative consequences for the environment and the climate. What Niko Paech proposes is that we engage in twenty hours of gainful employment for external supply and twenty hours of self-sufficient work, so a good mix of local and global production methods. This requires a political support and innovations at an institutional level, as well as wide acceptance amongst the population, because changes to real infrastructure and the transformation of mental infrastructure are always mutually dependent.

And now? What happens next? This growth transition is like a journey to an unknown land. We still do not know exactly what awaits us. We may fear that it may be rather unpleasant, at least for a time. But the more supporters and travel companions we win over for the journey, and the more we react in a networked way, the less vulnerable we are, the safer we can feel and the easier we will find "being able to have less". Transition Town movements are a good example of this. The first step has already been taken – the vision is here! Now we have to move from dreaming to planning – each individual person for themselves and all of us together. As Franz Kafka once said, "Paths are made by walking."

Literature:

Adler/Schachtschneider (2010): Green New Deal, Suffizienz oder Ökosozialismus? Konzepte für gesellschaftliche Wege aus der Ökokrise, Munich, Oekom-Verlag.

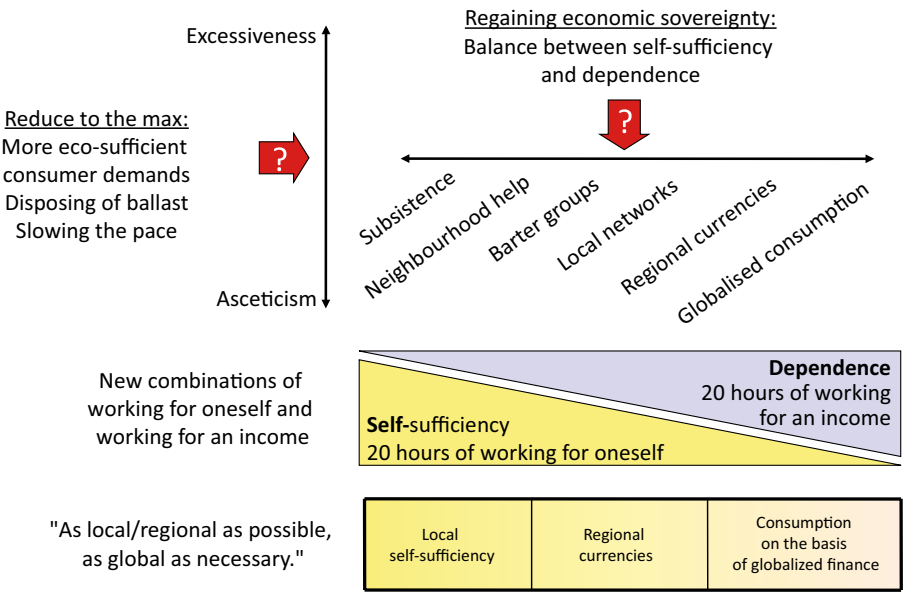
LEARN • UNDERSTAND • ACT

1. From the Brundtland Report: "We live in an unequal, overpopulated, polluted and interference-prone world."

a) Discuss this key phrase in small groups.
Clarify this statement with examples.

b) Present your findings to the whole group and write them all down and/or record them as a mind map.

Two dimensions of a post-growth economy (Niko Paech)



© Niko Paech

2. The author examines the extent to which this finding relates to our way of life. Discuss and question his "diagnosis of typical life lived in developed societies".

3. The author also increasingly asserts that we need a change in mentality that will lead to us better understanding our immaterial needs and questioning our consumer habits.

a) Describe and discuss this process. Be sure to analyse the consequences of this change as well.

b) What immaterial needs are particularly important to you? How can you meet them in your everyday life without harming the environment? Discuss in small groups.

4. Woynowski distinguishes between three approaches, which are discussed as solutions to this dilemma.

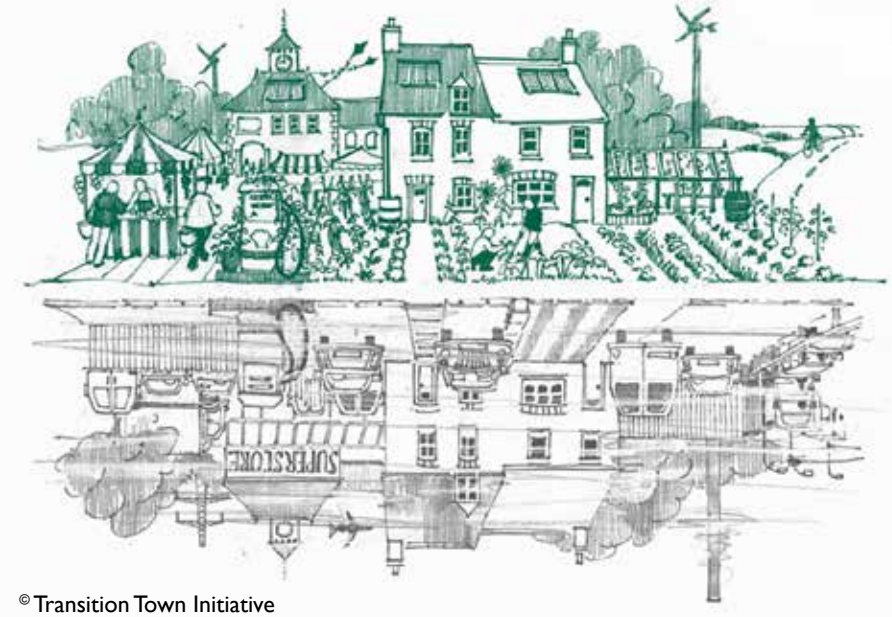
a) Describe and discuss the potential solutions described.

b) Which do you consider most promising, and which is likely the easiest to put into practice?
Answering this question requires additional research.

5. Today's Transition Town movements ("City in Transition") are setting trends worth imitating and is showing us as citizens new ways of shaping the future.

a) Get informed about this in general, getting in touch with one of these movements if possible. Engage in intensive discussion!

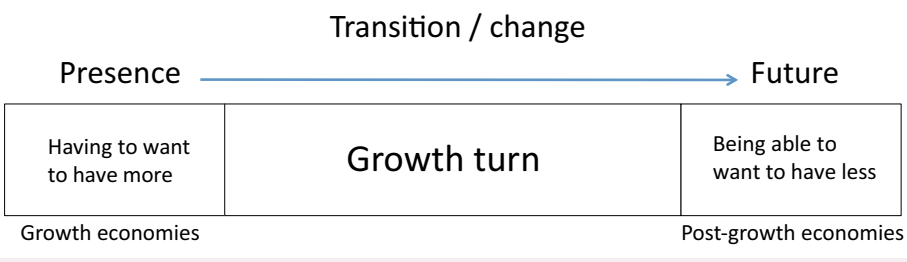
b) In this context, discuss the Franz Kafka quote.



© Transition Town Initiative

6. The graphic depicting the "growth transition" provides you with a so-called "tag cloud" of key terms. Compile an organisational framework for these concepts so that you present the content under the core heading of "Necessity and approaches to a growth transition" in a structured way. The concept and issue of growth transition should increase in scope, clarity and strength in the process.´

7. Call the join the "growth transition" campaign.
Develop a plan for this. Seek out advisers and supporters.





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SETTING AN EXAMPLE THROUGH HAPPY FRUGALITY – TRIGGERING SOCIAL CHANGE

By Prof Dr Rainer Dollase

How can we inspire other people about sustainable lifestyles? How can young environmentalists bring about behavioural changes without swinging the moral cudgel and snubbing their dialogue partner? What missionary approaches do not bear fruit? In this article, I want to provide some answers to these questions. My conclusion is this: "You yourself are the social change!"

I grew up in the post-war period in Germany. We lived in extreme poverty until I was ten years old. I suffered from hunger and had so few toys that they all fit into a small wooden box. And yet I felt something approaching happiness and satisfaction. It was a time when people still talked

with one another. As children, we created our own playing fields on the ground by laying out matches. We did not need an expensive entertainment industry. The feeling I felt then is something I call "happy frugality". And that's exactly how I imagine the good life.

There are many environmentalists who want to save energy or stop driving cars, but they can't actually do it. Their behaviour is conflicted because they have been trained by this materialistic society to not want to give anything up. I think anyone who wants to mobilise other people to fight for environmental protection must first themselves come to terms with this and to consider the following: What can I do in my own life to consume fewer resources? To do my bit but still live a happy life? This is the first major challenge.

Developing a sense of responsibility

But it is only reluctantly that people change. Many want society or at least for someone else to get sustainable development going. But they themselves do not want to have to do anything to further this cause. They hope and perhaps even expect that something will be done for them. We all would prefer to shift responsibility onto others. And yet everyone has an impact on what our world will look like ten or fifty years from now.

To me, this means that the individual question of responsibility is the most important one. Only if I can answer that can I try to persuade other people of my ideas and propagate a sustainable attitude. However, this is not nearly as easy as it seems. Here's a small example: I do not drive a car. Although I have a driving licence, once I finished driving school I never drove a car again. I take public transport out of conviction. If, however, everyone were to do this, the entire auto industry would go bankrupt. Million jobs across the world depend on this industry.

In addition, the public transport in many rural areas is still not sufficiently developed, and heavily dependent on subsidies, first of all because too few people are using it and second of all because the inadequate service offers no incentive for these people to switch to using it.

So it's not that easy to decide what consequences our "sustainable" behaviours will have. We cannot get rid of private transport overnight. Instead we need a smooth transition towards more environmentally compatible mobility: Cars that consume less petrol. Life is full of compromises.

Radicalisation is something people find repellent. The progress is slow, very slow. It drags along at a snail's pace. I have come across many environmental activists who were extremely radical and only succeeded in alienating people. So how can you persuade others of your cause?

Aspirations, role models, empathy

The first important answer to the question just raised is credibility, and that is something I get from personal contact, one on one. Anyone who hopes to have an educational impact must establish good relationships with others. We

OUR AUTHOR

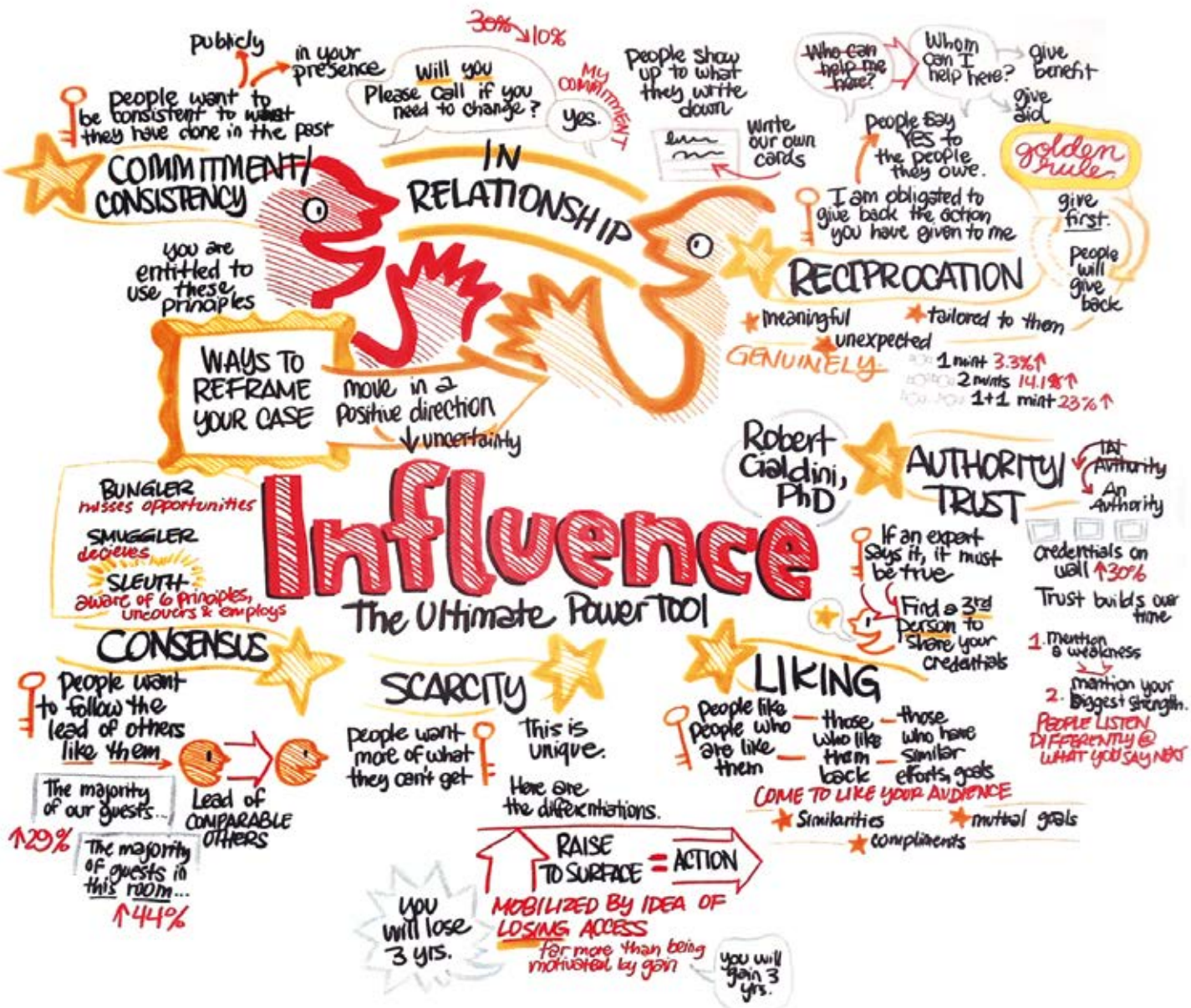
Prof. Dr. Rainer Dollase (b. 1943) worked as a university lecturer in psychology at the University of Bielefeld. His knowledge of education, values education and role models not only draws from international studies, but also from the intensive work he has conducted with educators and from his volunteer work for the "Schutzgemeinschaft Deutscher Wald" ("German Forest Protection Association"), an organisation to which he has belonged since childhood.



learn by example, not by reading books. You also need to have a realistic view of the world and the conviction to use your own skills and ideas in furtherance of your interests.

Second: We have been programmed by nature since our birth. I have worked intensively in studying how young children react to the environment. They generally enjoy exploring nature, prefer to play with plants in the forest and meadows or – depending on their habitat – with sand and stones. We should take our innate longing for a nature that is unspoilt as a starting point for our persuasive work.

Third: We need events where people can form new experiences, but also where they can be stimulated to think critically and engage in honest debates. These components are particularly important in the classroom. Teachers succeed



© Dr. Robert B. Baldini for influence at work



in inspiring their students if they put forth an empathetic and warm attitude during the day and provide an impetus for students to change their behaviour rather than simply making direct demands of them. Psychology has shown that it is not the fervent approach that changes people, but the gentler ones.

Fourth: Avoid methods that are ineffective! As Richard Lazarus has already stated, "Reports of catastrophes dull the senses." This is to say that people grow accustomed to disaster over time. And some think, "If I do something now, that will be enough." But this is not the case! We must change our behaviour, and personal contact is necessary if we are to do this. Another approach that does not work well is taking a know-it-all attitude: People who know everything about everything and tell the others, "This is how things are and that's that! You're wrong!" will only face rejection.

To paraphrase the words of Abraham Maslow: "Think of the needs of the person opposite you, even if he is your opponent. Try to understand him." The next step involves recognising your opponent, building them up and even encouraging them! Enter into a critical discussion with them, but do so on the basis of an empathetic relationship.

Maslow drafted his famous hierarchy of needs. To put it briefly, it assumes that people can only achieve self-actualisation if they are free from existential worries. As long as you're hungry and live in unrest or even war-like conditions, you will not be able to further develop yourself. You then have no capacity to engage socially. In addition, it is very important that you receive recognition and integrate socially. Only then will you have the power to take on responsibility and you can then begin to shape the world you live in.

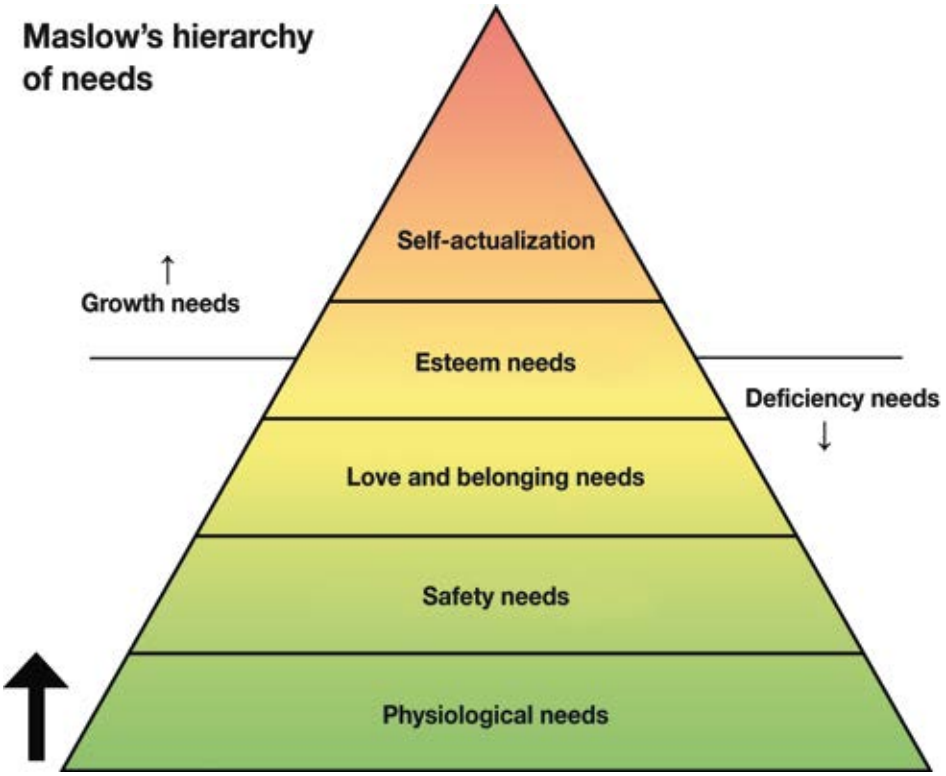


Abraham Maslow

INFO: MASLOW'S THEORY

Maslow assumed that human needs could can subdivided by degree of importance.

The first level consists of: physiological, existential needs: drinking, eating, sleeping, sexuality, etc.



The second level consists of: material and occupational safety needs: having a home, insurance, job protection, stability, security, protection, freedom from fear, order, law, boundaries

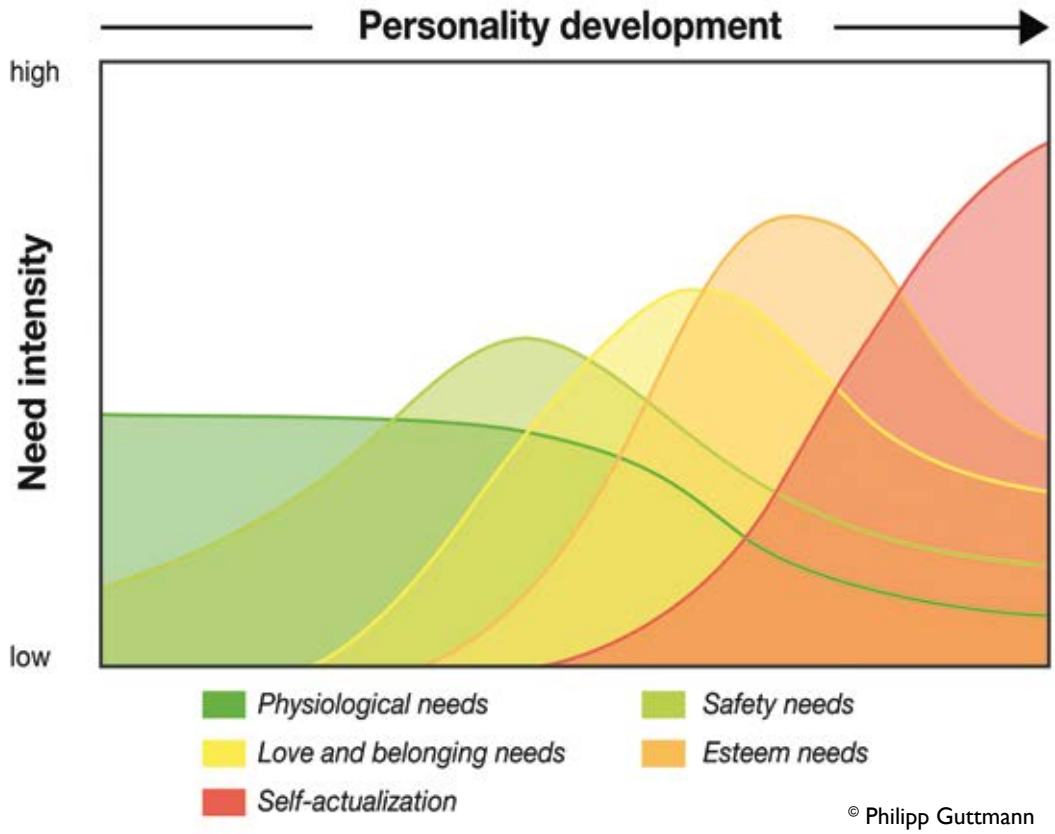
The third level consists of: social needs: communication, partnership, love, friendship, belonging to a group

The fourth level consists of: individual needs: recognition, validity (power and influence), reputation, prestige, esteem, respect and importance, the consumption of a product as a status symbol

The fifth level consists of: self-actualisation: individuality, goodness, justice, selflessness, mental and physical strength, success, independence and freedom, wearing extravagant clothes

Maslow's model can be used to explore and better understand what motivates people, not only in terms of human psychology, but also with regard to the economy, for example, in order to influence customer behaviour.

Maslow divided these needs between deficiency needs and growth needs (insatiable needs). According to Maslow, only when a person's deficiency needs are sure to be satisfied and satisfaction is reached at the physical level in the form of higher life expectancy, less illness and better nutrition do the growth needs – such as the need for self-actualisation – come into the foreground. Your satisfaction in turn leads to a deeper sense of happiness, serenity, wealth of inner life and increased individuality. When a need is increasingly satisfied, its motivational power decreases. Furthermore, the psychologist argued that the higher needs and their satisfaction would have far-reaching civil and social consequences.



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1. Dollase speaks of a feeling of happy frugality in his childhood. What could justify the causes and roots of his feeling of happy frugality?

2. Why are people so reluctant to change? Discuss this question in small groups.

3. You want to take an active role as an environmentalist. What basic requirements should you be sure to take into account as much as possible? What behaviours you should exhibit and what behaviours should you avoid? Discuss your results with the whole group.

4. Social engagement distinguishes a society. Find arguments for this statement and illustrate this using examples. To what extent are you yourself committed to social or environmental issues? Who could participate in your social commitment and who will benefit? Explain!

5. Dollase talks about a "smooth transition" to a sustainable society and calls for a willingness to compromise.

a) What exactly does he mean by that? Be sure to consider both the individual aspect of behaviour as well as behaviour on an overall societal level, for example developments in the fields of politics and economics. The previous article by Boris Woynowski may help to guide you in answering this question.

b) What are the arguments for a smooth transition, and what are those for a radical change? If possible, conduct interviews with environmentalists in your local area. Compile your arguments in tabular form.

6. Dollase emphasises the aspect of credibility in successful social engagement. Using examples from your personal life, explains what kinds of people and behaviours you find credible and what kinds appear less so. When formulating your experience, be careful not to judge or treat other people in a derogatory or hurtful manner; instead act with empathy and understanding, though do be somewhat (gently) demanding.

7. Dollase's statements refer to Abraham Maslow's socio-psychological theory and his "hierarchy of needs".

a) Explain Maslow's central theoretical arguments in your own words. Study the info box and conduct research on the Internet.

b) What points of criticism can you find with Maslow's theory?

c) In what areas does his theory still apply today?

d) After Maslow, what further developments or new theories have arisen concerning the psychology of human needs, e.g., those of Manfred Max-Neef? Compare the central arguments of these theories.

8. Project work under the slogan, "do without and win"
Dollase has experienced first-hand that materialism does not bring happiness, but rather that empathy and interpersonal relationships enrich our lives tremendously.

a) Discuss this message together and record a list of your findings and results.
b) Now think about and review your day-to-day life over the course of a week. What items/resources could you perhaps do without in your everyday life? Which of your habits may require correction?
c) Keep a table of your findings.
d) Starting shot: Each of you should decide for yourself which items/habits you want to do without over the coming week (month). Then get going!
e) Put it to the test: Write down your experiences (positive and negative) during this period and discuss them with one another. Which of your needs could you better fulfil and which could you stand to fulfil less?
f) It is worthwhile to go public with your project and your assessment of it. Write about it, for example, for your school or local newspaper.



"ENTHUSIASM IS FERTILISER FOR THE BRAIN"

An interview with André Stern
By Christian Vock



André Stern as a child

Pictures © André Stern

André Stern is a composer, musician, guitar maker and author – and has never been to school. He wants to use his movement, "The ecology of learning", to defend children's natural disposition against restrictive educational concepts and imposed curricula. In this interview, Stern makes clear that every child is perfect and that we often waster our children's talents.

youthinkgreen: Mr Stern, you've never been to school. How is that possible?

Stern: In France, where I grew up, there is no compulsory education. When people hear this, many immediately presume, "He was just taught at home." But that was not the case with me.

youthinkgreen: What did you do when your peers were attending school?

Stern: There was no typical schedule. Each day was different. For example, at some point I came across the German language and was immediately interested in it. From then on, I was just busy trying to learn German, and I was doing that six to eight hours a day. During this time, my days naturally looked different than they did at other times, for example when I was interested in locomotives or algebra. I would describe things more in terms of periods, not daily routines. But, to perhaps answer your question: I did what all children do when they are given the freedom to do so: I played. And I've been doing that for 43 years now.



André Stern in his workshop

Playful learning

youthinkgreen: So you discovered things that you found particularly interesting through play and then explored them more intensively?

Stern: Exactly. Modern neurological research has shown that there's nothing better than play when it comes to learning something. For children, playing and learning are synonymous; the two go hand in hand. It's therefore absurd for people to tell children to stop playing and learn instead. It's as if they were to ask that you breathe without taking a breath. Play is the first spontaneous tendency of all children – without exception. A child's development, wherein the child grows up according to their own environment, their own rhythm and their own inclinations cannot be compared to development clocked by an educational programme imposed upon the child by adults.

Actually, it's strange: Children are born with an incredible number of skills and talents. But so many adults are so concerned with trying to raise children that it doesn't occur to anyone to ask, "Can I learn anything from this child?" In terms of openness and freedom from prejudice, children are often far ahead of us adults and are able to dedicate themselves incredibly seriously and with a great devotion to things that inspire them. And enthusiasm is fertiliser for our brains.

We should be observing children better rather than trying to constantly teach them something.

youthinkgreen: How can you teach yourself algebra all by yourself, for example?

Stern: It's true that I was never taught, but that doesn't mean that I learned things alone. One learns in connection with others. For example, I have learned mathematics piecemeal, by which I mean I only learned about the areas that were relevant to me at that particular time. As a child, for example, I built a Lego car and wanted to know how fast it could go. So I tried to calculate that. I always learned things practically using things that addressed my emotional centres.



André Stern as a musician

But the fact that I am always being asked how I learned things like mathematics is something I find quite striking. Why am I not asked how I learned to cook, dance or sing? It's because we have built up such daft hierarchies in our world, for example, that mathematics and German are more important than other subjects. But the fine art of mathematics is simply not at all relevant to most people's everyday lives.

"Networking" is innate

youthinkgreen: Can you give us an idea of what your childhood was like in practice? Did you sit at home while your parents looked after you every hour of the day?

Stern: No, that would be the worst thing that could happen to a child. From birth, children are eager to explore the wider world and enter into relationships with others. If a child were to be locked up at home with their parents, their tendency towards forming networks with a variety of different people and orienting themselves towards this and discovering their talents would be suppressed.

youthinkgreen: As adults, most people have likely forgotten everything they once learnt in school. Is school all for nothing?

Stern: Well, those are your words *(he says this and laughs).* Hopefully you'll write that because 99.99 per cent of readers will identify with that! But seriously: That's a good question because the first experience children have with school is that they must learn things that don't interest them. But we can only learn in the long term if we are inspired and our emotional centres are activated. This also explains why you have forgotten so much of what you learnt in school. Just to clarify, I'm not Enemy Number One of schools. But I've always swam in the vast ocean and any kind of aquarium would be problematic for me and my development, however well-designed that aquarium may be. We have to understand that there are just as many ways to learn as there are individuals. Only then are we free to make our own decisions. As long as we cling to this belief that there is only one ideal type of school, we will not find it.

youthinkgreen: There is a beautiful saying: "You don't learn for school, but for life." Personally, I can still recite Virgil's Aeneid in Latin, but I can't change a tyre. What kind of life has school prepared me for?

Stern: That's not exactly compatible, you're right. The thing is: If you knew what was important in life, then you would supply yourself with knowledge accordingly. But that's not how things



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work. We are masters of adaptation. That's why we've been able to survive for so long even though we are not very well equipped. A truly strong society is one that maintains its diversity and in which people know different things. Otherwise, we'd be like lemmings: all following the same path and plunging into misfortune together by comparing ourselves. In a society like that, the person who learns the most the fastest is the one who comes out on top. But society needs a diverse range of skills and knowledge, as well as a good networking and mutual exchange.

Exemplifying passion

youthinkgreen: So for you, what would the ideal teacher and curriculum be?

Stern: No idea. I'm not here to advise. I would consider it highly suspicious if I were to offer universally applicable solutions. But what I can say is this: If we were to recognise that enthusiasm is the most important thing and that there is genius in every human being, we would be going about things differently. I once went to guitar maker Werner Schär and he told me, "I can show you this profession. But I can't teach it to you."

youthinkgreen: But in Germany we have to send our children to school...

Stern: Yes, but it no longer occurs to us that this is perhaps not the right way to do things. After all, we do live in a democracy. As a father in Germany you hardly have a say about your children's learning environment – is that not shockingly discriminatory? Moreover, we do this in the knowledge that there is no compulsory education in other countries like England, the US or France. Compulsory education limits us and prevents us from having the freedom to choose. I would like to say that it's up to you whether you want to put up with that. There are more and more people in Germany who are emigrating because of this.

youthinkgreen: Many believe that if you were to give children as much freedom as they want, chaos would ensue. How do you respond to your critics?

Stern: Children love rituals. They like things that take place in a specific context and give them direction. Children hate it when things don't happen the way they're used to. This means that children like structure. But these structures cannot be rigidly imposed from the outside; instead, they must come from within. This is something children tend to do. In addition, it's not at all a matter of letting children live according to a "laissez faire attitude". Instead it's about shaping a world in which every child is valued. Children want to be a part of the world and they want to draw guidance from others. So, if we ourselves do not set a chaotic example for children, children won't go looking for chaos either. If you take a child over the age of five or six years old with you to a concert or a theatre performance, they will base their behaviour on the behaviour

That's what a teacher is to me. Someone who is passionate about something and exemplifies this passion. This sets off fireworks.

It would be very exciting to get a chance to teach people who are going to school voluntarily instead of people who are simply forced into this artificial gathering of people their own age. It's so unnatural that simply stick children together to learn by age and by where they live. I don't know who came up with that. This doesn't result in mutual enrichment, only in comparison and competition.

OUR AUTHOR

Christian Vock (b. 1977) works as a freelance journalist for environmental and sustainability issues in Leipzig. He also heads up sustainability communication projects at the Leuphana University of Lüneburg. Link: christian-vock.de



of others. They won't spend their time climbing all over the seats.

And here's another important point: People always say we have set limits for children. For me to stand over a child and tell him how to proceed is a very hierarchical way of looking at things. But we are all team players. Children want to work on their environment and help shape it. If we recognise children as a kind of partner, then saying "no" is no problem for them because it's something they have confidence in. But if you are constantly taking a "no" attitude towards children and indicating – not necessarily just with your words – that the child doesn't even deserve to be spoken to like you'd speak to anyone else, the child will enter crisis mode. And then it's back to saying that the child needs a better education to develop a higher tolerance for frustration. If you want to have a child that has no problem with frustration, give them as much satisfaction as possible!

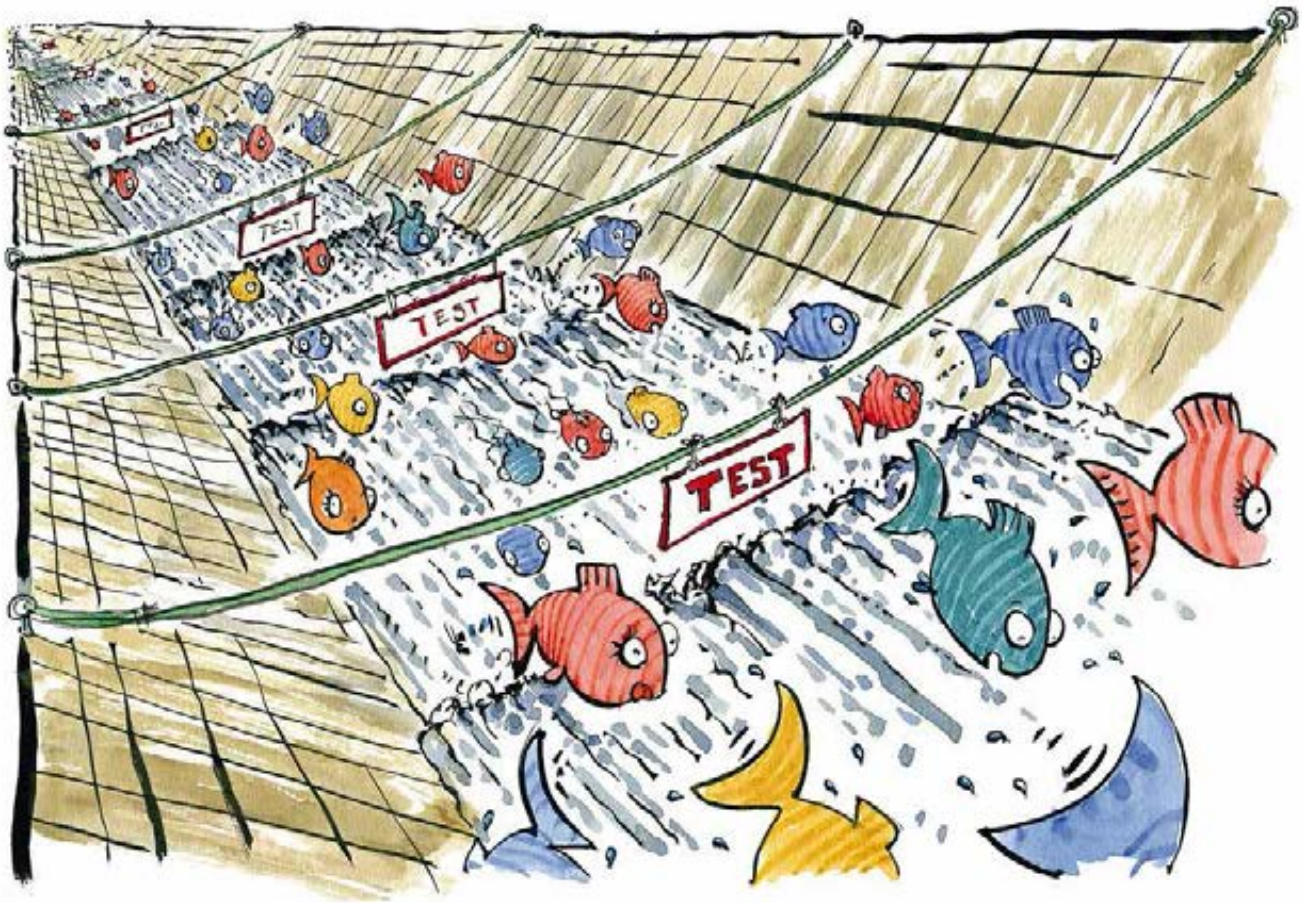
Conveying basic trust

youthinkgreen: So what's lacking there is placing children on an even footing?

Stern: Absolutely. Many educators are told that they should crouch down when they speak with children. But that doesn't help anything if you're still standing over them in your head and in your heart.

youthinkgreen: Are there certain values that your son should grow up with?

Stern: I hope that I can give my son what my parents have given me – a sense that he's perfect the way he is. That's a very different starting point than say, "You'll only be perfect once you've learned this or that and grown this way or that way." If we had all this basic trust in our potential for self-development and in our children's curiosity and joy of learning, we would then truly be able to appreciate their immense talent. My favourite



How the education system is failing the kids © Frits Ahlefeldt



A different approach to education © Frits Ahlefeldt

word is mindset. If we get started establishing and maintaining human relationships with this new mindset, a lot could change, including social structures and harmful behaviours. We see our past in our children, but children see us as their future.

youthinkgreen: When do you consider a person educated?

Stern: I have no idea what your average Joe considers to be an education. But I am certain that education is not simply a passive object that you acquire and accumulate in order to then be able to say, "I'm highly educated." I believe that a free person is always perfectly educated according to their environment and their talents. We are world champion optimisers and even before we are born we must begin adapting to the conditions under which our parents live. So if we entrust our abilities to this adaptation once we are born yet still act on what inspires us, we would be virtual magnets for everything that supports and fuels our interest at any given moment. That's how we can truly be in harmony with ourselves and the environment.

LEARN • UNDERSTAND • ACT

1. André Star emphasises children's natural tendencies and draws a number of demands from these tendencies.

a) Write out a list of these natural tendencies and his demands.
b) Engage in a detailed discussion about this.
Which of the wishes he has derived would you want your school and your parents to address?

2. Stern has been "playing" for 43 years. He considers this to be correct and important. How does he explains his opinion contradicting our official philosophy of education and school?

3. Institutions – what are they good for?

a) How does Stern rate the institution of "school", which he himself has never attended? What reasons does he give?
b) Discuss the author's attitude. On what points do you share his opinion? Do you find there are sufficient counterarguments that from your point of view favour compulsory education and regular school attendance?

4. Are the author's ideas about what constitutes a good education realistically transferable to all families? Examine this using simple examples.

5. Stern says, "We see our past in our children, but children see us as their future." What are your opinions on this? Discuss this in detail.

6. You want to enrich and change your school life. In order to do this, you seek to engage in dialogue with the school's management and the parent council. Make sure to deck out your Tree of Hope with leaves prior to meeting with them (for more on this, see Topic 2). What demands, thoughts, desires, ideas and principles are detailed on your leaves?

LOOKING AHEAD
CONTEMPLATING
TRENDS AND
QUESTIONS
FOR THE FUTURE

Konrad
Adenauer
Stiftung

5.1. Prospects for the Future and Scopes for Action

Introduction
Page 548
Remedies against Futurephobia
By *James Goodman*
Page 551
Design your future:
Why it's important to think about the future
By *Prof. Dr. Stephan Rammler*
Page 563
Ten future trends – Ten future questions
By *Prof. Dr. Armin Nassehi*
Page 571
Agile futures:
Mobility behaviour and technology use
in an up-and-coming generation
By *Wolfgang Müller-Pietralla for Volkswagen-AG*
Page 574
Always one step ahead of politics:
The city of Freiburg
By *Prof. Dr. Rainer Grießhammer*
Page 581

5.2. Looking beyond of one's own nose – abroad

Introduction
Page 591
Emerging India: Our elixir of life is under threat
By *Sunita Narain*
Page 593
A political case study:
Turning a vision into reality in Rwanda
By *Dr Rose Mukankomeje*
Page 603
No plastic bags? No problem!
The small African country of Rwanda leads the way
By *Charlotte Zink*
Page 606
Sustainability in Israel
By *Nora Marie Zaremba*
Page 614
Sharing the fruits of communal labour in New Zealand:
An interview with Mel Beirne
by *Nora Guzu*
Page 620



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5.3. Sustainability as a Matter of Education

Introduction
Page 626
From Practical Experience: Becoming More Courageous and More Political – Global Learning with Germanwatch e. V.
By *Inga Zinck and Stefan Rostock*
Page 629
Looking towards New Learning Cultures: A Plea for Greater Freedom of Action
By *Prof Dr Gerald Hüther*
Page 636
The School of the Future – A Vision from New Zealand
By *Nora Guzu*
Page 641
Future and ideas workshop – from *youthinkgreen's* workshop
By *Nadine Böttcher and Georgina Guillen-Hanson*
Page 653
More than tomorrow's music – courage to act: Our *youthinkgreen* song
Page 661



5.1. PROSPECTS FOR AND SCOPES FOR AC

Introduction

Anybody looking to the future full of hope and confidence is demonstrably involved more actively and intensively in the search for innovative solutions for the existing challenges. However, it is also understandable that many people are afraid of incalculable risks and unforeseen catastrophes, whether they are of an ecological or social nature. What can we do to take these fears seriously and



mitigate them instead of encouraging a fatalistic, passive inertia? How can creative processes for sustainable development be furthered for the long term and where do pioneers get their courage and their ideas from? You will find a great variety of answers to these questions in the following articles. Three ideas are reflected in the texts by all the authors:

1. We cannot be certain about the future.
2. The road to a world worth living in leads through better cooperation.
3. The future is already happening NOW.

In this section, we therefore examine the key question as to where we are right now as individuals, as organisations, as communities and as societies, and as to which "horizons of possibilities" we can see from a variety of perspectives. Because anybody who wishes to help shape the future must analyse present-day social processes, find their own place within them and consider the past. Obviously, there are as many different ideas about our future – or more precisely our "futures" – as there are opinions about our present.

In his article, James Goodman identifies different "remedies" for countering unspecified fears of the future, which are fuelled to some degree by the Hollywood movie industry and science fiction literature. He shows us very vividly the opportunities that can be explored by analysing challenges scientifically, examining the various initiatives looking for solutions and trying out new narratives of success.

In his article, the scientist Professor Rammler brings up similar questions relevant to the future. How and about what do we receive impulses for our imagination, enabling us to rethink the socio-political processes in entirely new ways? How do we gain positive ideas of our capabilities to shape sustainable development projects? He sees answers to these questions in so-called "Mitmachräume" (literally translated 'spaces to join the action'), in living your life in the spirit of solidarity, and in collaborative alliances for the future.

THE FUTURE
CTION

Pragmatism and global connectivity, the use of digital technology as a matter of course, a nomadic lifestyle and the desire for flexibility characterise the upcoming generations, according to the ideas put forward by Wolfgang Müller-Pietralla in his article "Agile Futures". The author explores contemporary perspectives and views on mobility and develops strategies for the future for Volkswagen AG on this basis. He describes how the realisation by many young people that we are all in the same boat generates huge energy and motivation for tackling the current challenges with courage.

The section concludes with an article by Professor Grießhammer, which provides a detailed analysis of the recent past and the sustainability processes in the city of Freiburg. This example demonstrates how slow and laborious progress in social transformation can be and the foresighted thinking and persistence it can take to realise visions of the future step by step.



© Josefa Kny

Staying power for the journey to "One World"

The authors of the following articles agree that the mixture of optimistic thinking about the future, the belief in self-efficacy, the will to make a difference and a sense of responsibility represents an ideal basis for the work done by pioneers. Added to this is the conviction of the significance of your own actions, as Josefa Kny found out while working on her master's thesis "Damit es eine Zukunft gibt", which translates as "To ensure that there is a future". According to Kny, further important aspects for visionaries and people keen to help shape the future is a realistic assessment of their own sphere of action, staying power and a high level of frustration tolerance. According to Kny, this includes the ability to deal with uncertainties and contradictions, and not wanting to sweep those under the carpet, but perceiving them as opportunities for exploring different avenues of action. The new information and communication technologies allow the vision of "One World" in mutual respect and appreciation to come within reach without anyone having to lose their identity.



© Michael Schrenk

Additional reading:

Josefa Kny (2014):
Damit es eine Zukunft gibt.
www.ewi-psy.fu-berlin.de/einrichtungen/weitere/institut-futur/aktuelles/1410_if-schriftenreihe_kny.html

REMEDIES AGAINST FUTUREPHOBIA

By James Goodman

If the Hollywood movie industry is anything to go by, we cannot look forward to a rosy future. In science fiction films such as "Planet of the Apes", "The Hunger Games", "The Day After Tomorrow" and "Children of Men", we see ourselves exposed to oppressive technologies, social division and rampant poverty. We will be confronted by environmental destruction ending in worldwide collapse. How can we rid ourselves of the vague fear of a tragic destiny of humanity and rewrite the story of the future to provide a positive outlook?



The epitome of the gloomy-futures genre is "The Road", a film adaptation of the novel of the same name by Cormac MyCarthy from 2006, which won the author the Pulitzer Prize for fiction. The story follows a father and son as they journey across the ruined landscape of a post-apocalyptic USA, where all non-human life has been wiped out by some cataclysm. A brutal battle ensues between the surviving humans, fighting over the rapidly diminishing food supplies. Some even resort to cannibalism. The causes of the disaster and the nature of the catastrophe remain vague until the end, and that is probably the most sinister aspect of this scenario. The vagueness of the story seems like a deliberate play on our deep-rooted fear of the future. The author and the director draw on this very consciously and drive the horror to the extreme, to the very limits of our imagination.

Futurephobia, which I am going to call this, is therefore based on vague threats – some non-specific apocalypse looming somewhere out there. But what conclusion should we draw from that? First of all, that one important remedy against this paralysing fear lies in the accurate description and identification of future threats. We can only wrest back the power that doom-mongers have in our society by knowing our true enemies. This principle can be applied to all challenges of sustainable development, of which there are an innumerable number, from fresh water shortages and soil erosion to the rising rate of obesity-related diseases.

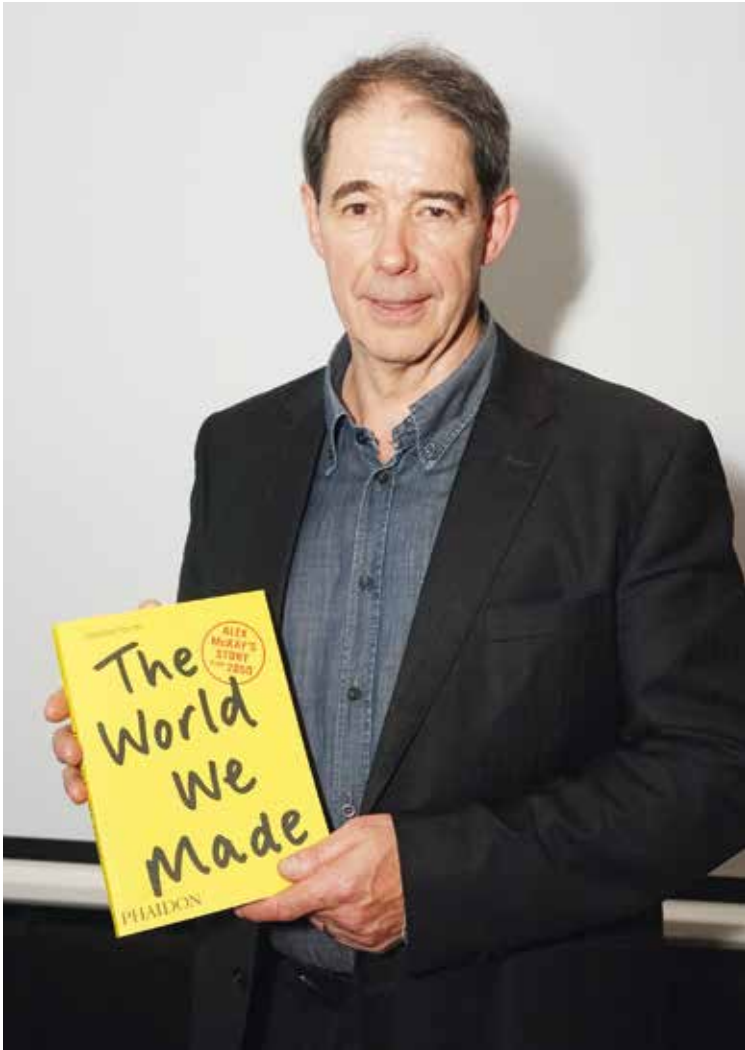
Complex knowledge and new uncertainties

I was very surprised to learn recently that urbanisation is one of the main causes of hunger in the world. As more people move from the country to the cities, food is transported there as well. But a lot of the food ends up in landfill or in sewers instead of being available to the people in the area where it was harvested. We also have a major problem with decreasing soil quality. This is linked to the systematic depletion of micronutrients such as zinc and manganese from the soil. Lower micronutrient content of the soil tends to result in lower yields and lower nutritional quality, which in turn means that people cannot survive on the produce they grow and flee to the cities: a vicious circle! However, knowing this gives me some hope that these problems too can be tackled and solved.

The topic of soil quality and nutrition illustrates the complexity of the difficulties involved in dealing with climate change. While it has been proven with a high level of certainty that man-made climate change is actually happening and that this process is even accelerating, there is so far no computer program that can predict the specific consequences. The great uncertainty about the consequences is also hampering international agreements on approaches, counter-measures and adaptation options. Roughly a year ago, for instance, it was still assumed that the continental ice sheet of the western Antarctic would only be in danger of thawing if the warming of the earth reached four degrees Celsius. However, scientists from NASA and Washington University, conducting separate studies this year, have discovered signs indicating that the process, which is expected to take two hundred years or more, has already begun, with the warming of the earth not yet having exceeded one degree Celsius. Consequently, the rise in sea level by the end of this century may even be double the currently anticipated increase.

Looking ahead to potential solutions

Climate change may mean the loss of the Amazon Rainforest and of the coral reefs, a considerable reduction in the temperatures in Northern Europe, or maybe none of these may happen. Knowing that we are facing major changes without being able to forecast the precise impacts is what makes climate change such a threat. But knowing your "enemy" is only one key component of the remedy against futurephobia. It is far more important and helpful to engage in concrete solution concepts that have already been developed. Only then can the panic turn into the solid conviction that our future will be better than our present. This belief and the will to effect positive change provide the second ingredient of the remedy against futurephobia.



© Photo Courtesy of Swire Pacific Offshore Operations (Pte) Ltd and Forum for the Future

To cite one example of how fiction can pave the way: the latest book by Jonathon Porritt is entitled "The World We Made". It is set in 2050 in a society that has implemented and internalised sustainable and equitable ways of life. In a retrospective, the protagonist Alex McKay reports on the events and developments that have shaped that society from 2014 to 2050. He thus conveys a positive and realistic vision on how our life could look in the near future if we set the right course now. Porritt illustrates that sustainable living is already feasible now and that the seeds for this future have already been sown all around us. The book investigates changes and experiences leading towards a balanced way of life in various areas such as health and wellbeing, technology, energy generation and energy utilisation.

Jonathon Porritt also describes the way his own views changed during the process of researching and writing the book, making him more hopeful that a sustainable and equitable future is a possibility, or even a probability. Gaining a positive view is not as easy as it may seem, particularly when you consider that, before writing the book, Jonathan had already been involved in environmental movements for over forty years. Let us keep this story in mind and take a look at some key challenges of our present and future, which are being examined in "The World We Made".

Water and energy

Food production requires a vast amount of water (agriculture accounts for 70 per cent of our fresh water consumption overall), as do industry (above all energy generation) and private households. Our "civilisation's thirst" is draining ancient aquifers and drying out watersheds. Just one example: the Yellow River in China – at 5,464 kilometres the sixth longest river in the world – ceased to flow for 230 continuous days in 1997 as a result of massive water extraction for farming. As the global population grows, we need ever larger volumes of fresh water. Studies indicate that global water demand will exceed existing resources by 40 per cent by 2030 already unless we finally make serious efforts to overcome this challenge and take precautionary measures. Integrated water management (more efficient artificial irrigation methods, rainwater harvesting, less wastage of fresh water, sophisticated sewage treatment plants and desalination plants where seawater is transformed into fresh water) can ensure that there will be sufficient clean water for all people in future. I would like to present three of the latest developments in this area to any sceptics who may think that this sounds like a pipe dream.

PepsiCo, a company hugely dependent on water for the manufacture of its products, has managed to halve the water consumption for its potato crops (e.g. for potato crisps) while still increasing yields. This was achieved through a combination of drip irrigation, use of the latest measuring devices and network technologies. One of the techniques used involves the measuring of moisture in the soil – one of the factors for the optimum growth of crops – every 15 minutes. The data is transmitted electronically and complemented by information from local weather stations. Farmers can obtain information on how much artificial irrigation their plants need on any given day by accessing the pertinent data via their smartphones. Over the last two decades, the use of drip irrigation has increased six-fold. This method is particularly useful in hot and dry climates, i.e. in areas where water quickly evaporates, because it helps to conserve water. In the countries with the highest intensity of irrigation, the areas where drip irrigation is used have expanded enormously, namely by a factor of 87 in India and by a factor of 111 in China.

Waterless washing machines

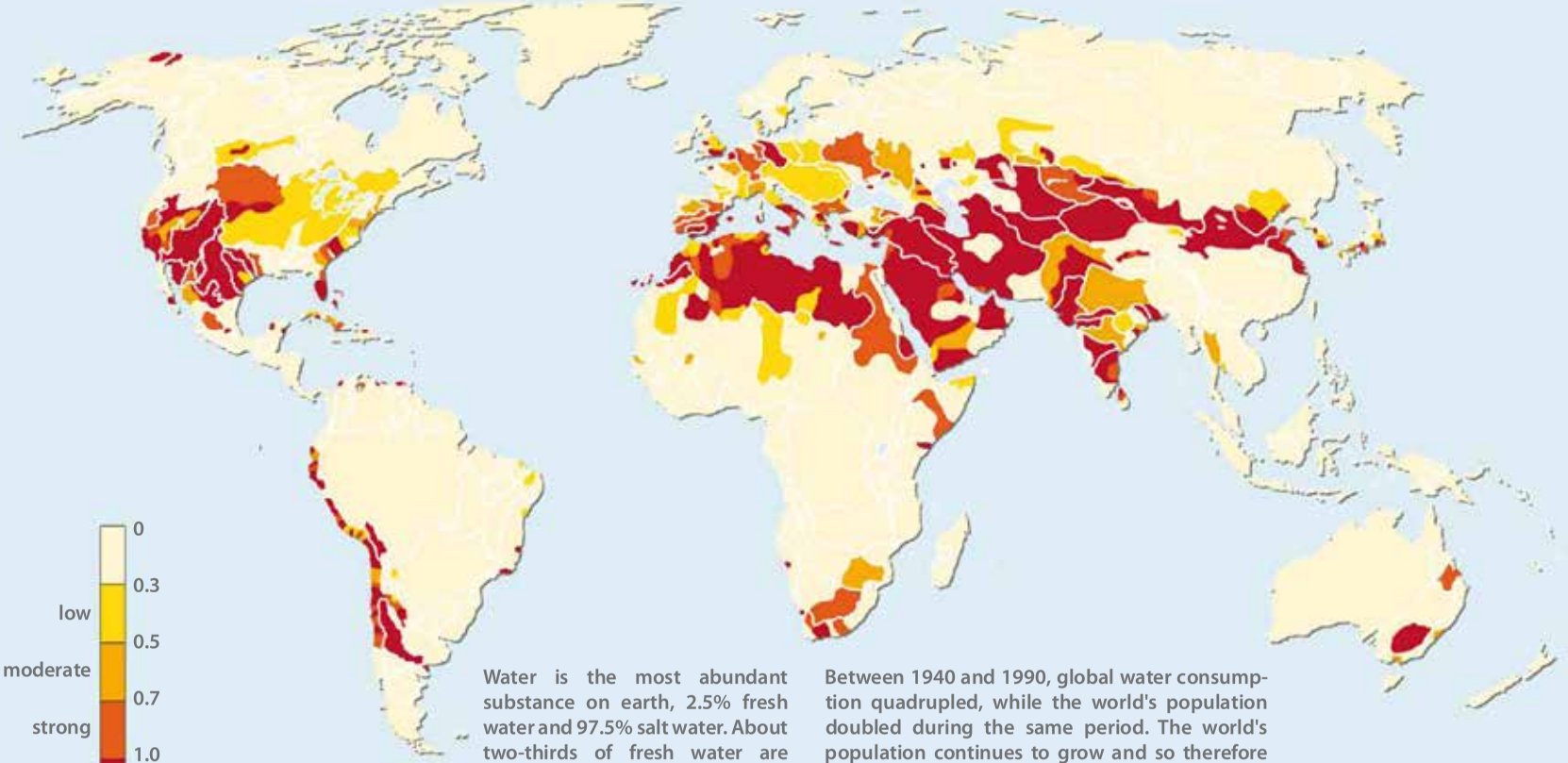
The second method for conserving water to be mentioned here is one that could reduce water consumption in people's homes: the waterless washing machine, which is already being used in commercial laundries. The dirty laundry is cleaned using reusable nylon beads; the manufacturers promise an 80 per cent reduction in water use

Water stress

At present, 2.5 billion people live in regions with water stress.

By 2025 this will be more than half the world's population.

At least 3 billion people will suffer noticeably from the water shortages.



The water stress index provides information on the relationship between water demand and the availability of renewable fresh water.

Water is the most abundant substance on earth, 2.5% fresh water and 97.5% salt water. About two-thirds of fresh water are locked up in glaciers and permanent snow cover. Only 0.03% of the fresh water can be extracted for use as drinking water.

Between 1940 and 1990, global water consumption quadrupled, while the world's population doubled during the same period. The world's population continues to grow and so therefore does water consumption. Already one third of humanity does not have enough water. The main user (70%) of the world's available fresh water is agriculture. Households (10%) and industry (20%) consume significantly less.

Source map: www.monde-diplomatique.de / Source text: www.unesco.de / Le Monde diplomatique (march 2013): „Fleischatlas - Daten und Fakten über Tiere als Nahrungsmittel".

WATER STRESS

Water is the most abundant substance on earth, 2.5 % fresh water and 97.5 % salt water. About two-thirds of fresh water are locked up in glaciers and permanent snow cover. Only 0.03% of the fresh water can be extracted for use as drinking water. Between 1940 and 1990, global water consumption quadrupled. The world's population continues to grow and so therefore does water consumption. Already one third of humanity does not have enough water. And 1.1 billion people have no access to clean drinking water. According to estimates, the world population will need at least 30% more water by 2030. At present, 2.5 billion people already live in regions suffering from "water stress". By 2025 this will be more than half the world's population. At least 3 billion people will suffer noticeably from the water shortages.

Water resources worldwide	
Sea water	1,348,000,000 m^3
Freshwater	36,000,000 m^3
Glaciers, polar caps	28,000,000 m^3
Groundwater	8,000,000 m^3
Lakes	126,000 m^3
Soil water	61,200 m^3
Atmosphere	14,400 m^3
Rivers	1,100 m^3

Pic. 1

WHERE DOES THE WATER FLOW?

The main user (70 %) of the world's available fresh water is agriculture. Households (10%) and industry (20%) consume significantly less. One third of the water volume consumed by agriculture is required for livestock husbandry, with most of the water being used to produce animal feed. The drinking water for the animals and the barn cleaning require less water. Not only meat but animal products generally require large amounts of water. To produce 1 kg of cheese, about 5,000 litres of water are needed, to produce 1 kg of eggs about 3,300 l. In the production of tomatoes (184 l) and carrots (131 l) the consumption is significantly lower. In addition, the pollution of groundwater (and thus often of drinking water) is a serious threat especially in regions where drugs and phosphorus-containing fertilizers are used in animal husbandry and livestock density is very high. Drinking water wastage is enormous in many households. In Germany, every inhabitant consumes an average of about 123 litres per day, of which 44.5 litres are for personal hygiene and 33.5 l for flushing toilets. The lowest proportion (5 l) is used for food preparation and drinking.

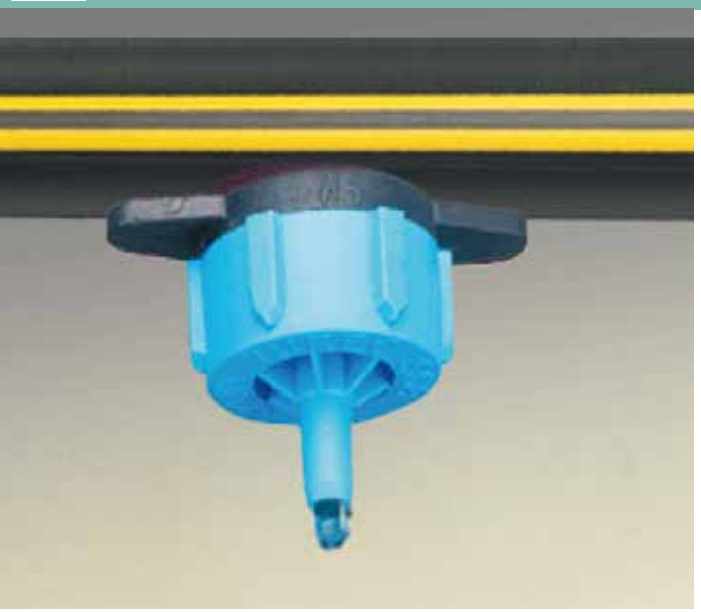
Water consumption for the production of 1 kg of beef

7200 kg	roughage
1300 kg	grain feed
24 m^3	drinking water
7 m^3	barn cleaning
= 15,500 litres of water (at 200 kg of meat per head of cattle)	

Pic. 2

Sources:
www.unesco.de/uho_03_2013_nexus.html
Le Monde diplomatique (März 2013). „Fleischatlas – Daten und Fakten über Tiere als Nahrungsmittel". p. 28–29.
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Pic. 1: www. wasserwerke -sonneberg.de/v4/wasser/wissenswertes/wasser-weltweit.html
Pic. 2: Data from: Le Monde diplomatique (march 2013). „Fleischatlas – Daten und Fakten über Tiere als Nahrungsmittel". S. 28–29.
31.05. 2013

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and a 50 per cent reduction in energy use. It is probably only a matter of time before this technology makes it into the home. Combine that with waterless toilets, greywater recycling, rainwater harvesting and storage, there is not much to stop the efficient use of water in households around the world.

Thirdly, desalination of seawater is becoming ever more widespread and costs are coming down. Since 2009, capacity has increased almost by 60 per cent and continues to rise. 150 countries are already using desalination techniques, the leaders being Saudi Arabia, the USA, Australia (following the "Millennium Drought" of 1997-2012) and Israel. Scientists and engineers from around the world are working on making desalination cheaper and more efficient. In 2013, a pilot project was started in Masdar (United Arab Emirates) with the aim of using renewable sources of energy for sea water desalination technology in the future.

Countless innovations and initiatives such as these can be found around the world. While the challenges remain huge, the prospect of sustainable water use becomes more realistic when people focus on potential solutions rather than the problems.

Energy supply of the future

Similar considerations apply to the issue of energy. In many respects, energy supply around the world will represent an even greater challenge than water supply. The demand for power is rising rapidly. The reasons include population growth as well as industrialisation processes in many countries, while approximately one billion people are still without power elsewhere (including 85 per cent of the rural population in Sub-Saharan Africa). Added to this are the complex changes brought about by climate change, caused above all by fossil fuels such as coal, gas and oil. Only if we make concerted efforts to avoid these fuels will sustainable solutions for energy supply be feasible.

Similar to the situation regarding water, rapid and fundamental changes are also apparent in the area of energy. In the above-mentioned book, Jonathon Porritt makes reference to the writings of Thomas Edison, who wrote the following over 100 years ago: "I put my money on the sun and solar energy. What a source of power! I hope we don't have to wait until oil and coal run out before we tackle that."

Well, we have almost waited until the demise of fossil fuels. However, investments in electricity generation from solar energy are growing worldwide and a future powered by solar technology seems a real possibility. According to Bloomberg, the efficiency of energy-producing solar plants has increased by 21 per cent and the price of solar power is falling rapidly compared to the prices of other energy sources. Solar power is already competing on an equal footing with conventional power from the grid in Germany, Italy and Spain pricewise – earlier than most people would have expected.



Decentralised, solar-driven desalination plant for energy self-sufficient production of drinking water from seawater or brackish water © Fraunhofer Institut

New narratives

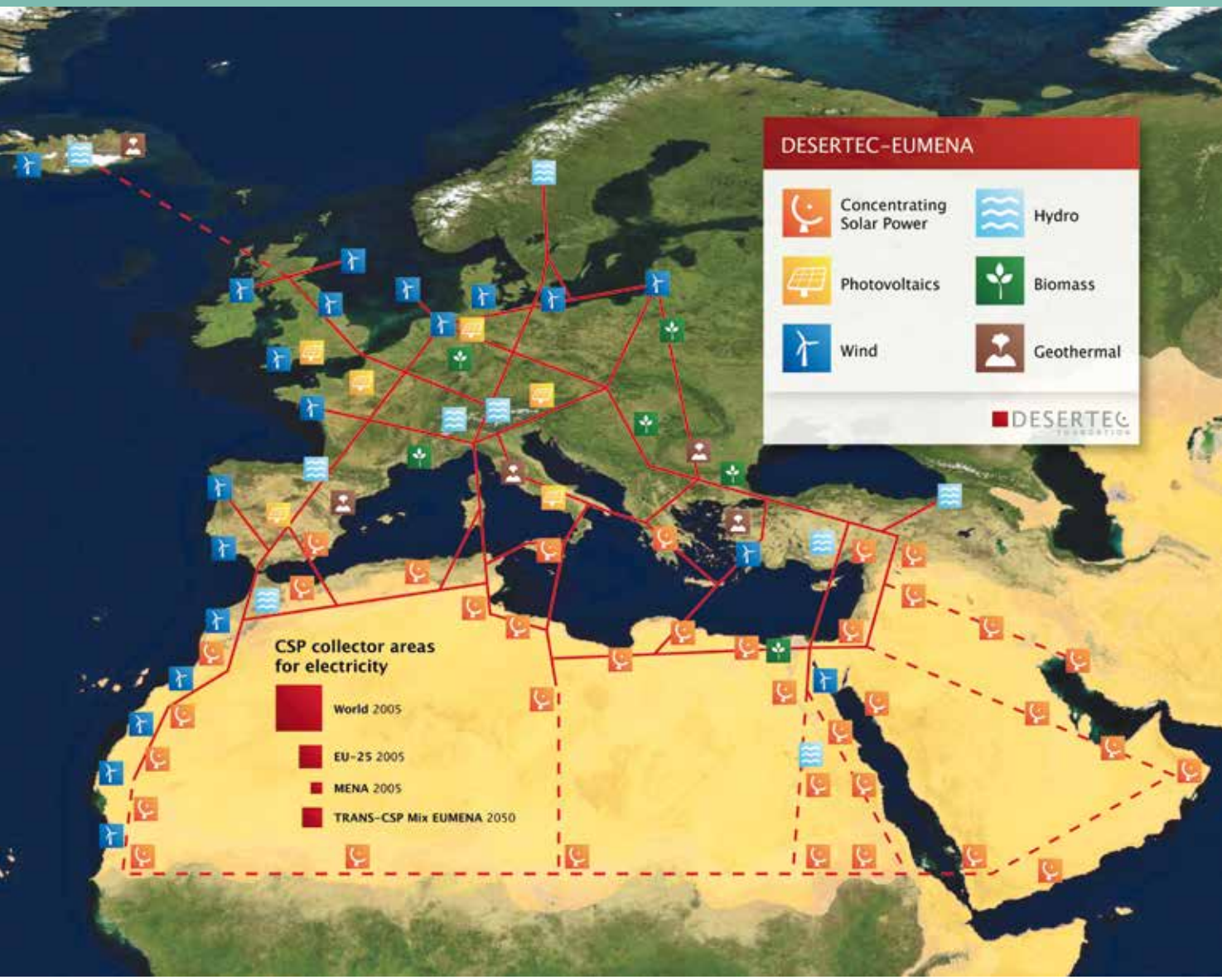
Thanks to a sensible renewable energy policy in Germany, the power of the sun covered a significant proportion of the electricity generated in the country for several hours on 7 July 2013. The media, in fact, referred to that day as "sunny Sunday"[1]. For some time, "DESERTEC" was considered one of the most impressive and visionary projects in the area of sustainable energy supply of the future. This was a large-scale programme for collecting vast amounts of solar energy in the Sahara and exporting them to the European energy markets via direct power lines. People hoped that it would be possible to eventually cover 15 per cent of European energy demand with DESERTEC. And this was not an idea dreamed up by environmen-

OUR AUTHOR

James Goodman (b. 1972) works for the organisation "Forum for the Future". He develops future scenarios and visions for areas such as strategic development and innovation, conducts research on promising techniques and carries out trend analyses. www.forumforthefuture.org



1) http://cleantechnica.com/2013/07/12/sunday-solar-sunday-germany-solar-power-record-in-depth/



© DESERTEC Foundation

talists but a solid business concept, initiated by the Club of Rome in collaboration with DLR, the German Aerospace Center, and supported by major European companies including Deutsche Bank, Munich Re and Avancis. By 2014, however, the industrial consortium behind DESERTEC had to concede failure. Many companies withdrew from the project. The main reasons are assumed to have been: excessive ambition, organisational and structural deficiencies, internal power struggles as well as incorrect assumptions about the consequences of the German energy transition. Where environmental issues are concerned, managers and entrepreneurs simply cannot replace politicians!

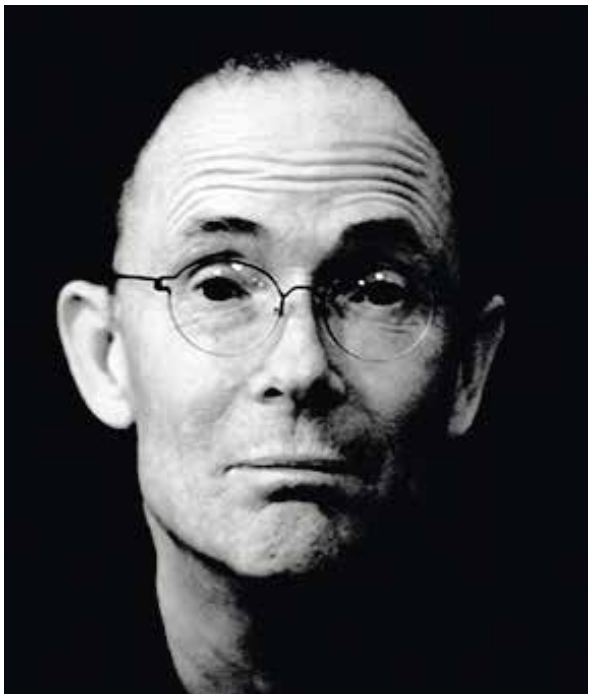
However, the good news is that North African countries have not stopped considering green energy a viable option and are no longer waiting for European investors. Instead, they are accepting funding from their Arab allies such as Saudi Arabia to realise smaller-scale projects. Solar technology offers great prospects for supplying power to those people who are not yet connected to the

grid. Serious competition for new ideas and business models for this area has broken out. There are "pay-as-you-go" schemes for solar power and lighting, for instance, in African countries (Azuri and M-Kopa) and in India (Simpa Network) as well as micro-credit platforms for citizens to invest in small-scale solar plants, such as "Sunfunder" in Africa and "Milaap" in India.

The author Willian Gibson made a statement that is very popular and frequently cited in the field of futures studies: "The future is already here, it's just not very evenly distributed. Every time we find a sustainable solution, we should celebrate it as an important element of the future we want."

Examples of this include marine parks, where fishing is prohibited (fish stocks in ten per cent of New Zealand's waters are protected this way[2], as well as innovative methods of indoor farming, which produce 20 harvests a year with little energy thanks to the use of LED lights and no need for chemical fertilizers or pesticides[3]. Another promising solution involves a replacement "aluminium can" made from recycled material, which could herald a new waste-free era[4]. The NGO SkyTruth is also likely to have a positive impact; it analyses satellite images and other measuring results to map environmental developments that would otherwise remain hidden from public view.[5]

Only if we bear in mind these positive approaches and signals will we be able to rid ourselves of the fear of a vague and tragic fate. Only then can we realise that projects and campaigns in the present will have a positive impact on our future. All that's left for us to do now is make a Hollywood movie about it.



William Ford Gibson
© Frédéric Poirot

2) http://www.doc.govt.nz/conservation/marine-and-coastal/marine-protected-areas/

3) http://greensensefarms.com/

4) www.theinnovationshowcase.co/#/novelis

5) www.skytruth.org

LEARN • UNDERSTAND • ACT

1. Modern-day phobias

a) What type of fear is the author seeing among people in present-day society?

b) What remedies does he offer for mitigating this fear?

2. The author considers deteriorating soil quality one of the key problems that sustainable development needs to overcome.

a) What reasons does Goodman mention for this problem?
Do you know any others?

b) What are the difficulties that make a solution of this problem more difficult?

c) What concrete solution concepts have already been developed?

3. The major topics of water and energy supply present further challenges in the present and for the future.

a) Which solutions does PepsiCo combine?
Where does the concept of drip irrigation originally come from?

Crop	Yield	Water consumption	Total productivity
Bananas	52%	–45%	173%
Cabbage	2%	–60%	150%
Cotton	25% to 27%	–53% to –60%	169% to 255%
Grapes	23%	–48%	134%
Potato	46%	0%	46%
Sugarcane	6% to 33%	–30% to –65%	70% to 205%
Sweet potato	39%	–60%	243%
Tomatoes	5% to 50%	–27% to –39%	49% to 145%

Change of the yield and water consumption when changing the surface and drip irrigation.

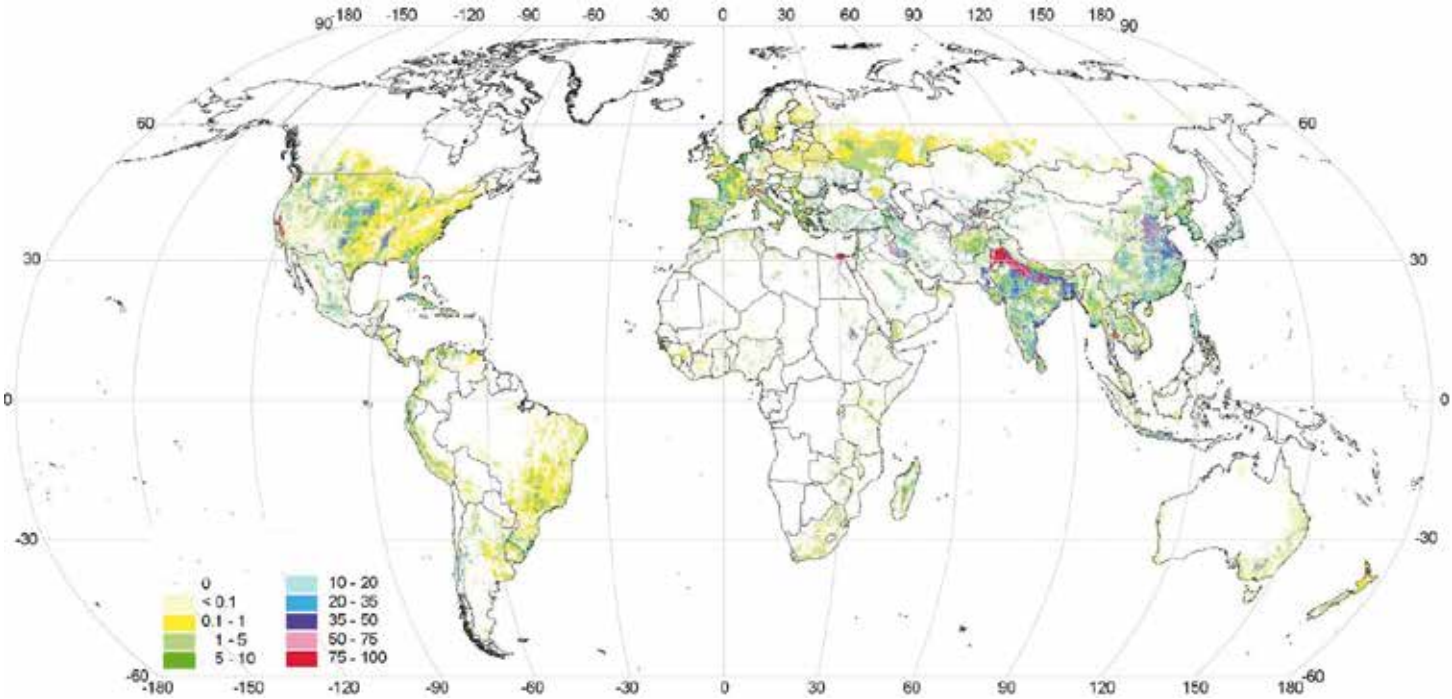
b) Research and describe the different methods of saving water in small groups: (1) in the home, (2) in agriculture, (3) in industry.

c) Research energy-efficient desalination plants. What progress has been achieved in this area in the last five to ten years?

d) What correlations and conflicts of interest exist in relation to (shortages in the) water supply and (increasing) energy demand in your country?

e) Work together to question and evaluate the objectives and achievements of the "DESERTEC" project. Research solution concepts and obstacles for promoting solar energy in your region and discuss these in the round.

4. "Every time we find a sustainable solution, we should celebrate it as an important element of the future we want."
Discuss this statement by Goodman. Why is celebrating achievements so important to him? What could a "culture of celebration" of successful sustainability initiatives, be they large or small, look like?



Areas under artificial irrigation in per cent of the total surface area of each country © Silbert 2000

→

5. "All that's left for us to do now is make a Hollywood movie about it," said Goodman.

a) Write a short screenplay reflecting your vision of the future.
- Talk to authors or filmmakers about it or read the information on the youthinkgreen screenplay workshop in section 2.
- Find people to help you with filming your vision in a short video. Put your video clips online and engage with the responses you get.

b) Organise a competition for pupils entitled "Your vision of the future". Ask people to do some brainstorming on the subject and express their thoughts in their own speeches, pictures, posters, pieces of music or theatre scenes. Maybe you can put together a jury to evaluate what has been produced and organise a little prize-giving ceremony.

c) Slip into the different roles of futurephobes, who see the future as a vague threat, and of optimists and pioneers, who can identify concrete threats and offer solutions. Try to find different arguments for both views and engage in a debate. What sort of an experience was that for you? How can you take the fears of your fellow human beings seriously without encouraging their phobia and spreading it further?



DESIGN YOUR FUTURE:

Why it's important to think about the future

By Prof Dr Stephan Rammler



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"A good vision grows out of a delicate balance between a sense of reality and utopia. Vision involves what is only just possible!" (Hermann Simon)

The future has always been uncharted territory. Today that's truer than ever. We live in an ever-accelerating world in which it has become harder and harder to comprehend what is to come. Where yesterday there was a path, today there's none. Where we've reached a dead end today, there may well be new ways forward tomorrow. Having a large family, burning coal, oil and gas, owning your own vehicle or the principle of continually expanding economic growth – all of which were once expedient – have proved to be potentially dangerous to our global ecosystem. Yet developments considered risky today may well create new opportunities for the future, even if that may sound paradoxical at first. For example, this could mean being able to navigate the Northeast Passage around the North Pole because climate change has caused the ice to melt, or wholly new settlements in the Arctic region.

No one knows what the future holds

This complexity and inconsistency make attempting to understand and assess future developments more important than ever. In doing so, possibility does not always result in probability, and the improbable can suddenly occur with an uncompromising statistical power. Sometimes even minimal changes serve to unleash long-dormant forces and render everything known until then useless. This is often the case with political developments, for example, confrontations between different ethnic or religious groups if people feel their cultural identities are being threatened.

If these conflicts occur in regions that are interconnected with the wider world due to their natural resources, as is the case with the Middle East, a local conflict about regional supremacy compounded by questions of faith can become a worldwide crisis surprisingly quickly.

For this reason, looking towards the future should always be accompanied by a sense of humility in the face of the unexpected and a distinct lack of that certain air of infallibility evinced by many futurologists, which tends to give the impression that these researchers can actually see into the future. This is simply not possible! Nonetheless, we should attempt to prepare ourselves for various versions of the future and, much more importantly, develop future world views that are preferable at the same time.

Opening up possibilities

From today's perspective, the future will unfold full of possibilities determined by a diverse range of influential factors. Developments in science and technology, politics, culture, business, ecology and



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human development all interweave to create the diversity we call society. As a result, our image of what the future holds for this society is one that must be painted with as many different brushes, colours and diverse perspectives as possible, those of both science and art, and those of both experts and everyday people.

What questions and trends will we face in future? What condition will the Earth be in? And what will future ways of life look like?

Risks and threats

If you make the effort to find answers to these questions by bringing together current debates about the future, trend analyses, the findings of basic scientific research, computer science and engineering as well as social and spiritual discussions about politics and culture, you'll begin to wonder:

for one thing, we are facing huge risks and threats created by the framework of mutually reinforcing and overlapping problematic developments. To name just a few key points: rapid population growth and the increasing problems in feeding the global population that come with it, conflicts surrounding clean drinking water, urbanisation, diminishing resources, social inequality and an unequal global division of wealth, climate change, pollution, the loss of biodiversity, wars and violent conflicts, the threat of pandemics and finally the consequences of digitalisation.

This last example in particular makes most clear just how quickly a positive expectation of the future can tip over into its problematic opposite. For many years, the 'computerisation' of the world, the Internet and mobile communication were associated with huge expectations of freedom. The scandal surrounding former CIA employee Edward Snowden and the NSA's spying on the German government underscore the threats presented by digital society – threats that have long been acknowledged but not taken seriously. Does new technology lead to a kind of "digital totalitarianism" in which a small number of corporate groups and governments assume power over free citizens using soulless mathematical algorithms? Or will it be possible to use digital media for greater democracy, more freedom, an increase in knowledge and simplifying and improving life in ?

It is above all the younger generation who will have to answer these questions. It will be their decision to give away their personal rights to privacy and self-determination in exchange for cheap and ubiquitous media consumption or take the opposite tack and harness the endless possibilities of the digital revolution to shape a greener, more peaceful and more intelligent world.



Rush Hour in Hongkong © Klaus Fahlbusch

Possibilities and opportunities

The flip side here is the achievements of an undisputed success story of modern society. Another few key words: growing prosperity and an expanding middle class, life expectancy that is increasing enormously and better health, improvements in education, safer food, declining birth rates worldwide, progress in gender equality and LGBT rights. Added to all this are rapid technological progress with enormous increases in efficiency and the diversity of human experience, a global cultural exchange and the continually increasing economic interdependence that makes large-scale conflicts ever more improbable.

Principles of a successful future

Is the glass now half full or half empty? What will continue: this success story, the intensification of the crisis or both at the same time? I am of the opinion that both "storylines" are justified and will continue in future. However, as things currently stand, an unchanged course of direction will see the pendulum swing ever more strongly towards a critical intensification of problematic trends. How can this be avoided?

"We can't predict the future, but we can shape it," is another maxim of future research. How can we act today with a view to tomorrow? Where should society be in ten, 50 or 100 years? What

"mission statements" does this require and how do we develop these ideas?

The difficulties of change required in the face of future challenges and likely even threats as well always begin at the edges of what is imaginable. Because of this, today we need still more than the options presented to us by established politics. Above all, we need an impetus for the power of our imaginations. After all, this always leads the way for politics. We have so far been lacking in positive visions of culture and politics that succeed in other ways. Where and how are they to be found?

OUR AUTHOR

Prof. Dr. Stephan Rammler (b. 1968) is a German future and mobility researcher and founding director of the Institute for Transportation Design. He is a Professor at the Institute for Transportation Design at Braunschweig University of Art.



566 Celebrating utopias

One example of a forum in which these questions are discussed and answers found was the "Festival of Utopia" (*"Festival der Utopie"*) in Braunschweig, Germany, which was first organised in 2013 by the Regional Alliance (*Allianz für die Region*), House of Science (*Haus der Wissenschaft*) and Braunschweig University of Art. For two days, committed young people from the south-east Lower Saxony region gathered together with future researchers, artists and presenters on an unused lot that housed the old Hertie department store in the town of Peine, enjoying a large workshop for the future, exchanging ideas and developing new visions. This formed the beginning of a whole series of similar events throughout the entire region surrounding Braunschweig, Wolfsburg, Salzgitter and Wolfenbüttel. The aim was to develop a shared ideal and future image for our region, allowing young people's individual life plans and future wishes to be aligned with the multifaceted opportunities and potentials as well as the challenges to be expected in their current – and hopefully future – home region.

The result was an enormously diverse image of a region in which economic opportunities are enduringly connected to local environmental sustainability, where the challenges of mobility, education, migration and population development are resolved in imaginative fashion, and where values of solidarity, new forms of



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community living and top-level technological innovation contribute to reconciliation and affiliation between old and young, rich and poor and native-born citizens and immigrants. Some of the ideas developed were spectacular, unrealistic and meditative, whilst others made perfect sense and could be immediately implemented.

Another noteworthy initiative was that of "Living Utopia", a campaign and project network taking a holistic approach in which young, committed people organise and implement projects in line with the principles of "money-free, environmentally friendly, solidarity and veganism".

The aim of these projects is to set up "participation spaces" where ideas on transitioning to a sustainable society can be conceived and brought to life and grievances highlighted – all with the aim of pursuing lifestyles of solidarity through alternatives.



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Forging alliances for the future

However, the most important aspect here is working together towards a successful future. This is not just a question of good ideas. Above all, it's about creating new networks and connections between those who will shape and determine the future of this region – as employees of companies, consumers of products, as parents and teachers and ultimately as future citizens and decision-makers in and on behalf of the region. These alliances for the future seek to redirect private and local lifestyles with a view to global responsibility. Just as R. Buckminster Fuller's once said, *"The best way to predict the future is to design it."*



R. Buckminster Fuller
© Dan Lindsay

LEARN • UNDERSTAND • ACT

1. "A good vision grows..."
Take a critical look this quote from Hermann Simon and the text by Gertrude Walch


© Gertrude Walch

Thoughts from Gertrude Walch
"All life plays out between two poles. Balance is the principle of polarity, the energy between these two poles. Balance is the secret of life, the place of coherence. Equilibrium is also balance. A state of both this and that. Those seeking balance need to know the extremes. Only then is the midpoint between conflict areas is recognisable and palpable. Balance is movement and equality. A tight-rope walker steers their balancing pole from one side to the other with the greatest fleet of foot. If they were to move anxiously and strain themselves they would lose their balance and fall to the ground."

2. Having visions and goals is healthy and expresses vivacity.
What options or creative methods do you know of for developing visions for the future? Research! Which of these do you like and which suit you?



WHAT WOULD YOU DO IF MONEY WAS NO OBJECT?

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3. Personal growth

a) If possible, describe your current position using the following questions. Who am I and where do I come from? What is my calling? What are my core abilities, talents and needs? How can I live up to these together with like-minded people? How can I do something good in my social environment in the process? What are my visions for my future, and how can I shape them according to my abilities? Where do I want to go and with whom?

b) What perspectives result from each of your descriptions of your own positions? What methods can you use to effectively plan your steps towards change?

4. "The acceleration (and the digital development) of many processes in the world today make the future even harder to predict."

a) How does the future nevertheless present new opportunities and open up new "spaces for possibility"?

b) What new risks and threats are connected to this? Discuss these questions using examples.

5. a) How do you define "digital totalitarianism" in the sense of the author's statement?

b) Describe the dangers of the digital revolution and discuss them.

c) Examine the issue of data protection in terms of citizens interacting with digital media. What fundamental tasks face the political sphere in the struggle for freedom in the digital age?



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6. There are two incredibly contradictory sides to modern society – progress and destruction.

a) How can we still "shape" the future in the face of this wide range of global problems?

b) Investigate the "Festival of Utopia" in Braunschweig (2013) as well as the "Living Utopia" campaign and project network. Research this online.

c) How might your joint collaboration on the image of a successful future look?

→

7. "Festival of Utopia" future workshop at your school or in your area. As part of a project week, invite the entire school to a "Festival of Utopia". Research this online or contact the organisers of "Living Utopia"

a) Form a school-wide organisational team to accomplish the following tasks:
- designing the programme: main theme, topics and speakers, workshops, forums and exhibitions, concerts and films, further contributions
- implementation: premises, forms of support, invitations to initiatives, publicity
- documenting the festival: photos, videos, texts, questionnaire/ short interviews with students
- evaluation and publications: website design, social networks, reports in the local media or community access television

b) A look back at your experiences: Offer your personal assessment.



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TEN FUTURE TRENDS – TEN FUTURE QUESTIONS

By Prof Dr Armin Nassehi

The world is moving faster and faster and we get the feeling that we are no longer able to influence its development using familiar means and methods. Many of the predictions made by future researchers have not come to pass. So considering the future means posing questions in a new way. In the following section, we will not only present ten future trends, but ten future questions as well.

1. The future is happening now!

Looking back at earlier expectations of the future, we can see that the future is always depicted with tools that are not yet available at that specific point in time. As a result, future trends are rarely correct. However, those who recognise this will handle the future differently.

QUESTION: What does that mean when thinking about the future?

2. Elites have to become translators!

Traditional elites are experts in their particular fields – as economic, political, scientific or artistic elites. Elites must now be able to learn to communicate between these disciplines. And they must learn to communicate between what different cultures assume to be self-evident.

QUESTION: What must elites do to achieve this?

3. Democracy is under pressure!

The successful model of European democracy is under threat. The simple rule that "economic prosperity creates new forms of democratic decision-making" no longer applies.

QUESTION: What will replace it? In other words, how is democracy possible under new conditions?

4. The real-time media of Web 2.0/3.0 are a revolution!

The use of the download/upload Internet and its mobile use are as revolutionary as the invention of the printing press. These new media forms are not just altering the flow of information but the identity of its users as well. Especially for the younger generation, the distinction between virtual and real worlds no longer applies. This is just as true for business as for leisure time and especially for culture.

QUESTION: What consequences and options does this technical development present?

5. In the 21st century, the question of energy is a question of peace!

The end of the age of fossil fuels is in sight and nuclear energy in turmoil. The search for energy solutions for the 21st century has become a key question for future economic and political development. It's not just a question of technical solutions but about their intelligent political and economic implementation as well.

QUESTION: How do we solve this problem and who will develop new concepts?

6. Climate change is a parable for the complexity of society!

There is no question that "society" must do something to combat climate change. Yet "society" never reacts as a single entity but always from diverse perspectives, be they economic, political, media, consumer or scientific. This global problem highlights just how little our complex society can be steered, even when we know what must be done.

QUESTION: How can we reconcile these different perspectives?

7. Terrorism will remain the key security challenge!

Modern societies are very fragile and the simplest means can rock them to their core. This provides nearly uncontrollable opportunities for terrorism. Current military strategies are patently unfit for purpose and are still relying on the arsenal of weapons used in the wars of the 19th and 20th centuries.

QUESTION: What security strategies can be developed without endangering liberal society?

8. Global connectivity is both a problem and a solution!

The end of the era of self-sufficient national states can be seen most clearly in the economic and political structures of world society. Whilst a huge number of people benefit from globalisation, the high degree of cross-linking makes economic and political connections unstable and prone to failure. Political events and natural disasters can topple entire regimes.

QUESTION: How can complex, modern systems be made more resistant to failure?

9. National and cultural identities are blending but not disappearing!

The European idea of national identity was an idea of self-sufficiency and purity. Although this model has disappeared, cultural identities and claims to cultural identities are quite strongly represented. In future, people's identities will have to adapt towards a greater acceptance of the blending and uncertainty of regional, national and religious identities.

QUESTION: What consequences does this hold for our understanding of ourselves culturally and for educational policy?

"The remaining risk and security organisation."

At first sight, the nuclear catastrophe in Japan appears to be a natural disaster. More than that, however, it is a crisis of organisation. This has clearly gone unnoticed, all too easily being attributed to untameable nature. In modern communities, the risks of technical processes are being resolved socially by highlighting the human nature of possible failure and economically regulating damages. In the process, we often overlook the fact that technical processes are themselves social processes, which is why the safety of nuclear technology is primarily a problem of organisation – an aspect of the debate that has yet to be addressed systematically.

OUR AUTHOR

Prof. Dr. Armin Nassehi (b. 1960) primarily focuses on the field of empirical ethical research into medical, legal, ethical and political decisions. Together with Ulrich Beck and Norman Braun, he publishes the sociology journal, Soziale Welt ("Social World"). Students named Dr Nassehi best speaker at the University of Munich in a public speaking competition.



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10. Concepts of planning and governance will change!

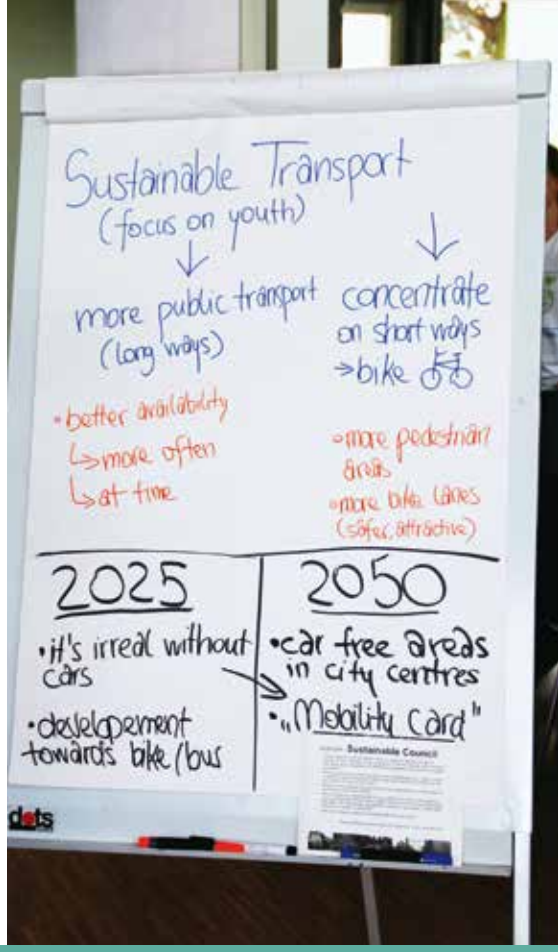
"Exceptional circumstances as the norm. Why we simultaneously underestimate and overestimate crises."

Modern societies distinguish themselves by the fact that they are accelerating and are driven by a state of permanent dynamism, never ultimately coming to rest. What individuals may find regrettable, however, is nevertheless an important part the creativity and problem-solving abilities that distinguish modern societies. A crisis is underestimated when it is believed to be a short-term problem that can be solved by taking proper action; it is overestimated, however, if the "crisis" is treated as a fundamental break that changes everything.

Source:

www.gastreferenten.de/referenten/spezialthemen/prof.-dr.-armin-nassehi.htm





AGILE FUTURES:

Mobility behaviour and technology use in an up-and-coming generation

By Wolfgang Müller-Pietralla

"Generation Y has no interest in cars," opined journalist Helmut Werb of the *Welt am Sonntag* newspaper as early as 2009. A current survey by Allianz Insurance provides a different picture, however: "The desire to own one's own car remains high. 94 per cent of those surveyed expressed this sentiment," summarised *ZEIT-ONLINE* in October 2014. So what's the story? The truth probably lies somewhere in between. Because of this, I first want to thoroughly examine young people's life circumstances, requirements for life and mobility, expectations and desires, both nationally and internationally.

Young people feel – and sadly in some parts of the world in painful and vivid fashion – that certainties are becoming uncertainties and apparent economic stabilities are becoming instabilities. All of this has a huge impact on their current life circumstances and those they anticipate in future. They are seeing a lack of political and economic

direction in everyday life and are experiencing the erosion of societal value systems. They are being confronted by the fact that social cohesion, exacerbated by the growing gap between the rich and poor, is under threat. According to a Shell youth study from 2010, 59 per cent of young people between the ages of 15 and 24 nevertheless have an optimistic view of the future. Four years before this number was only 50 per cent. The reason for this overall positive attitude is a high level of idealism and the desire to actively shape a new form of society based on cooperation, respect and passion.

Global connectivity and pragmatism

Young people see society as one globalised and connected organism in which differentiation on the grounds of race, nations and social classes is obsolete. They focus on unifying concepts of life and the awareness that all of us are in the same boat. This creates in them a boundless power to bravely tackle challenges, although – or perhaps because – instability and volatility are shaping their generation.

They also distinguish themselves through their distinct pragmatism. They keep their distance from a hedonistic lifestyle, look for publicity and after gaining huge amounts of feedback prefer to implement their ideas in social networks and organisations with flat hierarchies. In doing so they form a collective pool of experience that provides them with the wisdom to decide and emotional stability. In 2005, sociologist Stefan Hradil realised that young people today tend to determine their place in society by their social milieu rather than their class identity.

An almost innate ability to use digital technology goes hand in hand with this lifestyle. Many young people see themselves as the source and driver of an ever-present, value-creating stream of information, allowing them to identify opportunities early, deflect risks, make their lives more comfortable and playfully expand their own horizons. Technologies like robotics, artificial intelligence and augmented reality are accepted as natural extensions of human capabilities. In their use of data many young people are placing increasing value on protecting their privacy and are striving to win back control over their virtual personalities.

Vision of "One Young World"

In regions beyond Europe – China and India, for example – we find a variety of lifestyles in reaction to the societal uniformity that dominates. Dynamically growing cities serve as a melting pot and the driver of creativity and progress. They are becoming living laboratories, with young people serving as "test pilots" for innovative concepts of mobility. In this future, automatic driving in "connected cars" with different drive designs will become part of everyday life. Tradition and modernity are in constant confrontation and combine to form regionally varied sets of values. This is also reflected in consumer products; in China the focus is on opulent luxury, whereas enhanced

OUR AUTHOR

Wolfgang Müller-Pietralla (*1961), biologist, Head of Future Affairs and Trend Transfers for Volkswagen Group Research, analyses societal and technological developments together with his team. The internal cooperation that occurs within the group is varied. For example, together with the Group Market Research and Analysis division, future customer requirements are described.





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understatement takes centre stage in lifestyles in industrialised nations (cf. COSIGHT, Cutting Edge Detector 2014).

This fusion of cities into metropolitan regions, globalised markets and young people's need for connectivity make the vision of "One Young World" almost tangible. Information and communication technologies are making this possible. The desire is for unlimited physical and virtual mobility in a rapidly changing world. In future, car companies will need to offer young people worldwide mobility services that are economically and technologically impressive and suit their respective lifestyles. These services must be flexible, affordable, technologically state-of-the-art as well as culturally diversified. Our challenge now is to develop this.

INFO: VOLKSWAGEN AG SURVEY – THE MOBILITY REQUIREMENTS OF TOMORROW

It is still uncertain how young people's lifestyles will influence future mobility. However, according to Volkswagen AG the following trends are already clear:

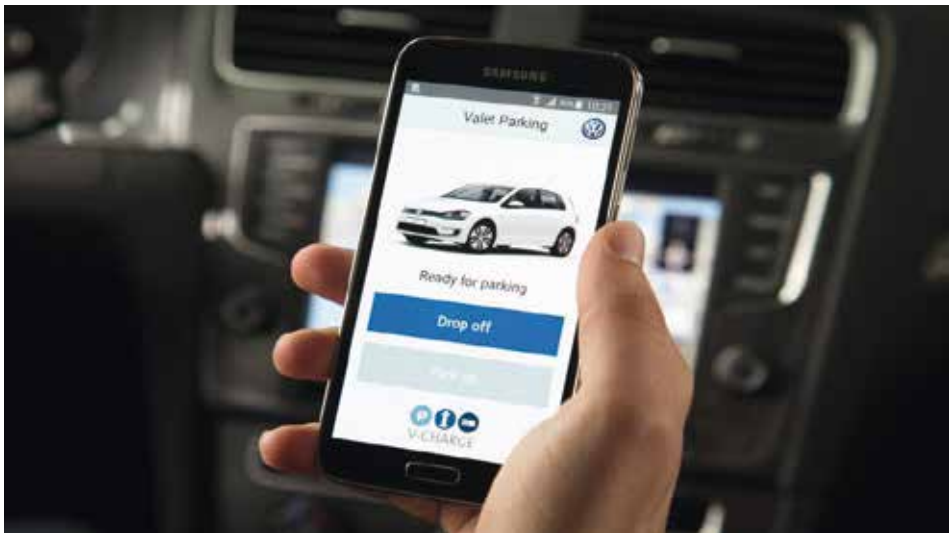
- Cars remain indispensable for leisure time and work, at least in Germany.
- For the young people surveyed, cars have less to do with aspects of prestige than the necessities of mobility.
- Having a car continues to mean independence, at least for the majority of young people in industrialised nations and emerging markets.
- Especially in rural and suburban areas, cars are indispensable for many for their everyday work and personal needs.



Modern nomads

- In inner cities, tailored apps help efficiently manage the resources of space, time and money.
- Hundreds of new mobility and business models demonstrate the requirements of a nomadic generation. This generation expects simple, comfortable access to mobility services as well as variety and flexibility.
- Prestige is increasingly being measured more by the quality of access to mobility services than by the brand reputation of vehicles.
- Important criteria like purchase and operation costs and safety will continue remain important criteria in future.

In collaboration with Leibniz University of Hanover, Volkswagen AG surveyed 16 to 25-year-olds in Germany about their attitudes and wishes for individual mobility in 2010. The most important findings were as follows:



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- The significance of cars for the future both inside and outside the workplace was valued as extraordinarily high by both young men and young women (86 per cent in the workplace, 82.4 per cent outside).
- When asked about their dream car, young people in Germany listed a black Golf at the top of their wish list.
- The sound system and adaptable information and communication features that make mobility fun were listed as important features.
- Cars play a crucial role when starting a family.

LEARN • UNDERSTAND • ACT

1. The author provides a rough overview of the situation and perceptions of young people born after 1985 (also known as Generation Y).

a) Describe (possible) viewpoints and needs of this young generation in your own words. Try to take international aspects into account when doing this.



b) Where necessary, expand upon and correct the author's main ideas.

c) It would be useful to visualise and structure your thoughts and viewpoints (your summary) into a mind map or cluster.

2. What characterises a "hedonistic" lifestyle? Research this. What are your findings?

3. We know that the style of online communication has made many new things possible: small changes to age, appearance, character or indeed a whole new "virtual" personality.

a) What roles do digital media play in your everyday life? Discuss this with one other.

b) Discuss the term "virtual personality". Research this online.

c) Take a closer look: To what extent can virtual and real personalities blend together? Or are these separate pairs of shoes you can change according to preference and depending on social roles?



4. What does the mobility of tomorrow look like?

a) What role do cars play for young people?
Create a list in small groups. Present your results to the large group and evaluate these together.

b) In this context, the author talks about mobility needs (see Info).
Make a list of these. What do these different requirements mean to you?
What other factors play a particularly important role here?

c) What trends is the author seeing in mobility behaviour worldwide?
Do you disagree with his statements? If so, why?

5. Global connectivity

a) How do you personally see this vision of "One Young World" today?
Research this online.
Discuss your models with one other and list your findings.



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b) Try to visualise your visions graphically.
Collect as many different images of the future as possible and put these together in a small exhibition. A colourful array of your exhibits would then form a reflection on all of your "hopes and thoughts for the future".

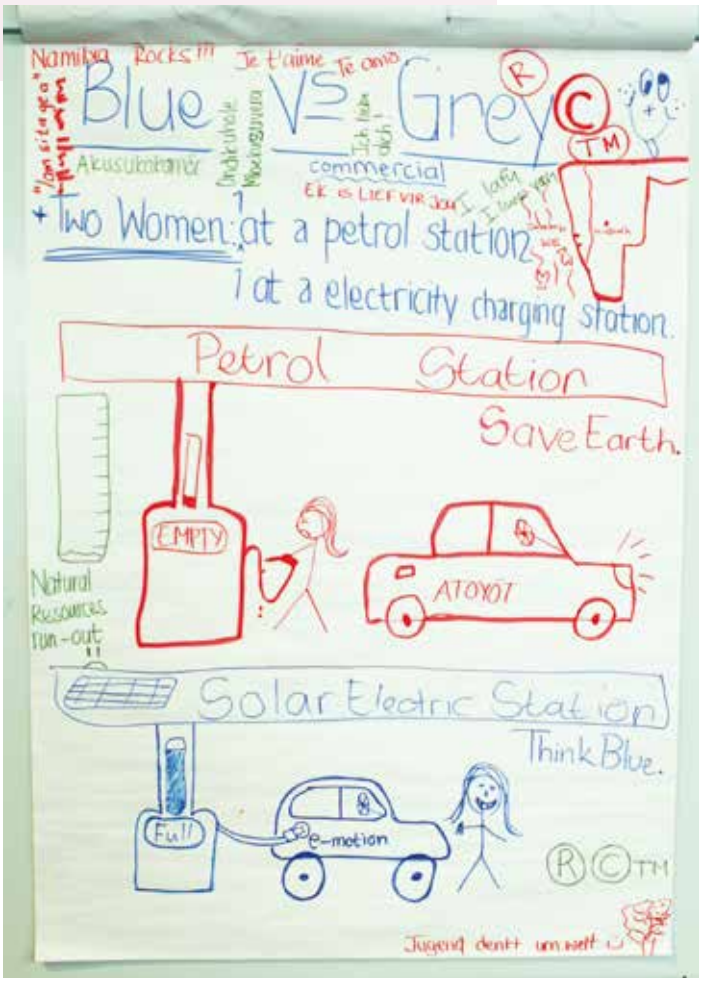
6. What key challenges are facing car companies today?
How are the major corporations attempting to address them?
Present your ideas and research them in the media.

→

**7. We must face the challenges of the present and future.
But what will the future bring? What trends will influence us all?
Organise a podium discussion on the issue of
"No future without a vision of sustainability".**







youthinkgreen – Climate ambassadors work on the mobility of tomorrow in Wolfsburg









© FWTM Cluster Green City

ALWAYS ONE STEP AHEAD OF POLITICS: THE CITY OF FREIBURG

By Prof Dr Rainer Grießhammer

The "Green City of Freiburg" is an example of how sustainability initiatives by citizens, scientists and companies can gain access to the political process and even influence legislative processes. But those looking to be pioneers for the future need more than just innovative ideas and strong partners for cooperation. Extensive knowledge about the typical course of transformations can be helpful. One thing is definitely needed, however: a great deal of patience.

Many environmentalists are wracked with doubt as to the success of their projects and campaigns. However, a closer understanding of how societal transformations generally proceed allows us to better (self-)assess initiatives and what they need to succeed. History has witnessed many major transformations; these are generally unplanned or even chaotic and their actual significance is usually only grasped later. Examples of historical transformations include the Neolithic Revolution (the transformation from a hunter-gatherer society to an agrarian one), the First Industrial Revolution (the introduction of steam engines, spinning frames and mechanical looms) and the Second Industrial Revolution (the advent of electricity, cars and mass production).

Typical causes and triggers of transformations are visions, technologies and crises. Causes generally combine or are staggered over time, as was the case in Germany's energy transition. Here, too,

there was a clear vision, which the *Öko-Institut* ("Eco Institute") in Freiburg has been presenting in strategy proposals since 1980. In addition, new technologies have helped – primarily by increasing the efficiency of solar and wind energy systems. And not least, crises can be said to have made the difference in the carrying out Germany's energy transition: climate change, Chernobyl in 1986 and Fukushima in 2010. Today we assume that transformations can actively be shaped and supported in the direction desired, if not directly steered. These transformation processes usually span several decades, as the example of the energy transition demonstrates.

Shaping transformations – the example of the "energy transition"

An entire 30 years passed between the first civil society proposal was issued by Freiburg and the official decision to transition to renewable energy in 2010 in the aftermath of the Fukushima disaster. During this time, an incredibly wide range of global and national events and crises occurred, for example, oil crises, Chernobyl, the Rio Conference, climate change and climate conferences. Yet along with this came the first legal measures towards an energy transition. Examples of state measures include the strong demand for energy from renewable sources (early 1990s) and the 100,000 Roofs Programme for photovoltaics (1999-2003), which then formed the basis for the Renewable Energy Act (*Erneuerbare-Energie-Gesetz*) of 2004. The latter guaranteed long-term cost-effective revenue returns for energy from renewable sources. By the time the Fukushima disaster occurred, society as a whole was already attempting to actively shape the energy transition in terms of power, building and mobility, including through the German federal government's energy plans. The process pursued multiple objectives: an end to the use of nuclear power, climate protection, energy efficiency and the expansion of renewable resources.

The example of the energy transition also demonstrates that transformations can in no way be triggered suddenly by the state and parliament and then systematically implemented. Quite often, this is preceded by initial activities by environmental groups – the "pioneers of change". These originate at a local level and then only implemented at a national and international level over time. This may necessarily involve differences between actors, including at the governmental level (e.g., between the national government, different states or counties and local governments).

The shaping and governance of transformation can be presented through ideal and typical models (see Fig. p. 583). Almost all initiatives occur at one of the eight system levels described (inner white section of the puzzle). For them to be implemented, traditional planning including forming a vision, setting goals and strategic planning are necessary on the one hand (green section of the puzzle). On the other, transformations present special challenges, including search processes, cooperation and even conflict management (green section of the puzzle).

Local initiatives, environmental groups and social movements have are particularly important for transformations. This is because they initiate and test out technical innovations. If successful, these are then transferred to larger entities and even implemented at the national and international level (upscaling). Taking the example of the city of Freiburg, the importance of "niche developments" for later transformative development will be shown below.

The origins of the environmental movement in Freiburg

During the late 1960s and into the 1970s, strong protest movements developed in many Western industrialised countries. The protests of 1968 were largely based on socio-political reasons, such as rejection of the Vietnam War in the US and Europe and the war generation's failure to



Conditions and levels of transformation © Rainer Grießhammer

distance itself from its National Socialist past in Germany. And political support for dictators in oil-producing countries was yet another cause for public demonstrations.

In the early 1970s, the focus of discussion turned to massive pollution. In the years of reconstruction that followed the Second World War, Western countries experienced rapid and unbridled industrialisation, the consequences of which became increasingly clear in the 1970s (just as is the case today in certain developing countries). These included massive consumption of resources, excessive traffic, high air pollution, "dead zones" in bodies of water, people and the environment facing massive exposure to chemicals, uncontrolled waste dumps and frequent incidents for chemical companies. The result was the emergence of strong environmental movements in many countries.

The protests of 1968 also took place in Freiburg, initially focusing on increases in fares for public transport in 1968 or the increasing scarcity in living space and the property speculation in the 1980s. And demonstrations increasingly began to focus on environmental protection as well. Included in this were protests against heavy traffic, the nuclear power plant planned for the town of Whyl near Freiburg and the visible decline of forests in the 1980s. A strong left-wing scene and robust environmental movement developed in Freiburg.



© Thomas Kunz

At the same time, Freiburg became a stronghold of the German Green Party. The Greens were represented on Freiburg's local council as early as 1980. In 2002, Dieter Salomon was elected the first Green mayor of a major German city.

Green City – Freiburg, the green capital

Freiburg's reputation as an environmental metropolis and Green City is primarily the result of its many environmental initiatives and ground-breaking model projects. I would like to briefly present some of these:

1. Freiburg – cradle of the anti-nuclear movement

In 1973, the Whyl nuclear power plant was planned near Freiburg. Years of protests from the region's farmers, citizens of Freiburg and students prevented its construction. By 1986, the Freiburg local council was demanding that Germany com-



The Eco Institute Freiburg © Mangan02

pletely abandon nuclear energy in favour of solar. Nationwide withdrawal from nuclear energy was first agreed in 2000 (the so-called nuclear consensus), becoming law in 2010/11.

In 1977, researchers and citizens' initiatives stemming from the anti-nuclear and environmental movements saw the founding of the non-profit *Öko-Institut* ("Eco Institute"). This was motivated by the lack of attention paid to environmental issues by researchers and universities during this period. Instead, some researchers were actually supporting systems, chemicals and technologies that were harmful to the environment and health. These same scientists regularly labelled the arguments made by the environmental movement and the Freiburg Öko-Institut false or unscientific.

2. Helping shape the energy transition

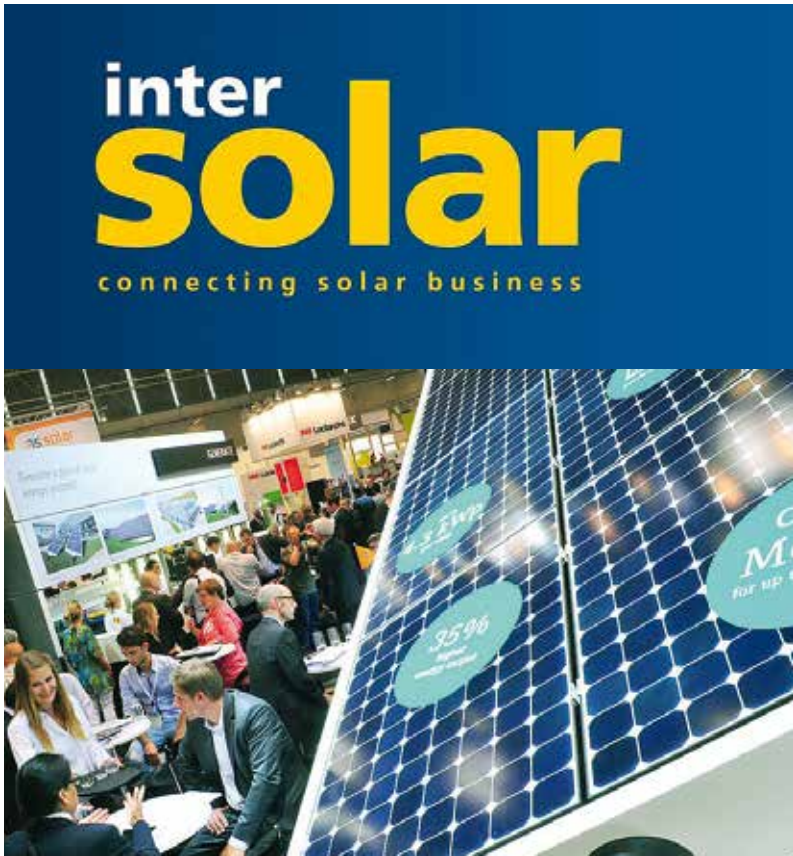
By 1980, the Öko-Institut had published a ground-breaking study, "The Energy Transition – Growth and Prosperity without Oil and Uranium" (*"Die Energiewende – Wachstum und Wohlstand ohne Erdöl und Uran*), with a clear focus on phasing out nuclear energy, saving energy, energy efficiency and expanding renewable energy. In 1986, the Öko-Institut initiated the founding of energy transition committees in some 400 cities and regions. These had – and indeed still do today – a significant influence on the further implementation of the energy transition in Germany.

3. Getting cultural and media representatives on board

The *Ökomedia-Institut* ("Ecomedia Institute") was founded in Freiburg in 1984; in the same year, it organised the first International Environmental Film Festival and continued to do so annually until 2004. In cooperation with Ökomedia, film festivals followed in Japan (1992), Moscow (1993) and Beijing (2001).

4. Promoting solar energy – first in Freiburg, then worldwide

A unique nation-wide and worldwide solar movement and solar industry developed in Freiburg. Organisations like the Fraunhofer Institute for Solar Energy Systems further advanced photovoltaic technology. For many years (2003-2006), Freiburg was ranked number one in the *Solarbundesliga* (German Solar League), and had the highest number of photovoltaic systems installed of any major city.



© Solar Promotion International GmbH

INFO 1: THE AWARD-WINNING CITY OF FREIBURG

Freiburg has often been honoured as a particularly environmentally friendly and sustainable city in competitions and rankings:

- 1992: Environmental Capital of Germany (Deutsche Umwelthauptstadt)
- 1995: European Local Public Transportation Award
- 2000: Honoured as Region of the Future
- 2002: Dubai Award – United Nations award for best practices in human settlements awarded to the Freiburg district of Vauban
- 2007: European OSMOS Award
- 2009: European Green Capital Award
- 2010: Federal Capital Climate; The European City of the Year, Urbanism Area
- 2011: Sustania 100; City of the UN International Decade
- 2012: German Sustainability Award (major city category) *(Deutscher Nachhaltigkeitspreis)*

INFO 2: INSTITUTES AND SCIENTISTS IN FREIBURG

The Öko-Institut in Freiburg began as a "new outsider's institute". It is now the centre of applied environmental sciences in the EU and one of the world's most renowned institutes. As early as the 1980s, the Öko-Institut was implementing a number interdisciplinary projects – projects incorporating different disciplines. www.oeko.de

Freiburg is now home to hundreds of small and large environmental institutes, consultancy firms and research-oriented companies. By 2013, seven researchers from Freiburg had received the German Environmental Award from the German Federal Environmental Foundation.

Beginning with a small solar trade fair in Pforzheim, the huge Intersolar was founded in Freiburg in 2000. It is now the world's leading trade fair for the solar industry. By 2007, the fair had to move to Munich due to its size – with Freiburg as co-organiser. Intersolar North America was born in San Francisco in 2008, with Intersolar India following in 2009 in Mumbai, Intersolar China in Beijing in 2011 and Intersolar South America in 2013.

5. Energy efficient, sustainable building and living

In the late 1990s, construction of the district of Vauban began on a huge, 38-hectare vacant barracks complex. It was a heavily reduced-traffic residential area for approximately 5,500 inhabitants. Low-energy buildings were compulsory here. Passive or energy-positive construction and the use of solar technology was standard for most of the houses. Heating was supplied by a cogeneration unit powered by wood chippings.





Quater Vauban in Freiburg © Claire7373, Andrewglaser

A solar settlement consisting of 79 energy-positive houses and one office and commercial complex is located opposite Vauban. All buildings are built to a passive house standard and the roofs are completely covered with photovoltaic systems. All told, the houses generate more energy than their inhabitants consume, giving rise to the name energy-positive house. This excess energy is fed back into the main energy grid. The remaining limited requirements for warmth are met by the wood-chip-fuelled power plant of the Vauban area.

6. Initiatives for greater energy efficiency

Initiated and backed by the Öko-Institut, the "Master Lamp" *("Meister Lampe")* campaign was implemented in Freiburg in 1996. Local energy providers and public utility companies in Freiburg distributed free energy-saving lamps to their customers. The campaign reached 90 per cent of households in Freiburg. Many later projects in Germany and worldwide were modelled after the campaign. Huge saving projects were set up and overseen throughout Cuba and at the University of Mexico (300,000 students) from Freiburg.

Demonstrating the huge differences in energy consumption between energy efficient and conventional products through these and other similar campaigns (see EcoTopTen website) was an important basis for European such actions and other similar ones were an essential factor behind the European Ecodesign Directive. This directive banned less energy efficient products across more than 30 product groups between 2005 and 2014, including traditional incandescent lamps, refrigerators, washing machines, etc. Projects encouraging Freiburg's citizens to conserve energy and support them in doing so accompanied these initiatives..

7. Sustainable transportation planning

In 1992, the reasonably priced regional ticket (*Regiokarte*) was introduced. This could be used for public transport and train journeys in Freiburg and the surrounding area. To accompany this, Freiburg's tram network was greatly expanded over the next few years. As a result, Freiburg was able to achieve a high level of travel by public transport (18 per cent of all journeys). The high number of environmentally conscious citizens,

the expansion of cycle paths, the construction of a bicycle parking complex and cycle-friendly traffic regulations meant Freiburg was also able to achieve an unusually high level of bike travel (26 per cent). Accordingly, travel by car stood at a comparatively low 33 per cent. Freiburg also had a low number of motor vehicles compared to Germany as a whole and other major cities (469 vehicles per 1,000 inhabitants; German-wide average: 622 vehicles per 1,000 inhabitants).

supported by local parties, societal actors and the city administration.

The local setting of Freiburg has provided opportunities for constructive exchanges – including through inspiring competition. At the same time, an optimal "climate for socio-environmental innovations" was developed, attracting other pioneers and establishing itself in the long term. Collaboration took place both informally through personal connections and through organised associations. Looking back on these examples demonstrates

OUR AUTHOR

Prof Dr Rainer Grießhammer (b. 1953), PhD in chemistry, long-time member of the Freiburg Öko-Institut; journalist, Honorary Professor for Sustainable Products at Albert Ludwigs University of Freiburg. His research focuses on product-related environmental and climate protection as well as sustainable industrial policy. He received the German Environmental Award from the German Federal Environmental Foundation in 2010.



Summary: What "pioneers of change" need

These were only a few examples of model projects that came to life in Freiburg. Other initiatives, such as those for waste prevention, conserving water, promoting the cultivation of organic produce or more energy efficient hospitals demonstrate that Freiburg's civic and corporate environmental movements were and remain continually mindful of concepts of sustainability. Almost all of the campaigns described were initiated and implemented by individual pioneers, local environmental groups and alliances of actors, and later through academic institutions and companies and their visionary leaders, all increasingly both how important these early initiatives, visionary personalities and cooperation between actors is as well as the fact that it can take a long time for innovations to be implemented at a national and international level. The good news is that if you are very patient, many niche projects can succeed! And sometimes their appeal and long-term effect are much greater than their initiators themselves would have ever thought possible.

Links:

www.oeko.de
www.ecotopten.de
www.topten.info

LEARN • UNDERSTAND • ACT

1. Transformation and scholarship

a) How do we define "transformation"? Describe the concept across different academic disciplines (politics, sociology, philosophy) and/or in its artistic and everyday use, using examples where possible.
b) What typically triggers societal transformations?
c) Describe options for shaping and guiding huge transformations using the model illustrated. What groups often take on a particular role and at what level? Take a critical attitude towards the author's viewpoint on this question.
d) What are the advantages and disadvantages of these ideal models? What questions and aspects of transformational processes cannot be analysed well using this model? Explain.

2. Explain the origins of the environmental movements in Freiburg. What socio-political circumstances and causes particularly supported this process?

3. Green City of Freiburg

a) Describe various initiatives that began in Freiburg, and expand upon their significance for change at a local and regional level.
b) Examine the ground-breaking model projects that were developed in Freiburg in detail. Research their backgrounds and expand on the critical or problematic aspects of the author's positive assessments.



Solar settlement in Freiburg © Andrewglaser

4. What different steps and procedures are necessary or helpful in successfully developing an initially small initiative further and helping it attain regional or national significance? Refer to existing research when formulating your response.

5. Discuss the city of Freiburg's sustainable transportation concepts.

a) What similar concepts can be found in other small or large cities?

b) Which of these concepts could be implemented in your home town in the most promising and sensible fashion? Be sure to take into account both social and environmental aspects. Background information about this question can be found in the article about mobility in Topic 4.3.

6. How do you create an optimal environment for socio-environmental innovations in cities? How might these differ from those in more rural areas?

7. Even in Freiburg, one of the greenest cities in Germany, not everything is perfect. Research the biggest weak points in relation to its citizens' more sustainable lifestyle and climate-neutral community development.

8. Take an active role in your school or local area under the motto "Always one step ahead".

a) Explore and investigate a topic of your choosing, for example, "Shaping the energy transition" or "Energy efficient housing" i n your local area.

b) Develop a campaign to develop and successfully implement initiatives together with like-minded people, such as "Energy transition at school" or "The energy transition comes first". Seek out strong partners and pioneers who are already active in the topic area you have chosen. Together, build on your experiences and accomplishments and use the structures already in place.



youthinkgreen-climate ambassadors congratulate Rainer Grießhammer for the German Environment Price 2010

5.2 LOOKING BEYOND OF ONE'S OWN NOSE – ABROAD

Introduction

In the previous section we focused on a wide range of perspectives on the future, principally from a European standpoint. We hope that the following texts will present you with visions of the future and sustainability initiatives from other countries and cultures.

Environmental activist and journalist Sunita Narain describes the key challenges facing her native India in the struggle against the increasing pollution of water by its citizens, industries and agriculture. According to Narain, how the country handles its water resources will decide the India's future. Narain wants this emerging developing country, the world's largest democracy, to find alternative paths of growth to copying the mistakes made by industrialised Western nations.

The small East African country of Rwanda appears to have already discovered alternative paths of development. Its capital city of Kigali is now considered the cleanest city in Africa. Since the beginning of the 21st century, the government has been pursuing its own vision of sustainability, guiding this process through legislation, plans and programmes, as Dr Rose Mukankomeje reports. Rwanda's national ban on plastic bags, which it maintains through strict controls, is unique to the entire continent. Charlotte Zink has taken a look around the country, spoken with many people and researched the many positive effects this law has generated, for example, for companies and seamstresses.

The situation in Israel is completely different, however. Foreign and security policies dominate the political debate rather than environmental protection, renewable energy sources or sustainability. In spite of this, Nora Marie Zaremba has found a small residential community in Tel Aviv that is going against mainstream consumerism. Tami Zori creates almost all of her utensils herself, including cleaning products and toiletries. She and her friends source their fruits and vegetables from local farmers. In addition, she has started the online project "City Tree", providing interesting tips around the themes of permacultures, food and composting.



Believe me! If we had known it all back then ... © Gerhard Mester

And Nora Guzu from New Zealand has also discovered a small community in Wellington where people are choosing to live differently from the traditional model of work, the nuclear family and stressing about time. Mel Beirne is involved in her home town's "Transition Town" initiative, and spends her free time planting apple trees, strawberries and flowers in a small community garden. In an interview, she explains why projects and capacities for local self-sufficiency are the way forward, and how we can strengthen community engagement.

No matter how different the situations in these four countries, the social roles and views of the people portrayed and their initiatives: they show us quite clearly that courage, innovation and sustainable and future-oriented thinking and action form an indelible unity.



© Ariane Missuweit

EMERGING INDIA: OUR ELIXIR OF LIFE IS UNDER THREAT

By Sunita Narain

Water is the basis for all life! Yet the sewage and pollution people create are leading to the disappearance of India's fresh water reserves. This is in addition to the excessive use of pumps, which lower the country's ground water level. The inexorable urbanisation processes and the associated concerns and problems of water management in cities, including dealing with communal sewage, inevitably leads to the pollution of rivers and streams. How we deal with water will be the key to shaping our future in India. What might solutions look like?

Only recently have environmental concerns become central to the public's interest in India. However, conditions are not improving. Very much to the contrary, our rivers are more polluted than they were even in the 1980s despite a multitude of investments in treatment plants and all other efforts to tackle the problem. Our new-found wealth has brought with it increased pollution and damage to the environment. The only thing that could help would be a genuine paradigm shift, one that allows for and requires sustainable and affordable means of production.

In a 1991 report by the Centre for Science and Environment (CSE) entitled, "Floods, Floodplains and Environmental Myths", we put forward the then-controversial hypothesis that many floods in India have occurred as a result of faulty planning of dams and electricity grids. However, engineers were of the opinion that they could beat nature, alter the course of rivers and drain flood areas using technology. With what we now know about man-made climate change and the unstable and extreme precipitation it causes, the effects of the choices made in that era have taken on a new, grave meaning.

Another study, "Excreta matters: How urban India is soaking up water, polluting rivers and drowning in its own waste", was published in 2012. It posed the question of how we have to change water management in order not to figuratively sink into our own waste. These problems affect us all! Every one of us needs water in our homes. All our waste flows into sewage, and we can see rivers both large and small dying before our eyes. Yet, to some people in India, this conclusion is still not so clear cut. They do not see the connection between flushing toilets (which more than half of the people in our country are without) and the condition of our rivers.



INFO 1: THE CSE IN INDIA

The Centre for Science and Environment (CSE) is a non-governmental organisation (NGO) in New Delhi, India, which rates companies according to their environmental qualities. The NGO was founded in 1980 by a group of academics, journalists, engineers and environmental activists. The CSE is led by Sunita Narain, the author of this article. It is the explicit goal of the Centre to find and promote solutions for industrial environmental problems in India.

Traditional knowledge versus modern technology

In another study from the year 1997 with the title 'Dying Wisdom: the rise, fall and potential of India's traditional water harvesting system', we shone a light on the technological accomplishments and the marvels of traditional water provision across the diverse ecosystems of India. This study looks in detail at how the inhabitants in each region had learned to live with the water resources available to them in processes that spanned decades, with great gratitude and solidarity, learning to value and "tame" the rain. This report presents alternatives to the prevailing modernised and technical methods of water provision and consumption in the late 1990s.

Billions of dollars to clean the Ganges

Let us take the example of the Ganges, India's longest and most important river. The Ganges basin covers 26 per cent of the country's surface and supplies water to 43 per cent of the population. In 1986, the Indian government passed the Ganga Action Plan (GAP). In August 2009, this plan of action was dusted off and the National Ganga River Basin Authority was entrusted with its implementation once more. However, despite cleaning programmes worth billions of dollars, India's largest river continues to be choked with rubbish. Sewage that is hazardous to human he-

alth continues to flow into the river. In fact, the latest research demonstrates that water quality has continued to decline. Measurements show that all forms of pollution are continuing to increase in sections of rivers which had been declared clean.

Even worse is the fact that the amount of waste and pollution to be filtered in sewage plants remains far underestimated. A short analysis by the Central Pollution Control Board (CPCB) shows that the difference between the official estimated amounts of contaminated water and the real amounts of sewage introduced into the Ganges every day comes to around 3.364 million litres. This represents a level of contamination 123 per cent higher than experts had initially assumed.

OUR AUTHOR

Sunita Narain (b. 1961), Indian environmentalist and activist, is committed to sustainable development in her home country and worldwide. She is the Director of the Centre for Science and Environment and the Society for Environmental Communications in New Delhi. In addition, she is Editor-in-Chief of the magazine *Down to Earth*.



Most environmental funding was allocated to infrastructure programmes without their effectiveness and value being subject to adequate scrutiny. Most cities still lack the adequate infrastructure to transport waste to existing sewage plants. Furthermore, only a few cities and districts have the financial means to keep sewage facilities operational.

© Pfly



Success at last

A comprehensive solution to pollution in the Ganges must address three different problems. First, we must seek out and use water resources that allow us to cut down on pollution or even stop it altogether. Second, we need to find innovative ways to control and reduce the amount of waste and sewage which are directed into rivers. Third, we need effective methods to prevent companies and corporations from causing mass water pollution.

Local water management in India should place a stronger focus on the method used to dilute polluted waters with clean water resources since many communities cannot afford the cost of sewage treatment plants. Standards require a dilution of at least a factor of ten in order to lower water pollution to an acceptable level.

According to the valid controls, the nominal gas levels of bodies of water should amount to a biochemical oxygen demand of 30 BOD or less (see Info 2). If rivers carried enough water, cities could save themselves the expense of several sewage treatment plants. Instead, the continuous water supply would support nature's ability to clean and regenerate itself.

However, where should this additional water for supplying polluted areas come from? Taking more water from upstream would literally cut off the water supply to farms, cities and industrial facilities and therefore does not seem to be a good solution.

Instead of this, it is recommended that the additional water required be supplied from the affected city's own resources or the government of the state in question. This would provide governments with the choice of either setting up collection tanks during the monsoon season for the purposes of dilution, or gathering flood water in order to supply the needs of private households, agriculture or industry in the relevant areas. In other words, everyone who consumes water will have to plan their usage carefully and according to what the river can support, instead of constantly living above their own environmental means.

No waste disposal and hardly any sewers

Furthermore, the planning of waste disposal has to be considered. Urban centres do not have the capacity to set up modern sewer systems to the

INFO 2: MEASURING WATER POLLUTION

The biochemical oxygen demand (BOD) is the amount of dissolved oxygen needed for aerobic degradation by biological organisms of organic substances present in water under certain conditions and over a certain amount of time. The biochemical oxygen demand is particularly important in assessing water pollution.



© Ariane Missuweit

extent and in the time required. Because of this, new forms of waste disposal must be conceived for implementation in parallel with the planning of processing plants.

It should also be taken into consideration that, in terms of planning, we are still miles away from establishing a functioning sewage system. No matter the solution and wherever possible, polluted water should not be allowed to enter public sewage pipes.

In addition, our engineers need training and further education. We hold that the expansion of hydroelectric power is possible, even when reduced during the six months outside of the rainy season when the amount of electrical energy produced decreases by about half. Now, the question remains: how can sustainable hydroelectric power be used? Currently there is no legal framework in India to prohibit the overexploitation of natural resources and make it a punishable offence. We must establish principles that strike a balance between a reasonable use of hydroelectric power and sustainable, environmentally friendly water management. The fact is that rivers cannot, and indeed should not, be mechanically diverted. However, dams can certainly be built in a way that respects and protects the natural limits of the river.



Extreme water pollution © Ariane Missuweit

New paths for development

In India, most politicians and citizens want to quickly mimic the disastrous development paths of taken by wealthy nations, despite the latter having to grapple with fewer resources and greater social inequality and poverty. For many, consumption is a necessary step on this path as it appears inseparable from the Western economic model we have adapted.

Yet what is forgotten is that the more we consume, the higher the cost of waste disposal – a cost we cannot afford. So we look for sticking plasters to cover this. Even amongst the supporters of the environmental movement in the Indian middle class, there are only a few people who are prepared to change their lifestyle so comprehensively that they create less waste and pollution. In addition, the struggle for resources has intensified. In every exploitable part of the country, no matter how small, or where water sources have been tapped into by industrial ventures, people are engaged in a bitter struggle, sometimes with deadly consequences.

Our biggest challenge is finding alternative approaches and a new definition for growth without increasing environmental pollution. To do this we must be brave enough to think twice and act differently from the tried and tired models of the West. I am certain we can do this!

INFO 3: HYGIENE IN INDIA

India is the country that faces the greatest challenges for hygiene and sanitary provision in the world. More than 626 million of its inhabitants, or more than half of the country's population, have no access to toilets. More than 600 young children die of diarrhoea every day, an easily avoidable and curable disease. 23 per cent of girls in India have to leave school when they reach puberty as there are hardly any sanitary products available, nor is there much understanding about menstrual hygiene. Source: www.wash-united.org

INFO 4: WORLDWIDE WATER AND SANITARY PROVISION

Rights to water and sanitary provision are guaranteed as human rights as part of an adequate standard of living and, as such, are legally binding. According to official estimates, 900 million people worldwide have no access to water sources that could be described in surveys as "improved". Of these people, the proportion of women who do not have access to clean water is much higher. The situation is similar with respect to sanitary provision. 2.6 billion people live without sanitary provision that can be described as "improved". All states are required to respect, protect and guarantee the rights to water and sanitary provision. International cooperation should support states in doing so.

As part of Millennium Development Goal 7, the international community agreed to halve the number of people without adequate access to clean drinking water or sanitation by 2015. This goal appears to have been reached for drinking water for the world as a whole, even if success in individual states will not be achieved until well beyond 2015. As for sanitation, this target is unrealistic because the subject has been neglected for too long. One important new document here is the UN Resolution of 2010 recognising the human right to water and sanitation. Source: www.institut-fuer-menschenrechte.de



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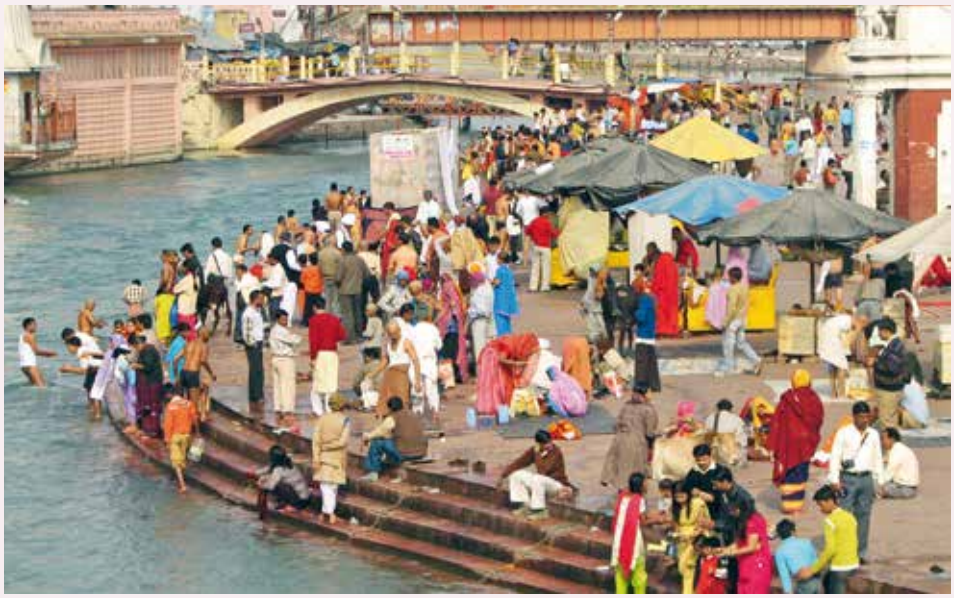
1. Complex causes

a) How can we explain that certain environmental problems (e.g., pollution of rivers, flooding) in India are deteriorating despite the fact that environmental issues are taking on a more central role in the public's consciousness?

b) What responsibilities do India's citizens, companies and politicians bear in this regard?

c) In this context, what role do religious tradition and everyday ritual play in India? Research this online.

d) To what extent can man-made climate change make the problems of water provision in India even worse?



© McKay Savage

2. The CSE is a non-governmental organisation in India. Describe the various areas in which this organisation is active.

3. A holy river

a) Using the example of the Ganges, India's longest and most important river, describe how the problem of water is continuously getting worse.

b) A comprehensive solution for the problem of water pollution touches on multiple issues. Describe these as well as possible areas for improvement and solutions.

4. What does "BOD" mean and what is the purpose of these parameters?

5. "Even amongst the supporters of the environmental movement in the Indian middle class, there are only a few people who are prepared to change their lifestyle so comprehensively that they create less waste and pollution," asserts the author.

a) Record the complex problems with and barriers to water provision and sewage disposal in India in a table.

b) Try to compile a list of measures that offer solutions and address the points you came up with in task a). To help you with this, try to imagine yourself faced with the various roles and responsibilities faced by the local population (see 1b).

6. Discuss the sanitary situation in India and worldwide (see Info 3 and 4). What effects on health and what limitations to lifestyle are associated with this for many people in India?
Be sure to also refer to your research.

7. Putting it to the test: Save water!

a) Question your conscience and your attitude towards the precious asset that is fresh water.

b) Together, discuss options for saving water and try them out at home (bathroom, housekeeping, garden, etc.) and at your school.

c) There are also critical voices that say that, unlike in India, conserving water in Germany is not constructive. Examine the arguments behind this statement and choose your position.



© Ariane Missuweit

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8. India hopes to become an economic superpower in the region as quickly as possible, currently modelling itself on its neighbour, China.

a) Research the Indian government's plans and intentions as part of their "Make in India" campaign (and also in relation to the German government). What large social and environmental changes are likely to be connected to this?
Keep in mind the difference and conflicting goals between India's sustainable agricultural and industrial development, as well as the urban-rural divide.

b) Assess the plans of the current Indian government. In your view, is there a new, alternative option in contrast to the developmental and economic models of the West, as argued by the author, Sunita Narain?
Find arguments for and against.

c) What critical points and what alternatives to the current government's plans can be found from Indian researchers, politicians and citizens?

9. »"Emerging India" should be the slogan of a special campaign in your year or across your entire school.

a) Consider who you want to contact to support a socially just, environmentally conscious modernisation of India through small campaigns at the local level. Highlight their international importance. (The Indian Embassy or Consulate, Goethe Institute, Indian partner groups from civil society, the media, academics, engineering pioneers, etc.).

b) Compile a list of topics for environmental protection and fighting poverty in India, including aspects that particularly interest you.

c) Look out for supporters and patrons.

d) Develop a realistic timetable and organisational plan according to your chosen event format.

e) Don't forget to make personalised invitations and to advertise your event.



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f) Because it is likely that your event will be successful, make sure it is reported in the media and remember to evaluate the event.



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A POLITICAL CASE STUDY: TURNING A VISION INTO REALITY IN RWANDA

By Dr Rose Mukankomeje

Since the start of the 21st century, the Rwandan government has been following a clear vision for their country's sustainable development. The government considers it essential to implement sustainability through national policies, laws, plans, programmes and projects. In 2005, as part of "Umuganda" – the public, mutual cleaning campaign in place across the country – many Rwandans found a huge number of plastic bags. This was crucial in prompting the environmental studies that brought the dreadful negative consequences of the material to light. The plastic gradually blocked drains and rainwater sewers, which in turn caused flooding during the rainy season. The soil was polluted with bits of plastic, preventing plants from growing. In addition, Rwandans burnt plastic waste, which filled the air with toxic particles. In 2008, the government decided to ban plastic bags.


RWANDA
State capital
Provincial capital
Town, village
Airport, runway
International border
Prefectural boundary
Road
Path
UGANDA
DEMOKRATISCHE REPUBLIK KONGO
VEREINIGTE REPUBLIK TANSANIA
BURUNDI
RUANDA
BIRUNGA NATIONALPARK
KAGERA NATIONAL PARK
NORD
SÜD
WEST
OST
KIGALI
Kigali
Byumba
Kibuye
Gisenyi
Goma
Ruhengeri
Butaro
Kidaho
Cyanika
Kisoro
Rutshuru
Kabale
Lubirizi
Rwemhasha
Nyagatare
Gabiro
Ngarama
Gatunda
Mulindi
Muvumba
Katuna
Kirambo
Cyamba
Busogo
Kora
Mutura
Kagali
Nemba
Kinihira
Kinyami
Rutare
Muhura
Rushashi
Mbogo
Murambi
Kabaya
Ngaru
Shyorongi
Rukara
Ngororero
Kiyumba
Kinyinya
Gikoro
Rwamagana
Kayonza
Bicumbi
Kicukiro
Bulinga
Runda
Butamwa
Mabanza
Gitarama
Kigarama
Birambo
Gishyita
Bwakira
Rwamatamu
Bugesera
Rilima
Gashora
Sake
Kibungo
Rukira
Rusumo
Masango
Ruhango
Gatagara
Kaduha
Nyabisindu
Karaba
Rusatira
Gikongoro
Karama
Rwesero
Kamembe
Gisakura
Cyangugu
Rwumba
Kitabi
Bukavu
Cyimbogo
Karengera
Nyakabuye
Bugumya
Ruramba
Butare
Gisagara
Busoro
Bugarama
Munini
Nyanza
Runyombyi
Bare
Kirehe
Nemba
Ngenda
Kivu-See
Insel Bugarura
Insel Wahu
Insel Idjwi
Insel Gombo
Lowa
Akanyaru
Kagera
Mutanda-See
Bunyonyi-See
Burera-See
Ruhondo-See
Rwanyakizinga-See
Mikindi-See
Hago-See
Mujunju-See
Kivumba-See
Muhazi-See
Ihema-See
Lac Nasho
Mugesera-See
Mpanga-See
Cyambwe-See
Bisongau-See
Cyohoha-See
Rweru-See
Kafunzo
Merama
Kagitumba
31°00'
1°00'
1°30'
2°00'
2°30'
29°30'
30°00'
30°30'
29°00'
0 10 20 30 40 50 km
0 10 20 30 mi
The depicted borders and names as well as the designations used on this map do not signify confirmation or acceptance on the part of the United Nations

Many years after the educational campaigns, new lucrative careers began to surface at the local level. One example of this is the women's group COVAGA in the eastern region of Rwanda, which creates handmade items from pontederia flowers. This allows women to pay for their children's school fees and health insurance. At the same time, they are able to make an important contribution to maintaining the ecological balance of lakes.

Since Rwanda has made the shift to biodegradable bags made from paper, wool, banana leaves, papyrus etc., the country is far cleaner than ever before. Our capital city of Kigali was even honoured in 2008 with the "UN-Habitat Scroll of Honour Award".

OUR AUTHOR

Dr Rose Mukankomeje, PhD in biology, Director General of the Rwanda Environment Management Authority, university lecturer; Member of the Rwandan Parliament, Parliamentary Vice President of the National Unity and Reconciliation Commission and Director General for Science, Technology and Research at the Ministry of Education.



© REMA



Rwandan students are reforesting © Ariane Missuweit

© UN map



NO PLASTIC BAGS? NO PROBLEM!

The small African country of Rwanda leads the way

By Charlotte Zink[1]

Since 2008, a strict ban on plastic has been in force in Rwanda. Supermarkets giving out bags were closed. New arrivals at the borders are subject to strict controls. In 2014, the European Union passed a more restrictive law on plastic bags. Yet success is still a long way off. What could we stand to learn from the small East African country?

1) This report first appeared on 02/01/2015 on FOCUS Online.

61
TEX
The Recycling-Code for Jute

At Kanombe Airport in Kigali, the capital city of Rwanda, every new arrival sees their luggage subjected to the most exacting of searches. Visitors are best advised to leave their plastic bags at home. The process is not done in an unfriendly manner, but amiably. Rwandans have realised that they are playing a leading role worldwide in the conservation and protection of their natural resources.



© Soimex Plastic

New arrivals are politely informed at the airport that for one US dollar they could purchase a reusable jute bag to repack any items removed from plastic bags. Even when arriving in Rwanda by land, for example from the Democratic Republic of Congo, soldiers ask travellers to open their luggage. Confiscated bags are gathered and brought to recycling companies, such as Soimex Plastic.



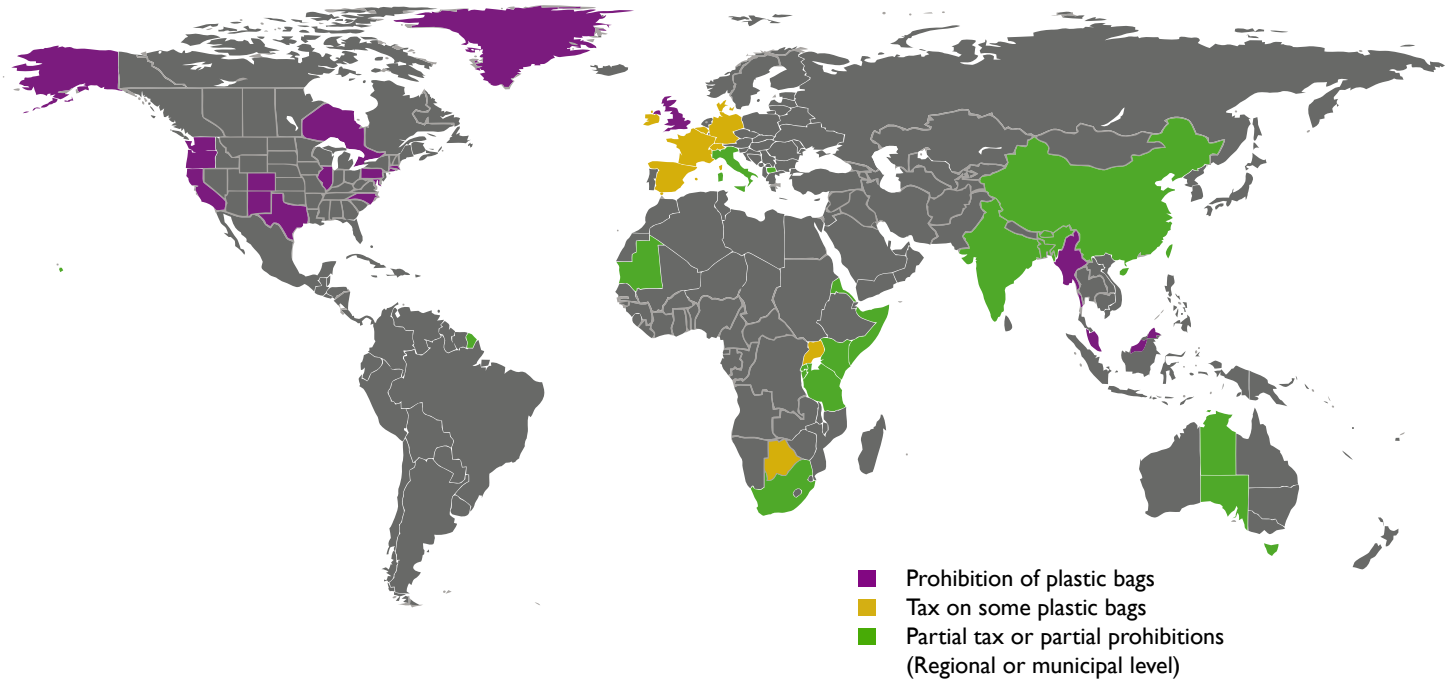
© Charlotte Zink

From his office, Gilbert Ndagijimana can see Kigali's airport. Standing at the window he can see the planes making their approach to land. They don't look much bigger than a paper clip, but they are big enough for him to recognise whether they are cargo planes. He finds them particularly interesting because cargo planes mean plastic rubbish is arriving. Gilbert Ndagijimana is Managing Director of Soimex Plastic, which manufactures plastic bags and film made from recycled plastic from abroad. A contested market: Three other Rwandan companies have specialised in recycling plastics. No new polyethylene plastic has been permitted to be produced in the East African country for ten years. This is exactly the type of plastic that can be found in plastic bags in supermarkets all across Germany.

SOIMEX PLASTIC
Packaging & Recycling

Charges for plastic bags are conceivable

In addition, six years ago in this African republic, which is not much bigger than Brandenburg, the use of plastic bags and film was regulated: Rwandans are only allowed to use them in exceptional circumstances. For example, a hotel requires a licence in order to keep its salad buffet fresh with



Measures against light plastic bags worldwide © Elekhh

plastic film. A special disposal unit then comes by to collect them. Thick plastic coverings are only allowed for construction works or in agriculture. In addition, plastic bags can be used for removing rubbish from hospitals or homes. The government has banned the use of plastic bags and film as packaging in supermarkets. Customers carry their purchases in colourful cloth bags or thick brown paper bags. One exception is that baked products must be provided in biodegradable plastic packaging.

The European Union is also planning a law to reduce plastic bags. In a vote in November, all 28 Member States expressed their support for an initiative to reduce the use of disposable plastic bags in future. According to a decision by the EU Council, by the end of 2018, Member States should either add a charge to lightweight plastic bags (of thicknesses up to 50 micrometres), or reduce consumption to 40 plastic bags per citizen by 2025. According to the German government, each European citizen used around 200 plastic bags in 2010. How EU Member States integrate these changes into their national laws remains up to them according to the Vice President of the EU Commission, Frans Timmermans. Possibilities include outright bans, imposing taxes or adding charges for plastic bags.



Plastic granules © Soimex Plastic

Rwanda as an example for neighbouring countries

This EU regulation gives rise to a certain amount of pride in Rwanda; Rwandans can consider themselves pioneers. "The EU has enough reasons to ban plastic bags," says the Director General of the Rwanda Environment Management Authority (REMA), Rose Mukankomeje. This supervisory body of the Rwandan environmental ministry is responsible for compliance with the relevant laws. Mukankomeje knows that the subject of plastic bags is under discussion in many countries. Many foreign experts, for example, those from neighbouring Uganda, have already sent fact-finding missions. "We have countless visitors from other countries who come to see our law in person," she says. However, as yet, not a single European country has sent a delegation.

In Gilbert Ndagijimana's office, the loud rattling of machines can be heard. In the hall behind his office, located in central Kigali, huge facilities wash scraps of plastic bags, turn them into pellets and finally into long plastic strips out of which new, biodegradable bags can be made. Inspectors from the Environment Management Authority often pay surprise visits in order to check that all regulations are being followed. Before the passing of the anti-plastic bag law, Ndagijimana's company produced exactly the type of bags that are now expressly forbidden in the very same hall. His company has more workers and machines than back then and produces one tonne of recycled plastic bags per month.

"In the beginning I wasn't happy with the law at all," says Ndagijimana. "Today I am proud to know that I am contributing to the cleanliness of Rwanda's streets." Its capital of Kigali is currently the cleanest city in Africa. For now, this strict plastic regulation is unique in Africa. Before the law, discarded plastic bags were part of the urban landscape as they are in many other large African cities. Yet this cleanliness has its price. With specially trained officials and in cooperation with the police, the Environment Management Authority regularly inspects supermarkets. In addition, citizens can call a toll-free number to report violations of the plastic law. If a passer-by is found by a REMA inspector with a plastic bag they are required to hand it over and they are informed about the law. In case of a second violation, the official collects a fine of 5.40 euros.

Managing director seeks plastic

Large quantities of plastic packaging enter the country as part of freight deliveries. The government provides instructions on how packaging is to be recycled by distributors. Compliance with these instructions is closely monitored. So, for example, the packaging of around three million mosquito nets arrives at Soimex Plastic's storage yard. These will then be processed into plastic bags. Despite all this, there is not always enough plastic available for Soimex Plastic's production. Because of this, the boss personally scouts out import dealers in order to access new material for use. "I often find that traders don't want to sell me plastic because they are waiting for REMA's disposal service," says Ndagijimana. "They are concerned about making a mistake and don't know that the plastic ends up with me in the yard in the end anyway."

OUR AUTHOR

Charlotte Zink (*1991) studied at the Cologne School of Political and Economic Journalism. Since September 2014, she has been an editor at FOCUS Online and works principally as News Director and Manager.





© Neil Palmer (CIAT)



© rytc

On the border with Uganda, countless lorries carrying import goods wait to pass through a security gate. Red dust is thrown up when a multi-tonne vehicle begins to move. A thin wire mesh separates Rwanda from Uganda. As far as the eye can see, a green, hilly landscape stretches out in both directions: banana trees, tea plantations and dusty streets. The plastic ban only applies on the Rwandan side of the fence. For this reason, goods at the border are also inspected for smuggled plastic bags. "It is primarily in the border areas that we always seem to find the banned non-degradable plastic bags," says REMA inspector Juliet Kabera. She believes there will always be an illegal plastic bag trade. These environmentally damaging bags are markedly cheaper than the prescribed alternatives.

Before the introduction of the strict ban, Rwanda's government had set a minimum thickness for plastic bags in order to ensure they could be used more than once. "That was too difficult to monitor," says Kabera. This was the reason behind the ban. "There haven't been many violations," says the inspector. Distributors who do not adhere to the rules have to pay or REMA will close their business. The fines go into a fund the Environment Management Authority uses to finance climate change initiatives.

In Rwanda, environmental awareness plays a huge role. Everyone contributes, especially given that this is required by law. Accordingly, for example, Rwandans must perform community service, known as Umuganda, every last Saturday of the month. Picking weeds, collecting rubbish or building houses – improving the environment together.

In future, Rwandans will also have to recycle plastic bottles. Whereas it has primarily been distributors who have had to bear the burden of recycling until this point, citizens themselves will now have to take on this responsibility. "We are working on introducing a system of bottle de-

posits ," says Mukankomeje. This might be designed so that customers receive credit points for returning bottles and, after reaching a certain amount, receive a free drink.

"There is a lot of competition in the bags business"

People benefiting from the plastics ban include the employees of Ineza. Since 2008, the 27 women have been sewing colourful bags made from African fabrics to earn a living. The law has brought great improvements to their lives. Treadle sewing machines are rattling in their small factory. "Before the ban, we made various handicraft items, such as traditional Rwandan baskets; afterwards, we specialised in making bags," says Managing Director Mary Bahizi. The women now no longer have to rely on financial support from an NGO.



© Charlotte Zink

However: "There is a lot of competition in the bags business," explains Bahizi. "We have to keep offering new designs to stand out from the crowd." In the company's small storeroom, there are piles of folding shopping bags in the shape of a heart, children's backpacks with an elephant design, upholstered laptop bags and much else. The women sell most of the bags in Rwanda, but some go to Europe and the USA.

There is also a colourful fabric bag visible behind the desk of Rema boss Rose Mukankomeje. "We avoid using plastic bags as much as possible because we know their negative impact on the environment," she says. "The climate doesn't know any national borders. We don't want to lecture others. We want the Rwandans to be able to live in the environment they deserve."

LEARN • UNDERSTAND • ACT

1. The use of polyethylene plastic has been banned in Rwanda since 2008.

a) Which circumstances in the country have favoured and furthered this ban?

b) Describe and discuss the processes and the structure, the different regulations as well as ways whereby this ban has been and is being implemented consistently in Rwanda.

c) Who do you think are among the winners of this ban? In this context, also consider new, green markets and products in the country. Give reasons for your thoughts and answers.

d) What does the example of Rwanda demonstrate and teach you? Write your conclusions (results) down in an overview.



© Hands of Mothers

2. How does the EU intend to reduce the use of plastics?

a) Do some research on this subject and express your opinion in detail.

b) Which civil society organisations in your country are supporting the goal?

c) What are the essential differences with respect to the legislation, its implementation and the monitoring in Rwanda and in the European Union? Make some initial suppositions about this and check them through some general research.



© Charlotte Zink

3. What should be done with the plastic waste?

a) Address the problems associated with this issue first in small groups and then in the large group. Do some research and start by making a list of the consequences of the uncurbed use of plastics.
b) What measures would you take? Examine your suggested solutions and methods critically and give reasons for them.
c) It would be good and helpful if you were to address politicians with concrete demands, collect as many signatures as possible in support and then submit those to parliament in a petition.

4. Start a large-scale campaign in your local area under the motto "Plastic bags are out".

a) Produce a factsheet on the subject.
b) Investigate among yourselves and in conversation with friends and interested people how you could transform your school, your local shops or your community into a predominantly plastic-bag-free zone. Devise suggestions and environmentally-friendly alternatives to plastic bags. Check how "sustainable" the alternatives (paper bags, jute bags, etc.) really are with respect to resource consumption.
c) Present your project and your results to the school management and the pupils' council at your school and try to win their support for your cause.
d) Seek collaboration with existing initiatives and bring further supporters and sponsors on board, e.g. from Ursulaschule Osnabrück (see article in Section 2).
e) Think about what further activities may be relevant to your project.
f) What does your campaign plan look like in detail?



Tel Aviv

SUSTAINABILITY IN ISRAEL

By Nora Marie Zaremba

They make their own cleaning and hygiene products and fetch fruit and vegetables by the crateful directly from the field: a flat share in Tel Aviv is going against the mainstream.

Tami Zori is kneeling on the bathroom floor and scrubbing the tiles with a sponge. Her reddened fingers smell of lemon and vinegar. She stops in her energetic movements and dips the sponge into the container by her side, which is filled with a grey paste. "It also contains flour and salt," she explains a little out of breath. She is talking about her self-made cleaning agent. A young man's head briefly appears around the doorframe. It is her flatmate Avid. "We're driving to the farmer's now," he shouts and then he's gone. Tami nods her approval. There will be crates of fresh fruit and vegetables come the evening. Avid has to borrow a neighbour's car for his trip, but what he is doing would not work without a car. The farmer's field is too far away, out of town. Now Tami pushes two large buckets full of water into the corner next to the toilet. One contains fresh water, the other grey water. "The dirty water is for the toilet. We don't pour anything away," she explains. They don't use an automatic flush for the toilet in this flat in the centre of Tel Aviv.

Anybody investigating sustainability in Israel's second-largest city after Jerusalem will inevitably come across the 46-year-old Tami Zori and her project "City Tree". Initially, it was just an online platform where interested people could exchange ideas on permaculture, nutrition and composting. "It has developed into an ecological space for communal living," explains the small woman a little later in the kitchen, where she pours chickpeas and oil into a mixer. The apartment, which has three rooms, a kitchen and a bathroom all on one floor, sometimes accommodates eight



© City Tree Tel Aviv



people and sometimes up to twenty. That also means that there is always something going on. You can hear a sewing machine rattling in the lounge. 20-year-old Noa manufactures washable sanitary towels. "They might become a bestseller," she laughs and holds up the bright pink towel. Anybody living here makes a contribution. This does not necessarily mean money; it is more about producing life's necessities yourself.

But as rent and electricity still have to be paid, the eco-project has some 200 members who pay a small monthly subscription. Tami sends them a newsletter and offers courses. How do you make your own soap or makeup? How can you manage without plastic? The subjects are in line with a current Zeitgeist, which you even find in Israel. Tel Aviv's vegan restaurants and yoga classes are booked up and young people think that a healthy lifestyle is important. However, Tami believes that most of them are only scratching the surface. "Many don't stay the course when it gets down to the nitty gritty," is how she puts it. Maybe the Middle East conflict has something to do with it. After all, who would want to restrict their lifestyle, which may be wasteful but is so comfortable, when there is an ever-present threat of war? Especially as life in Tel Aviv can feel easy. That is what the city with its beaches, bars and restaurants is known and loved for.

Improvisation Politics

Climate protection is consequently a marginal issue in Israeli politics; this also applied to the election campaign for the early new elections to the Knesset in mid-March 2015. In the competition for funds and public attention, the subject automatically loses out. Even the fact that Amir Peretz, Minister for Environmental Protection, placed a reduction in CO_2 emissions at the top of his agenda did not help matters. The department budget regularly suffers cuts. Climate policy also needs a long-term approach and coherence. But the politicians frequently improvise. They make decisions based on current events, the security situation. Anything else is easily disregarded. The marginal significance of climate protection is also reflected in public reporting. There is not much to be read or heard in the media about the fact that Israel will be hit massively by the impact of climate change.

According to climate research forecasts, droughts will become more frequent. That is pure poison for a region where water is a rare commodity anyway. Israel currently has 8.2 million inhabitants and the population is growing. More people mean greater energy consumption, a sensitive subject. Israelis have not forgotten the days back in 2011 when there were electricity shortages. They were not allowed to switch on



© Nora Marie Zaremba

their washing machines or air conditioning systems during the day – and that in the middle of August.

"We could manage with less," says Tami Zori in her unheated kitchen. It is January and cold for Tel Aviv. She wears a thick jumper as there is no heating in the apartment. She is pouring a brown liquid into small moulds. It is vegan chocolate, which smells so delicious that it makes you want to have a taste straightaway. But Tami places them outside the door. "They need to rest a while."

Tami Zori herself has had little time to rest, even in her previous life. In her early twenties, she started out as a consultant to major fashion houses. Initially, she worked in Tel Aviv, then in New York. "I went out every evening, ate in expensive restaurants, threw money out of the window for the most expensive dresses," she admits. "I was truly a capitalist pig." But the daily race through meetings and the stress exhausted the young woman and caused headaches and stomach ache. From a certain point in time onwards, the high salary only seemed compensation for her suffering. Tami could have talked to her boss and reduced her workload for a while back then. "But that would only have been a half-hearted exit," she explains her decision to make a radical break. She returned to Israel and made a new start, trying to see how many products for everyday living she could produce herself. In the course of this process, she learnt how people and their conventional ways of living and doing business could do irrevocable damage to the earth. Since that time, everything in her life has been about how she could do things differently.

That is also why talking to Tami can be exhausting. Tami finds it inconceivable to do or buy something just because you want it, giving no thought to its impact on the environment. She does not seem to like any exceptions. "She is pretty consistent in her principles," confirms her boyfriend and flatmate Beny Schlevich. "To her, it's not a sacrifice; she can't act any other way anymore." Sometimes, he says, he feels guilty just for buying a snack from a market stall. "I don't want to impose my views on others," emphasises Tami. But she thinks that most people lie to themselves. Tami believes that it is an illusion to think that you can prevent the destruction of the foundations for life through a green economy without having to change your own lifestyle. But she would probably be in favour of a transformation of the energy supply system.

OUR AUTHOR



Nora Marie Zaremba (b. 1987) has worked as an independent journalist (for WiWo Green, der Freitag among others) and been employed in campaign management at a foundation focusing on climate issues. A one-year stay in India prompted her to devote herself to the topics of the environment, climate policy and sustainability.

Fossil Resource Imports

In the Israeli public, renewable energies are only talked about in connection with energy dependency. Having access to fewer natural resources than its neighbours, Israel covers the majority of its fossil fuel demand from imports. The country brings in coal from South Africa and Colombia, among other countries. The astonishing thing is that solar energy, an abundant resource in Israel, plays only a minor role in the energy mix. Although there are over 100 local companies involved in the solar energy sector, they export the latest technologies instead of using them themselves. There is some hope for greater use of solar power from the example of a new five megawatt solar farm in the Israeli Negev Desert. It is operated by Arava Power Company, an indigenous business whose founders include some pioneers from the kibbutz scene.

"I also saw the beauty of the desert, but above all I saw its potential," says Arava boss Yosef Abromovitz. He has a great variety of business interests and is a celebrity in Israel, among other things because of his engagement in the renewables scene. Siemens was one of the investors behind the solar farm in the Negev Desert. Abromovitz hopes for greater support from the country's own political sphere for further projects.

Throughout Israel, you are struck by the fact that almost all roofs are equipped with solar collectors for water heating. They go back to a lesson learnt from the early years of the country's existence. Israel had hardly been founded when it had its first energy supply problems. At that time, the government issued a daytime water heating ban. Later on, in the 1970s, a political directive was issued to enforce this ban and the rooftop panels became obligatory. Solar energy is therefore nothing new in Israel at all.

In the evening, Tami Zori sits in the shared lounge and cuts old shirts into long strips, which she then rolls into a ball. She will sew or crochet something from them later, maybe a tablecloth or a pillowcase. Her boyfriend Beny sits at the computer, his eyes fixed intently on the screen. He is organising the last few details for a course on urban ecology. Tami looks across to him and has to laugh. "Look at us: we have decided to do things differently – and still we sit in front of the computer all day."

The largest solar energy dish in the world
© David Shankbone



LEARN • UNDERSTAND • ACT

1. An unusual flat share

a) Describe and discuss the ecological flat share set up by Tami Zori in Tel Aviv.

b) Her views and her actions reflect the Zeitgeist in some ways. How?



© Nora Marie Zaremba

2. "Many don't stay the course when it gets down to the nitty gritty," summarises Tami

a) Examine the different reasons for and views about a more frugal and resource-saving way of life.

b) How far would you go and what obstacles might you encounter along the way?

3. Why is it so difficult in Israel to push a subject such as climate protection up the political agenda or to pursue long-term goals?

4. Commercialism dropout

a) Explain the individual experiences and phases of Tami's life that resulted in her radically changing her lifestyle.

b) Which key questions and answers led to her rethinking and reorientation? Exchange your ideas on this, question your own fundamental views and take a stance, if possible.

5. "The astonishing thing is that solar energy, an abundant resource in Israel, plays only a minor role in the energy mix. Although there are over 100 local companies involved in the solar energy sector, they export the latest technologies instead of using them themselves."

a) Discuss the causes of this state of affairs.
b) What measures could help to make the transition to the use of renewable energies in Israel's energy supply system a primary goal?

6. At the end of her article, Tami takes a look back.

a) Give an idea of her basic mood as well as her doubts.
b) Do some research on similar initiatives involving communal living in your local area, away from the fast-living and wasteful consumerist society. Make contact and seek inspiration for more sustainable ways of life.

7. According to Niko Paech "What makes a person superior is not having a lot, but needing little".

a) Use this quote as a motto for an exhibition, a piece of theatre, a video or a discussion forum at your school.
b) Have a discussion on who might be able to support you and further your activities. Develop guidelines for your concept.
c) Present your project to the school management and the pupils' council and seek their support for your pioneering cause. Don't lose courage!





©Victoria Duggan for uprootingourlives.com



SHARING THE FRUITS OF ONE'S LABOUR – IN NEW ZEALAND

Interview with Mel Beirne

Image material © Brooklyn Community Orchard

Does our future lie in gardening and in local self-sufficiency? Why else do more and more people living in cities all around the world take the time to plant apple trees, soft fruit and quinces? And are communal gardens really effective in encouraging others in the neighbourhood to engage in social-ecological activities? Mel Beirne, coordinator of the "Brooklyn Community Orchard" in Wellington, gave youthinkgreen some insights and answers to these questions and also talked about where she sees differences and advantages of gardening compared to the Transition Town initiatives. *By Nora Guru*

***youthinkgreen*:** What are the goals of your Brooklyn Food Group, and what is your vision?

Beirne: Our vision is to strengthen our neighbourhood community and at the same time grow fruit and vegetables in order to provide more of our own food locally. Anybody can work in our small orchard, established on common land, or just come along to take a look, to meet other people and to taste our fruit. We also help people manage their gardens on private land. One thing is particularly important to us: connecting gardeners with people who own private land, but can no longer manage it because they are too old or too busy.





and traditions that are worth preserving. However, stone fruit doesn't do that well here because our climate is too moderate. But we tried growing stone fruit anyway. And that is precisely what communal projects such as community gardens are all about: the fact that you can simply try something out and experiment. Having a go yourself and curiosity bring people in our city closer together again.

***youthinkgreen*:** And what are the concrete benefits of such activities and collaborations?

Beirne: When the collaboration is successful, the gardeners obtain access to a piece of land and share their produce with the owners or other neighbourhood groups. And of course we also conduct workshops in the gardens so that as many people as possible can share in our wealth of experience and knowledge.

Revolution on a Small Scale

***youthinkgreen*:** You had also been very active in the "Brooklyn Transition Town Initiative", but then became more strongly involved with gardening. Why?

Beirne: The Transition Town approach aims at the big picture of society: system change – or even revolution. For many people that is too large a scale. As a result, initiatives are frequently abandoned or only continued half-heartedly. But when food is involved, people can see the results and fruits of their labour very directly. They can see something grow, even if it's on a very small scale. That makes it easy to assure yourself that you can really make a difference.

***youthinkgreen*:** Put another way: are the key ideas from the Transition Town movement still being pursued anyway, and if so, how?

Beirne: Yes, I think so. Transition Towns have been set up in over 400 cities and communities

OUR AUTHOR

Nora Guzu (b. 1996) qualified for attending the 1st World Youth Sustainability Summit in Berlin by entering the youthinkgreen Open Competition. She subsequently founded the first *youthinkgreen* group in Wellington, New Zealand, and became a member of the Youth Advisory Council. She is currently a visiting student at Munich University.



***youthinkgreen*:** What is special about the plants in your gardens? After all, you can get fruit and vegetables at any street corner in Wellington.

Beirne: You wouldn't find fruit such as that from our fruit trees in the supermarket. These are older, traditional varieties, a special diversity, which we are really keen to retain. Four years ago, we received the seeds from a two-hundred-year old apple tree – a Bramley. A young Englishwoman called Mary Ann had planted the tree in Nottinghamshire around 1815, and Bramley apples were first sold commercially in 1867. These are stories

around the world, after all. And it has been most successful and most widespread in the UK, where it was founded. I'm not entirely sure what the causes and differences are resulting in us giving up on the initiatives in many places in New Zealand. But it will be up to you, i.e. the upcoming generations, whether the movement can survive and expand.

***youthinkgreen*:** Which values have played a particularly important role in the implementation of your idea of the community gardens?

Beirne: Initially, you need a team of like-minded people. We also had a pretty concrete idea of the community garden project from the start. And everybody in the group then got stuck in full of passion. Of course, we cannot devote the same energy to this project at all times because we are all in different phases of our lives. But allowing each other to take a back seat at times, i.e. basically accepting the needs of others, is an enormous help.

In any case, such an engagement should begin at a local level. In Wellington, the project was relatively easy to realise because it is a small town in terms of area and most people can get to the different project locations quickly. And of course much depends on the culture and the mentality of the local and regional authorities. But the government can also provide valuable support. However, when a project or an idea does not fit



INFO: WHAT ARE TRANSITION TOWNS?

There are now many towns and communities around the world where people are looking for ways to strengthen or revitalise the local economy and agriculture and trying out sustainable, resource-saving, post-fossil as well as communal ways of life. The proponents emphasise the participatory approach because they believe that transition represents a great experiment that anybody can become involved in. Supporters are concerned with the question of how citizens and politicians can be emancipated from oil by relying on renewable energies in the long term and, above all, by consuming less energy.



© Nils Aguilar

Transition Town initiatives have been set up in over 40 countries, from the Brazilian favelas to energy-autonomous towns in Japan to Swiss Alpine villages. The initiators of the Transition Town movement included the Irishman Rob Hopkins and students of the Kinsale Further Education College in Ireland.
www.transitionnetwork.org; www.transition-initiativen.de

with the culture and the mindset of an area, you have a battle on your hands to try and assert yourself.

youthinkgreen: Yes, that is probably true everywhere. I also ask myself: how can young people learn or become involved in these or similar initiatives?

Beirne: Many schools have, in fact, already started to grow their own plants and fruit. In Wellington, a programme entitled "Garden to table" was started recently. I personally think starting with food to convey knowledge and allow kids to make new experiences is ideal. That is precisely what states and politicians should ultimately place most importance on, namely the ability to feed their population well. Because of globalisation, that has all changed. 50 to 60 years ago, many people around here still grew their own food. Supermarket chains and fast food did not exist.



Maybe that will be our future too. The pendulum may just swing back to a situation that people just know from stories and books. So if children learn gardening and the basics of agriculture in school today, they may not immediately put this knowledge to use at home with their families. But they may make use of it later on, when they have grown up and have families of their own.







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1. Community gardens are of great importance these days, particularly in the Western world.

a) Make a list of the aspects representing the special features and varied benefits of community gardens.
b) Try to order the items in the list by topic.
c) Think about the individual steps people have to take in such an initiative to be able to carry on in the long term and to be successful.
d) Which role does her engagement play for Mel Beirne in her daily life? Try to describe her very personal benefits from her activity and form your own opinion on it.

2. Become involved

a) What are the objectives of the Brooklyn Transition Town Initiative by contrast? Do some research on this as well. Discuss the differences to the "Brooklyn Community Orchard" project.
b) What are the main challenges for the activists? What do you and don't you like about these initiatives?
c) Assuming that you would want to become involved in such initiatives, what would be on your wish list?
d) Discuss your expectations and ideas among yourselves. What would you definitely want to contribute to such a project?



courtesy of www.enviroalternatives.com

3. a) Do some research on the "Transition Town" phenomenon in your region/country. What are your research results and your insights?

b) It could be a good idea to contact and visit an initiative of this type in your area. Such a trip would no doubt be an enriching experience.

4. Your challenge:

A community garden with a future at our school.

a) Devise and discuss among yourselves possible ways to develop, realise and sustain such a project at your school in collaboration with your fellow pupils.

b) At a later stage, seek professional advice, if possible, and draw on the wide-ranging experience of experts, for instance gardeners. Work together to develop very concrete, detailed plans and produce some good documentation to inspire the pupils' council for your cause and gain its support.

c) Try to bring on board supporters and sponsors for the realisation of your plan for a community garden at your school. Don't forget to also secure the support from the body responsible for the school funding so that measures can be implemented more easily and more quickly.

d) Your project should also interest the media. So take steps to involve the media as well.







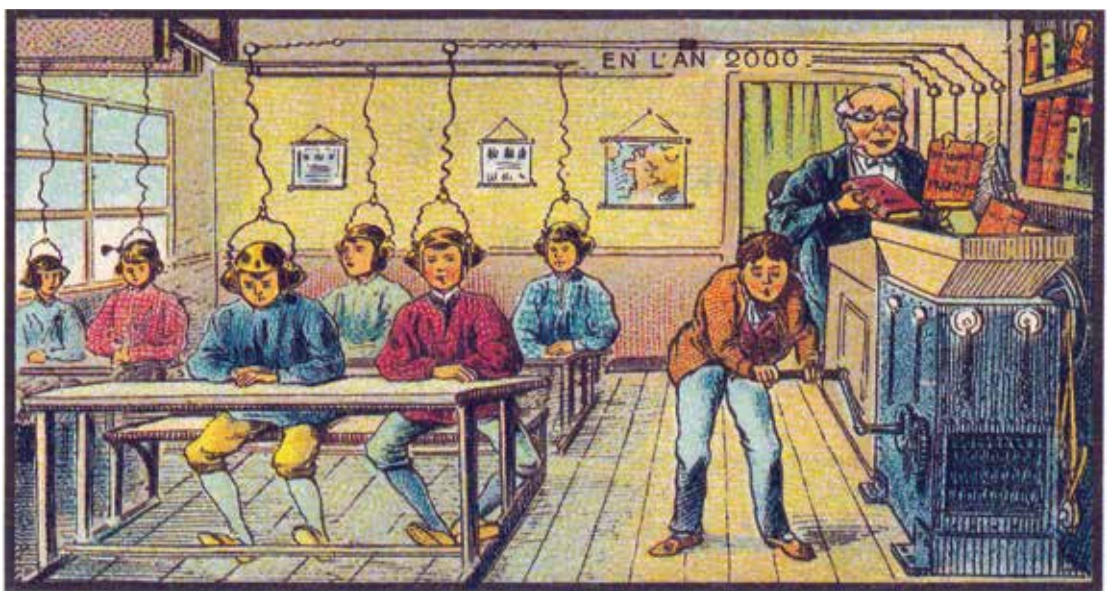
5.3. SUSTAINABILITY AS A MATTER OF EDU

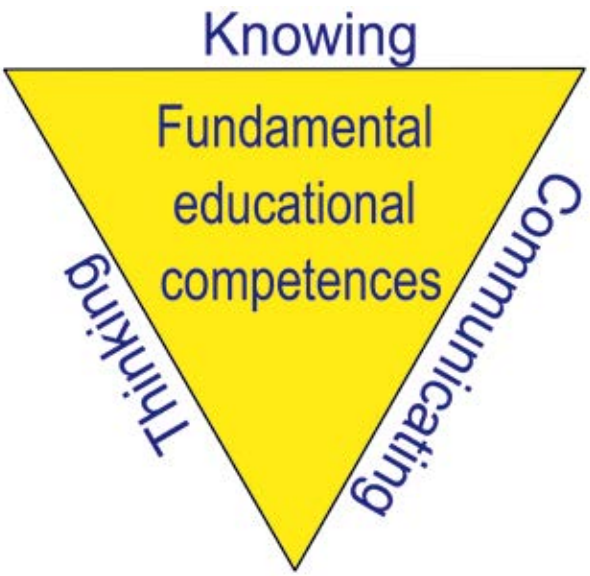
Introduction

"My action has consequences, as does my inaction, for me personally, for my local environment, for nature, for the global community. I can and must do something to make the world a little better." This view and this stance are conveyed and strengthened by the diverse programmes and projects of "Education for Sustainable Development" (ESD).

We see our projects as well as our Tree of Hope media package as contributions to this approach and would therefore like to conclude this section and the book with texts on issues relating to "Education for Sustainable Development". Education indisputably plays a key role in shaping our future in a more equitable way and forms the basis for successful sustainability efforts. This conviction was already set down in writing at the time of the 1992 Rio Summit in Chapter 36 of Agenda 21 in a key statement maintaining that there can be no sustainable development without a comprehensive change in awareness.

The heading of this section – "Sustainability as a Matter of Education" – is therefore to be taken metaphorically. In her article in section 3.1, Dr Marianne Dehne reports on the results of her detailed analysis, which indicate that it is not enough to introduce sustainability as a separate "subject" in school, for example. It is an interdisciplinary topic that affects and pervades all subjects. The special thing about ESD is that it draws attention to the correlations and interconnections between the different disciplines. The conclusion that ESD must be integrated into all places of learning and educational institutions is therefore obvious. We further believe that sustainability is a complex issue that needs to be debated with an





© Christoph Samsen

open mind. Rather than being treated as a theoretical subject for study, it needs to be questioned critically, jointly fought for, and demonstrated for people to live and experience. ESD demands the engagement and participation of all citizens, whatever their age and social position.

We therefore hope that our texts will inspire and challenge as many young people and adults as possible to become involved so that our project ideas will be picked up by as many people as possible and developed further. In their contribution, Inga Zinck and Stefan Rostock also call upon us to uncover the political potential of Education for Sustainable Development and to make better use of it. They describe the significance of important conferences and international processes from 2015 for the adoption of a new global development agenda and comprehensive climate protection measures.

The neuroscientist Professor Gerald Hüther deals with the topic of education at a neuroscientific and personal psychological level. He has been calling for years for an educational approach that does more to encourage and reward creativity and critical thinking as well as taking greater account of the learner's individual personality. According to Hüther, this needs a culture of open and trusting discussion at schools and among educationalists. It requires people who are good at arousing curiosity, pleasure in one's own talents and a creative zest. However, he also believes that the renewal of schools and the development of sustainable education models must not be imposed from outside, but have to be developed jointly by those involved at a local level.

Subsequently, we present the vision of a "School of the Future" by Nora Guzu from New Zealand to you, which she developed at the age of 16. Nora took inspiration from various architectural styles that can be used to combine social and ecological aspects and to design flexible learning spaces.

Finally, we report on how a future and ideas workshop can be designed and run, where visions, goals and "projects of the heart" such as Nora's "School of the Future" or the "Plastic Bottle House" of Nishchhal and Monika from Nepal can be developed and followed up on. Nadine Böttcher and Georgina Guillen-Hanson from our *youthinkgreen* team were instrumental in devising this open workshop concept, which they have already tried out and refined with many young people from different countries (see also the *youthinkgreen* Project Workshop in Section 2). Instead of providing fixed solution concepts



and answers, we bring along many questions to bridge the gap between the reality of the workshop participants' lives and their visions for a sustainable way of life and positive changes in their local environment.

The fine arts also offer excellent and significant opportunities for expressing and disseminating the desires, emotions and ideas of Education for Sustainable Development. To conclude the section and the "Tree of Hope" book, we therefore present our *youthinkgreen* song, for which the young people attending the 1st World Youth Sustainability Summit in Berlin composed the tune and lyrics with guidance from Daniel Arruda. You could say that the simple title of the song encapsulates the essence of our project work and of our "Tree of Hope" book and is addressed to every one of us: "The courage to act".

INFO:
KEY CHARACTERISTICS OF "EDUCATION FOR SUSTAINABLE DEVELOPMENT" ARE:

- **Critical appraisal of our way of life:**
  What are the consequences of what we do, produce or consume or how we socially interact for the environment and development?
- **Multiple Dimensions:**
  How is development to be evaluated in economic terms (economic performance), ecological terms (ecological compatibility) and social terms (social equity) (conflicts of interest)?
- **Global Outlook:**
  Do we live in such a way that all people (particularly those in developing countries) have a chance to secure their survival?
- **Generational Equity:**
  Will our development deny the coming generations important options?
- **Participation skills:**
  What possibilities for pupils to take responsible action are emerging?

Sources: www.schule-der-zukunft.nrw.de and www.bne-portal.de

FROM PRACTICAL EXPERIENCE: BECOMING MORE COURAGEOUS AND MORE POLITICAL – GLOBAL LEARNING WITH GERMANWATCH E. V.

Filling the "Global Action Programme on Education for Sustainable Development" with life

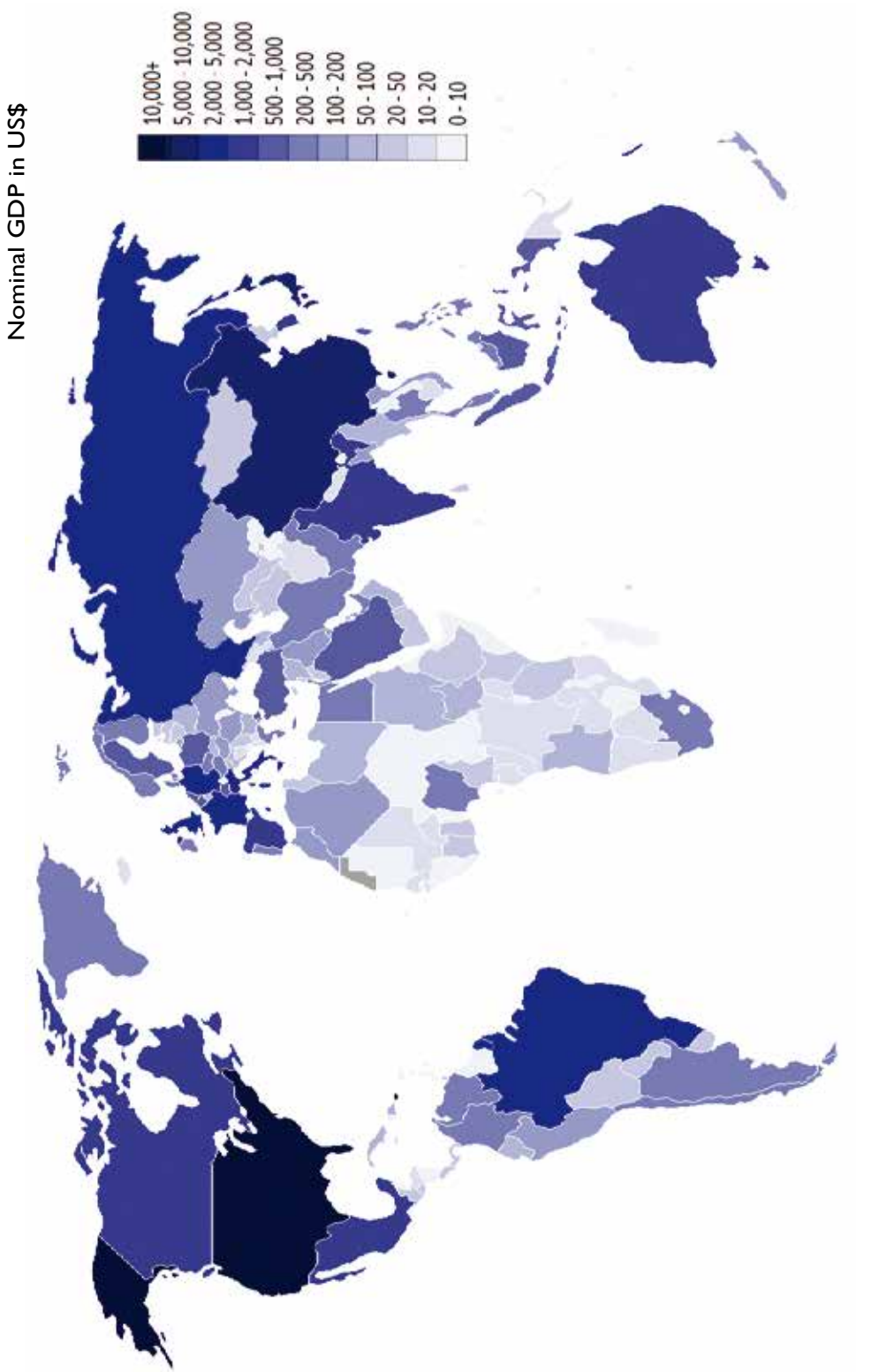
By Inga Zinck and Stefan Rostock

For all actors promoting sustainability and social equity around the world, but particularly for climate and environmental activists, 2015 represents a significant milestone: pioneering political processes, the adoption of new sustainability goals as well as the next major UN climate conference in Paris will take place. What significance do these political development processes have to civil society actors? What demands should be put forward and what influence can we exert?

Climate change is taking place right now. We can tell our children what it was like in the early days. Extreme weather events are on the increase, the sea level is rising, global warming is causing extreme heat and droughts, threatening important ecosystems – to mention just a few consequences. People in the Global South are particularly hard hit by the impact of anthropogenic, i.e. man-made, climate change.

Building Alliances – The New Role of the Emerging Economies

Nowhere else do the shifting geopolitical realities become clearer than in the economic and political rise of the emerging economies. A new global middle class is emerging, intent on imitating Western consumption patterns. It is absolutely clear that the countries of the North have the responsibility to develop viable ways of life for the future, including low-emission prosperity models, for themselves as well as to inspire others. In exchanges with actors from the Global South, this would offer opportunities for providing mutual impulses in the area of sustainable development. The development of production and consumption patterns viable for the future can only gain momentum via alliances between pioneers in industrialised countries and the Global South. In addition, alliances between industrialised countries and those most seriously affected by climate change are of particular importance. This is where projects and programmes of civil society "bridge building" in the South-North exchange play a special role. The experiences of migrants are not yet made nearly sufficient use



© Quite vivid blur

of in this process. However, these collaborations can only be successful if we are serious about the "major transformation" in our countries in the North and make credible and successful efforts to lead a more sustainable life.

For one, this requires great courage, a zest for new ventures and for change, and a comprehensive cultural transformation of our societies. In addition, we must not ignore the political processes and economic actors, but monitor them critically in our role as civil society actors.

What Roles can Education Perform?

The United Nations declared the 2005 to 2014 period the Decade of Education for Sustainable Development (DESD). Coordinated by UNESCO, the purpose of the decade was to integrate ESD programmes and projects into all education sectors, a course of action to which all UN member states committed themselves. During the course of the decade, the relevance of the

INFO 1: THE POLITICAL YEAR OF 2015 – AND THE IMPORTANT SUBSEQUENT IMPLEMENTATION PHASE

Humanity is facing global challenges in the social, ecological and economic areas. 2015 plays a special role in this context. One reason is the fact that the Millennium Development Goals (MDGs) agreed in 2000 expire in 2015. Here is an overview of important conferences and processes taking place in 2015 at an international level:

- UN World Conference on Disaster Risk Reduction in Sendai, Japan, in March
- G7 Summit (forum involving the most important industrial nations) in Elmau/Bavaria in June (2014/15 as the year of the German G7 Presidency)
- Third International Conference on Financing for Development (Sustainable Development Goals, SDGs) in Addis Ababa, Ethiopia, in July
- UN Summit in New York for the official adoption of the "Post-2015 Agenda" with new Development and Sustainability Goals in September (and taking stock of progress on MDGs)
- UN climate negotiations (COP21) with the aim of adopting a new global climate protection agreement in Paris in December, with important preparatory negotiations throughout the year

Result of these processes: a new global development agenda for the post-2015 period – the so-called "Post-2015 Agenda". The tasks for the post-2015 era will be to implement the decisions in national legislation, to critically monitor compliance with that legislation and examine it under aspects of equity as well as to update the legislation in line with newly gained scientific knowledge (on climate issues).

goals of Education for Sustainable Development was also raised. One significant achievement was the inclusion of the education concept into the Post-2015 Agenda (see Info 1).

As a follow-up project, UNESCO has developed the Global Action Programme on Education for Sustainable Development (GAP on ESD). The key objectives are as follows: firstly, integrating and strengthening Education for Sustainable Development institutionally in all education sectors; secondly: integrating education and learning processes into all areas and activities of sustainable development (pioneers such as solar plants, Community Supported Agriculture, etc.); and thirdly: empowering civil society comprehensively through EDS funding so that its members can make their own contributions to sustainable development. All countries have a duty to further EDS.

This has widened the educational focus enormously. The earlier tendency to engage in small-scale campaigns such as "energy saving tips" now only forms the basis for a more far-reaching engagement. In line with this development, a declaration was adopted at the UN conference in Nagoya, Japan, in December 2014, describing the significance of Education for Sustainable Development in greater detail. The conference participants emphasised "the potential of ESD to empower learners to transform themselves and the society they live in, [...]" (Aichi-Nagoya Declaration, item 8).

Greater Understanding and Zest for Action

"Global Learning" is crucial for the major transformation towards a sustainable society. Germanwatch wants to inspire civil society to act more consciously, effectively and actively, and is calling for greater political engagement – not only at a personal, but also at a local and national level. Sustainable development as a guiding principle should no longer be up for discussion! Instead, framework conditions should be established so that climate-friendly, socially and economically sustainable behaviour is normalised. Currently, non-sustainable activities are socially established and accepted in many places, and any deviations from this conduct are, in fact, frowned upon in society.

It is important to Germanwatch to encourage people to be proactive and to promote sustainable thinking and action. The relevance of local and global issues, sequences of actions and decision-making processes should, wherever possible, be experienced and understood by people through their own involvement, through participation

INFO 2: THE GERMANWATCH ASSOCIATION

Germanwatch e.V. is a charity based in Bonn, which was founded in 1991. The development and environmental organisation considers its key goals to be engagement for global equity and the preservation of livelihoods under the motto "Observing – Analysing – Acting". The organisation's activities focus on the analysis of the politics and economics of the countries of the Global North and their impact on the particularly disadvantaged people in the Global South, on lobbying, campaigning, publicity and education work for the common good, as well as on dialogue with a great variety of actors. https://germanwatch.org

opportunities and reality. Young people should be inspired to question conventional behaviours and to recognise and use opportunities in their own social environment for helping to shape a sustainable society.

Young people around the world clearly do have the will to make a difference and the desire to take on greater responsibility. But it is not enough to simply aspire to make small energy savings and take efficiency measures in their own everyday lives. We must encourage young people – within the appropriate context that they can understand and influence – to question and change the existing political and economic framework conditions. This is precisely where the concept of the "Hand Print" supported by Germanwatch comes in. The motto is: "Increase your Hand Print, decrease your Footprint".



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Developed by the Indian environmental organisation "Centre for Environmental Education" (CEE), the Hand Print concept can be applied and developed further individually. Germanwatch uses the Hand Print concept to encourage individuals and civil society actors to go beyond their comfort zone and promote greater sustainability and better climate protection in an ambitious manner within their social environment and beyond. It is very important to convey the results of the international processes in a comprehensible manner to the general public, to business actors and to the younger generation and to enter into discussion with them on the subject. It is further important to insist on the adopted goals being binding and subjected to monitoring.

Education for Sustainable Development sharpens civil society's awareness for global correlations. But this education will only take on concrete form in the actions taken by the young people. Such programmes and projects must therefore aim at changing social realities as sustainably and comprehensively as possible – towards greater lived sustainability and global equity.

OUR AUTHORS

Inga Zinck (b. 1990) studied linguistics, focusing on communication, and worked at Germanwatch in the Sustainable Development Team in 2014/2015.



Stefan Rostock (b. 1967), geographer and theologian, is ESD team leader at Germanwatch. He advises (youth) groups, associations and organisations on issues of climate and development and manages the "Climate Expedition". http://germanwatch.org/de/4087



LEARN • UNDERSTAND • ACT

1. What is the impact of anthropogenic climate change on the countries in the Global South? Do some research on this question and write down the essential results in a table.

2. New alliances

a) Describe the new role of the emerging economies.

b) What should the characteristics of the alliance between the industrialised countries and the pioneers in the Global South be? Explain the possibilities and the process of civil society bridge building in the South-North exchange by way of some examples. Also, which aspects would you consider or expect to be of particular importance?

3. Political processes of 2015

a) Why does 2015 play a special role with respect to the major global challenges? Exchange ideas on this question.

b) What should replace the currently still predominating North-South thinking in this context?



Rethink.
Rethink your consumption behaviour.



Repair.
Maintain and repair products that you use.



Refuse.
Borrow, share or barter for an item rather than buying a new one.



Recycle.
Repurpose old products you no longer need or recycle them.



Reduce.
Take care to buy products that have been produced by r esource-saving and fair means.



Reform.
Promote improvements that will make sustainable consumption easier.



Reuse.
Utilise and use up consumer goods for as long as possible.



React.
Participate in campaigns to raise awareness of problems.

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4. "The aim is to integrate sustainable development into all forms of education and to integrate education into all areas of sustainable development."

a) Carry out research to gain an overview of ESD and discuss some educational objectives for sustainable development that you consider of importance to yourselves (see www.bne-portal.de and www.globaleslernen.de).
b) What form could educational offerings take in the different areas of sustainable development?
c) Try to find some simple examples to illustrate and explain the above key statement.
d) Describe similarities and differences between the concept of "Global Learning" and Education for Sustainable Development.

Nachhaltigkeit lernen

Weltdekade der Vereinten Nationen 2005–2014
Bildung für nachhaltige Entwicklung
UNESCO

5. Name and describe fields of activity and goals of Germanwatch. Do some research on this and also look for some critical views about the work the charity does. Form an opinion.

6. New forms of engagement

a) Work in small groups to find out the goals pursued with the "Hand Print" concept.
b) What possibilities are there to increase your handprint to further sustainable development? Do some research on this. Helpful websites: www.handprinter.org, www.handprint.in.
c) Present your results to the entire group and assess this concept jointly. Which upsides and downsides can you see? Would the concept be helpful to you? Give your reasons.

7. What form would campaigns by young people need to take in order to change the existing social realities sustainably and comprehensively

a) Produce a handout with the main points.
b) Question and discuss your handout with other groups (e.g. NOGs) that have extensive experience in this connection.

8. "Decrease the ecological footprint, increase the handprint of your personal engagement," is the wake-up call for your campaign.

a) Develop a flyer for the Hand Print campaign that shows in very concrete terms how we can exert greater influence politically. The meaning, objectives, approach and purpose of the Hand Print should be shown clearly and memorably.
b) Distribute your Hand Print flyers at your school, in the local shopping precinct or at your local market. Arouse people's interest and talk to passers-by about the subject.
c) Evaluate your campaign and report on it in the media.

HAND PRINT
Action Towards Sustainability

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LOOKING TOWARDS NEW LEARNING CULTURES: A PLEA FOR GREATER FREEDOM OF ACTION

For teaching that strengthens individual talent and encourages independent thought and action

By Prof Dr Gerald Hüther

A good learning culture must take into account the challenges of the present times and pupils' needs. But our school system still operates in part as it did during the time of 19th century industrialisation, when people were not meant to realise their potential, but to function in factories. Pressure to achieve and competitiveness are continuously rising in our schools. And at the end of the school year – when the reports are handed out – the winners are those who have fulfilled all the teachers' instructions and expectations as perfectly as possible, i.e. those who were willing to conform. Creativity, critical thinking about and questioning of social structures, i.e. an independent mind, are neither encouraged nor rewarded to any great extent.

There is a lack of will on the part of the business world and politics to initiate major upheavals in our education system because small numbers of people in those sectors indirectly profit from the fact that so many pupils, teachers and parents remain conformist. It took me a long time to understand that pupils and their education are considered in the context of the commercialisation chains: as potentially subservient, diligent workers and keen consumers. While companies also seek employees who demonstrate engagement, have a strong personality and enjoy independent thinking and teamwork, they prefer the majority of their suppliers and customers to be "dumb enough to allow themselves to be taken for a ride", to put it bluntly. Hopefully, the time will come when most contemporaries will realise that you cannot eat money and that amassing ever greater amounts of material possessions does not increase your enjoyment of life. But as long as that many people earn their living by pushing all sorts of products at young people, it seems that schools need to churn out sufficiently large numbers of customers willing to part with their money.

New laws, curricula or regulations imposed from above are not the solution and can only help to bring about the necessary change indirectly. The will to change the education system

OUR AUTHOR

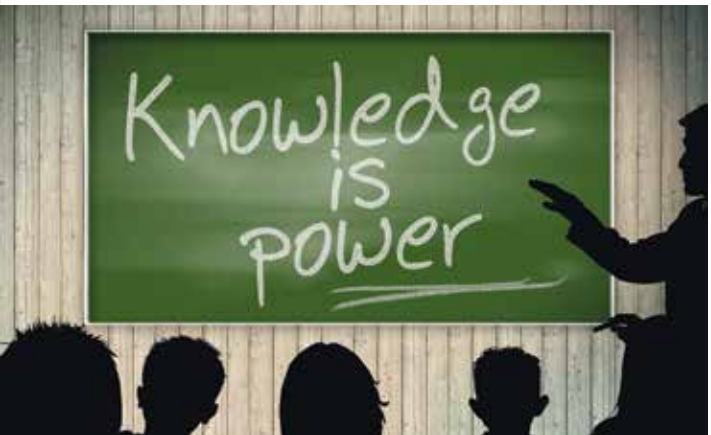
Professor Gerald Hüther (b. 1951) is a neurobiologist and author of several popular science books on education issues. His last two publications are *"Lernlust. Worauf es im Leben wirklich ankommt"* (Zest for learning. What really matters in life) and *"Etwas mehr Hirn, bitte"* (A little more brain, please).
www.gerald-huether.de



© Franziska Hüther



must come from within. It must come from the schools themselves and it must gain the support of everybody, from the school's leadership, its teachers, the parents and, above all, the pupils. Teachers and heads who battle on their own to try and change the learning and relationship culture at their school will only succeed to a limited extent. But if all parties join forces and agree on the direction to take, such changes will not involve additional, exhausting work. Then changes will be something everybody looks favourably upon and to which everybody is happy to contribute according to their ability.



A Stage for Individual Action

What this needs is to allow every individual in our society to establish a reliable and trusting relationship with as many and as different people as possible. In such a community, knowledge and knowhow will automatically flow from one person to another, and everybody will invite, encourage and inspire others to learn even more and to expand their horizon. By learning with and from strong personalities and mentors, who encourage them, young people can make positive experiences: experiences which awake their joy of discovery and creativity and which allow them to discover and develop their innate talents and aptitudes, which offer them a stage for their individual action and develop a climate of openness and honesty. Once I have become aware of my own talents, I will be less likely to let upcoming changes derail me – because I know what I am capable of and what strengths I can draw on at any time. The difficulty lies in discovering your own motivation and values so that you can follow them – and that



youthinkgreen Climate Ambassadors launch a weather balloon at Lindenberg Observatory

is a lifelong task. Today's pupils, however, will find it difficult to navigate the world of tomorrow if all they have learnt is to chase good grades.

And of course we are all to blame if our children lose the desire to think for themselves and the joy in making discoveries and acting with others. Because over time, we as parents, educators and teachers have lost sight of what our children need to realise their innate potential, namely greater freedom of action, teamwork and support. Instead of integrating these leading principles into our learning culture, we try to teach our children and adolescents everything that we adults currently consider important and significant. Whereas the important thing in our society is, in fact, what you are capable of rather than what you have quickly learnt by rote. Knowledge that pupils cannot use or apply practically is dead knowledge. Even if I have learnt everything there is to know in terms of the technical details of aeroplanes and about the physics of flight, that does not make me a pilot. For that, I must be able to sit in the cockpit and start, control and land the aircraft myself.

A "Global Environment School" with a strong interdisciplinary and international focus on the topics of sustainable development, such as that envisaged by *youthinkgreen – jugend denkt um.welt e. V.* and other organisations, should be developed and implemented primarily by pupils themselves. Again, it would not be very helpful for adults to offer prescriptive guidelines and blueprints to the young people. Maybe school is no longer the right term for these places of learning. I propose the term "workshop" instead. And the pupils should be able to decide for themselves when – in which subject or project – they would prefer to become active at a local, regional, national or international level. In conventional schools, environmental protection and sustainability should be integrated into all subjects as cross-disciplinary topics rather than introducing a new separate subject to the curriculum. Then pupils would understand more quickly that protecting the environment and resources means far more than drinks can deposits and waste separation. Emotions are also crucial to long-lasting learning. Anybody who has an experience that touches them deeply will then no longer be able to carry on as before. That person will change their life and their environment with great purpose and self-confidence.

Links:

www.schule-im-aufbruch.de
www.schulen-der-zukunft.org
www.lernwelt.at

LEARN • UNDERSTAND • ACT

1. Creating a good learning culture is simultaneously a task, necessity and challenge for the education sector. What constitutes a good learning culture in the author's opinion? Which guiding principles does he wish to see integrated into our learning culture? Do some research on this and contribute your own experiences and views.

2. To employers, the significance of school grades is becoming less and less relevant. According to a recent survey, they rank in ninth place among the ten most important criteria, with personality, communication skills and practical experience ranking at the top.

a) What does the author think is the reason for the fact that there is so little willingness to make changes to our school system? Discuss this question among yourselves. What are your conclusions?
b) Which approach to effecting change does the author consider crucial?
c) Who do you think benefits most from the current education system?

3. a) "The will to change the education system must come from within," says the author. Discuss this statement and the author's comments in small groups. Present your findings to the large group and come to an agreement on a well-founded view.
b) "Today's pupils, however, will find it difficult to navigate the world of tomorrow if all they have learnt is to chase good marks." Discuss the author's statement. To what extent may indifference and complacency as well as the fact that politics and bureaucracy have often encouraged dependence and apathy have contributed to this?

4. Why would the author prefer to see school as a workshop?

5. In the interesting video "alphabet", the problems existing in education and education policy worldwide are examined and changes are suggested and called for. Watch this video together and take the opportunity to jointly examine the topic of education in a new light.



© Pandora Filmverleih

6. Do research on the author's output. Our documentary "Tree of Hope" incorporates and illustrates several points the author puts forward as important: the need to encourage young people in a self-determined and proactive attitude to life, to strengthen their belief in their own abilities, to give them space for their inquisitiveness and creativity, to offer a stage for a climate of openness and honesty, to give them opportunities to realise their ability to effect change through their skills and their engagement.

a) What do you and don't you like about this video?
b) Have the young people featuring in the video managed to inspire you? Do their stories motivate you to take a step back, to question your daily lives and to even finally take action? Discuss your impressions, feelings and opinions on the subject.

7. Motto: "We don't learn for school but for life."

a) Try to breathe new life into this motto with an exhibition involving the entire school community.
b) Sound people out and make suggestions on the topics that the exhibition should definitely cover.
c) Try to enrich your exhibition with a discussion forum, interviews with contemporary witnesses, and surveys.

Comment:
at www.zeit.de/2013/36/bildung-schulrevolution-bestsellerautoren,
the journalist Martin Spiewak takes a critical view of the author's suggestions.



YTG Delhi also supports this school at the city's periphery © Thomas Frick

THE SCHOOL OF THE FUTURE – A VISION FROM NEW ZEALAND

Von Nora Guzu

I often wonder what could happen if we don't finally change our attitude. Will we suffer the same fate as the people on Easter Island once they had cut down the last tree? How can we prevent that? To put it simply: we must invest more strongly in education for sustainable development and ways of life, and we must do so now! For this purpose we need novel and flexible learning spaces. Let's not wait until climate change has left devastating marks everywhere.

Unfortunately, we are still far removed from a sustainable lifestyle "that meets the needs of the present without compromising the ability of future generations to meet their own needs", as defined by the Brundtland Commission in 1987. Consequently, we must intensify all our daily sustainability efforts, acting at different levels: at the political level, in business, in our local communities and as individuals. It is crucial that young people also address these issues. We, the coming generation, should collectively become involved with sustainability ideas because it will be up to us to implement the models and proposed solutions. And where is the best starting point for forging new ideas if not the "school of the future"?

Impulses for Change

I have come to realise that we cannot achieve the required change of attitude with the conventional school models. It is important for sustainability to be established in our education systems as a cross-disciplinary programme. Only then will young people be able to fully understand the enormous complexity and existential significance of sustainability. The schools of the future must be better set up, trying out new formats and methods, so that we young people can mature into citizens of the world endowed with foresight and empathy. We need flexible and innovative learning concepts as well as a culture of open debate to be able to master the global challenges such as climate change through collaboration.

These deliberations gave me the motivation to develop an architectural and conceptual plan for an environmental school. I adapted the model specifically to the conditions in Christchurch, a city with 341,469 inhabitants in the Canterbury region on the east coast of New Zealand's South Island. The city's buildings were badly damaged in an earthquake in 2011. My model therefore represents a project involving ecological as well as social aspects of the (re)building of schools.

Inspiration for the Architecture

For the architectural model for my school of the future, I sought inspiration from indigenous, traditional building methods, from modular architecture and from the ideas of the metabolists.

My school concept is based on a deep understanding of the natural and cultural environment, local traditions and current architectural construction methods as well as materials



Christchurch before and after the 2011 earthquake © Roger T Wong

INFO: METABOLISM ARCHITECTURE

Metabolism is an architectural style developed mainly in Japan after the end of World War II. Not only architects but also designers and urban planners presented their innovative ideas and models at the 1960 World Design Conference in Tokyo.

Their fundamental concept focused on the question of how organic life cycles of birth and growth can be transferred to urban development and architecture. They played with expandable large structures, exchangeable construction modules and integrated traffic infrastructure – railway, streets, lifts – as "arteries" within the urban environment.

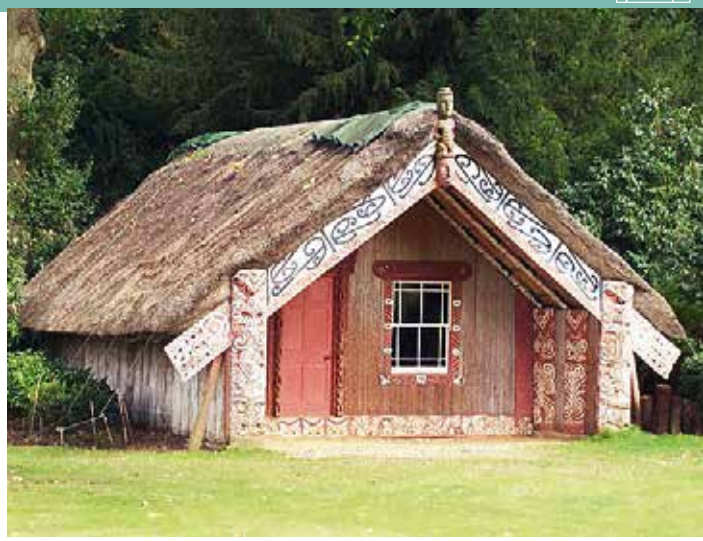
The metabolists took inspiration from insights and ideas from culture, religion, physics and biology. But while a small number of building projects were realised in the 1960s and 1970s, most of the ideas and concepts remained on the urban planning drawing board. They did, however, influence many building styles in other countries.



The Nakagin Capsule Tower in Tokyo, one example of metabolist design © Jordy Meow



© New Zealand Defence Force



Maori architecture © Len Williams

OUR AUTHOR



By submitting this article to the Open Competition held by *youthinkgreen*, Nora Guzu (b. 1996) qualified for attendance at the 1st World Youth Sustainability Summit in Berlin in 2013. She subsequently founded the first *youthinkgreen* group in Wellington, New Zealand, and became a member of the Youth Advisory Council. She is currently a visiting student at Technische Universität München.

available in Christchurch. When designing the roofs, for instance, I was able to combine effective methods of insulation with natural planting that is reminiscent of the architecture of the Maori pit-houses. The advantages of nomadic lifestyles in terms of the portability and flexibility of shelters also feature in my design, which combines the latest environmentally-friendly construction practices and techniques with natural, recyclable and renewable materials.

At the heart of my idea for a school model is the silver fern ("Ponga" in the language of the indigenous Maori) with its seedpods. I chose this tree as a model from nature because it has very unusual and unique characteristics. While growing very slowly, it has a great regenerative capacity. When you plant a seemingly dead log of the plant, it will send out new shoots after a while. Added to this is the fact that the silver fern is the most widely known symbol of New Zealand, which is even to feature on our flag and which has already served as a source of inspiration to many Maori artists.



Silver fern, national symbol of New Zealand
© André Richard Chalmers

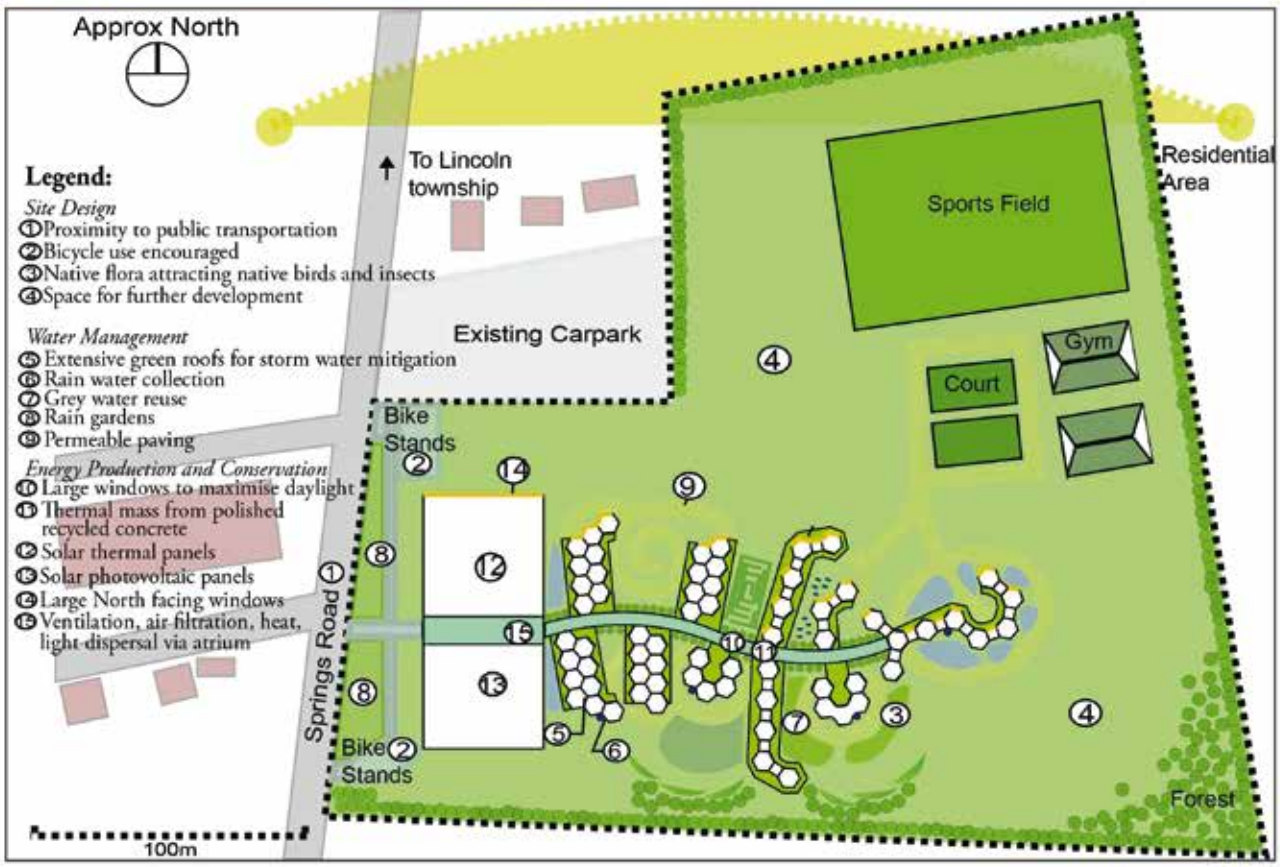
Board 1

Key Principles:

The following key points of sustainable development in the building sector inform the design:

- Design with the elements and climate in mind
- Minimise energy demand
- Minimise resource use
- Reduce and recycle waste
- Conserve and recycle water
- Respect the vernacular





Design overview

[for a visual representation, see Board 1]

The Site – Description of Locality

Since the 2011 earthquake, the entire area around Christchurch has been undergoing rapid rebuilding and redevelopment. One of the greatest challenges for me was to find a site that had not suffered massive damage and where the natural risks such as soil erosion, flooding and rock falls were low. The site I ultimately chose measures eight hectares and is located in Lincoln, to the South-West of Christchurch. It is close to Lincoln University, a renowned centre for agriculture and horticulture. In January (summer), average temperatures in Lincoln are around 22.5 °C and in July (winter) around 11.3 °C. Lincoln enjoys over 2,050 hours of sunshine a year on average, with the sun in the northern sky. All these details were important to the design of my school.

The Site – Characteristics

The school buildings and the immediate surroundings comprise facilities such as classrooms, staff offices, a library, social spaces, a school yard, sports fields, laboratories, a canteen and a cafeteria, a cultivation garden and a tree nursery. The buildings are constructed from geometric modules, a design ideally adaptable to any landscape. The classroom architecture is reminiscent of seed pods or honeycombs, resulting in a look that is both modern and natural. Other important components include the generously proportioned internal and external corridors, which connect the various spaces and allow pupils to move quickly from one area to another. The model offers enough spaces and rooms for pupils to meet up and spend time together. The idea was also to encourage interaction between pupils from different classes and age groups as well as disciplines.

The intended site also offers plenty of outside space for horticultural use, including vegetable and wild flower gardens. Even the roofs and walls can be furnished with indigenous plants. This use of plants offers several benefits. The larger plants provide shade and are soothing to the eye, gardening provides relaxation, and the gardens also provide opportunities for projects of after-school clubs or for biology lessons. In addition, we could supply the school canteen with fresh fruit, vegetables and herbs.

The premises have been designed to encourage pupils' creativity and to inspire them to investigate sustainable construction methods. Workshops or leisure activities could be offered where we build sculptures from recycled materials or investigate the ideas and concepts of permaculture. In addition, we would generate energy with the rooftop solar modules as well as becoming involved in local sustainability projects (food sharing, repair services, etc.). Another conceivable project could be a rainwater management system that would help to restore the natural water cycle and keep it intact.

Hexagonal Classrooms

[see Board 2]

In my concept, the school of the future combines the use of leading resource-saving technologies with a curriculum that allows the correlations between the individual disciplines and learning contents to be examined. The teaching should generally aim at allowing pupils to try out and internalise an environmentally-friendly and sustainable way of life. I think that lessons should be very practical and allow the pupils to discover possible solutions on the basis of concrete examples or activities while furthering their personal initiative. My concept envisages more group work and discussion sessions and less teaching from the front of the classroom. Socrates, in his day, already thought that pupils need to be enabled to think for themselves instead of filling their heads with the "right" answers.

Board 2



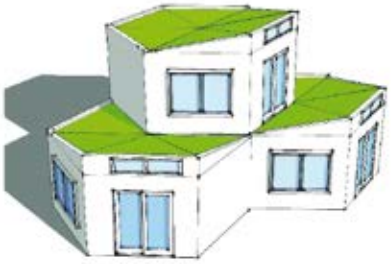
The classroom design takes into account several sustainable building practices to increase the occupant comfort, whatever the weather outside. For example, the classrooms follow a passive solar design, with double glazed windows, insulation with recycled content, and a thermal mass provided by the recycled concrete floors. Waste management practices are also in place through a school wide recycling and composting scheme, for use in gardens.



When deciding on building materials, preference was given to renewably sourced materials with a high recycled content and products manufactured locally. The main material used in the classrooms is Cross Laminated Timber (CLT), for the numerous benefits it provides. The wood structures give a sense of flexibility to meet changing needs because they are light and allow for quick assembly and disassembly. Their airtight nature also makes the buildings more efficient to heat, reducing energy demand. CLT also performs well in earthquakes through a system of post-tensioned steel tendons that anchor the panels to the foundations, allowing for controlled rocking during earthquakes. Furthermore, because these panels are pre-fabricated to precise dimensions, no waste is made in their production, while at the end of their life, they can be recycled into new panels.

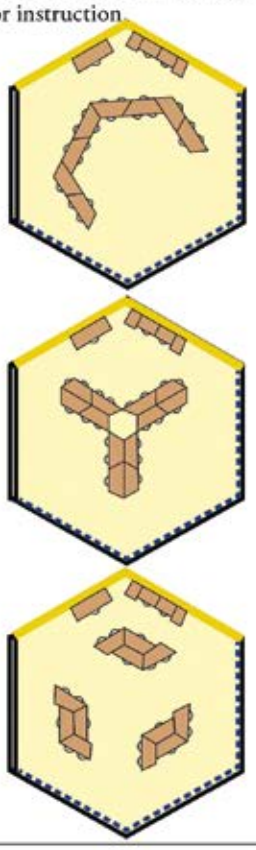


Extensive green roofs are another key feature of the design. Green roofs mediate storm water flow rates, provide superior insulation, filter dust from the air and support local flora and fauna, while also serving as a place to sit and socialise. The green roofs are used for a project monitored by staff, students and Lincoln University students to establish successful species for green roofs in a South Pacific climate.

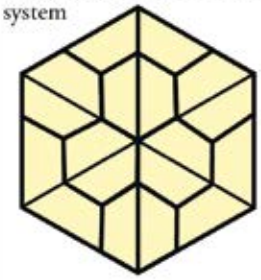


Development Potential:
In the first stage of development, the school is able to accommodate 1200 students and 150 staff. However, the geometric pods allow for quick, easy and cheap development either on the ground level or by building a second level on top of the existing one.

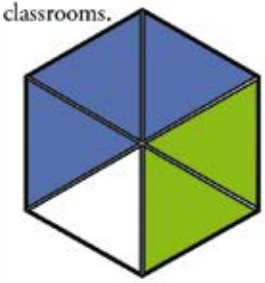
Classroom layouts with two walls for windows and three for instruction.



Strong modular structural system



Possible combination of green roof, solar panels, and reflective white for roof of classrooms.



In the modern hexagonal classrooms of my design, pupils sit opposite each other at round tables, which allows them to examine pieces of work in small groups through critical discussions and to try out methods of efficient division of labour. They will find that skills such as asking the right questions, listening and inspiring others are far more important that the end result or the "correctness" of the answers in line with prescribed thinking patterns. In the hexagonal classrooms, teachers would have three walls available for instruction. A variety of teaching aids could be use, including conventional blackboards as well as smartboards and screens. The other walls could incorporate windows or doors. Having several hexagons joined together to form one building unit also makes it easy to get from one classroom to another.

As you often come up with new thoughts and ideas outside class, I have incorporated different social spaces and break rooms in each disciplinary unit for informal exchanges and relaxation. And the generously sized main corridor also incorporates colourful seating and indoor gardens, which encourage socialisation.

The Benefits

In addition to the above-mentioned benefits of creating a pleasant learning atmosphere, the hexagonal basic classroom structure also offers special protection in the event of earthquakes. The construction is intrinsically more stable than that of conventional rectangular rooms. Furthermore, the obtuse angles make the classrooms appear larger and more open. In addition, the hexagonal units can be combined at will and built in close proximity to each other so that no space is wasted. I have designed my model with interchangeable dividers, adding further flexibility in terms of space usage. The school building can be expanded or reconfigured at any time to suit changing requirements. As the design makes for fast assembly, construction is relatively simple and low-cost; yet the buildings will last for decades.

The Main Building

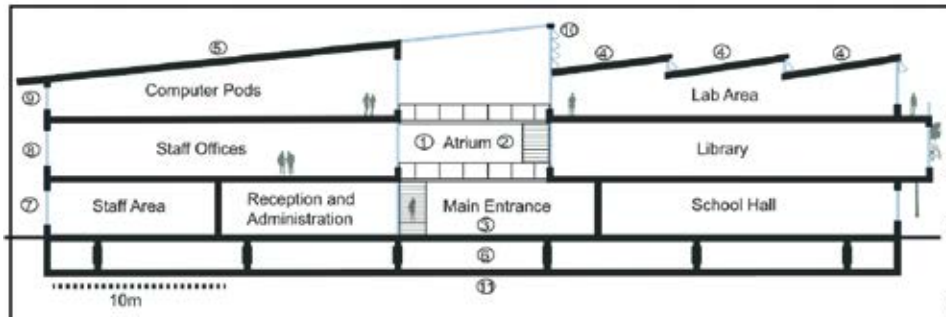
[see Board 3]

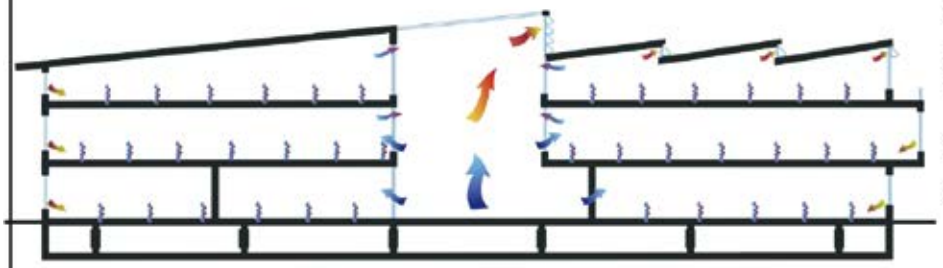
In my model, the building is rendered with natural colours and plant-like textures. Assisted by staff and students from Lincoln University, pupils will be able to check and control the school's air quality, heating, lighting and air conditioning via a specially developed software system.

The main hall offers natural ventilation as well as providing air filtration together with the green wall of the west wing, thus improving internal air quality. This system is designed to keep the building cool in the summer by natural means. In winter, the green wall protects the entrance from cold south-westerly winds. The first floor houses the library and the social spaces directly opposite the staff offices. This is conducive to interaction and to dialogue between pupils and teaching staff.

The atrium serves as the main thoroughfare to the classrooms. Each classroom unit branches off directly from the main corridor, which has a glass roof to make maximum use of daylight and save electricity. The roof rests on wooden tresses, which reference nature and the path of life as the wooden tresses become entwined with the silver ferns growing outside.

Board 3





Energy concept diagram of main building

Legend:

Energy Production and Conservation

① Ventilation, heat and light dispersal via atrium
② Air filtration through green wall on west side
③ Thermal mass from polished, recycled concrete on all floors stabilizes internal temperatures
④ Solar thermal panels
⑤ Solar photovoltaic panels
⑥ Underfloor water heating and cooling from super efficientheat pump
⑦ Large North facing windows
⑧ Active facades adapt to ambient conditions
⑨ Large eaves inspired by Maori meeting-houses
⑩ Operable windows

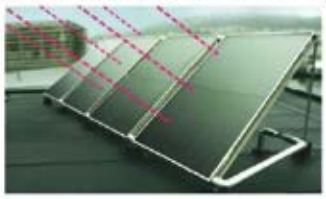
Earthquake Safety

⑪ NZ invented base isolators

Sustainability Features

Energy production: Solar Panels

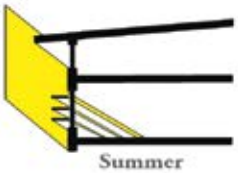
Solar panels need to be tilted up and face North in New Zealand to maximise solar absorption.

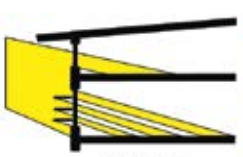


The preferred angle for Christchurch is 32° in summer and 57° in winter. Solar systems in Christchurch will produce 40% more electricity per year than the same size system in Germany.

Energy conservation: Active louvres

The building envelope is a wooden frame of light sunshades installed with specific angles on the north and west facades to redirect daylight further back into perimeter spaces and for glare reduction and thermal control.







In this way the high angle summer sun is excluded and the low angle winter sun is included. Western red cedar has been chosen for its durability and no need for chemical preservative treatment.

Indoor temperature regulation: Concrete floors and green walls

Concrete floor slabs are the simplest way to store solar thermal energy, amd have many financial, energy and health benefits.



The main building will not overheat or drop in temperature as rapidly, due to the thermal mass. The concrete floors, made from recycled rubble from earthquake-affected building sites, together with the green walls, support temperature regulation and distribution of filtered high-quality air.

Earthquake safety: Base isolators

Base isolation is a technique developed in New Zealand to minimise damage to buildings during an earthquake. The building is isolated from the ground by flexible lead rubber bearings which allow it to only move a little or not at all during an earthquake.



The rubber provides flexibility through its ability to move but return to its original position. Lead may deform with the movement of an earthquake, but it will revert to its original shape, and it is capable of deforming many times without losing strength. Using layers of steel with the rubber means the bearing can move in a horizontal direction but is stiff in a vertical direction.

Outlook

The vision of designing a school is a highly complex affair! Where to next? As I have completed my research and developed the first models based on the insights I gained, contacting experienced architects and builders in Christchurch will be the next step. Of course, I also want to speak to the municipal administration, which is responsible for rebuilding in Christchurch. Other tasks include sorting the funding and raise awareness among the public that constructing sustainable school buildings represents a communal necessity. In particular, I intend to contact the Canterbury Earthquake Recovery Authority (CERA) and Christchurch City Council. Ultimately, I hope that my ideas will inform the design of schools that will be rebuilt or newly built in Christchurch in the coming years.



The author at the 1st World Youth Sustainability Summit in Berlin

LEARN • UNDERSTAND • ACT

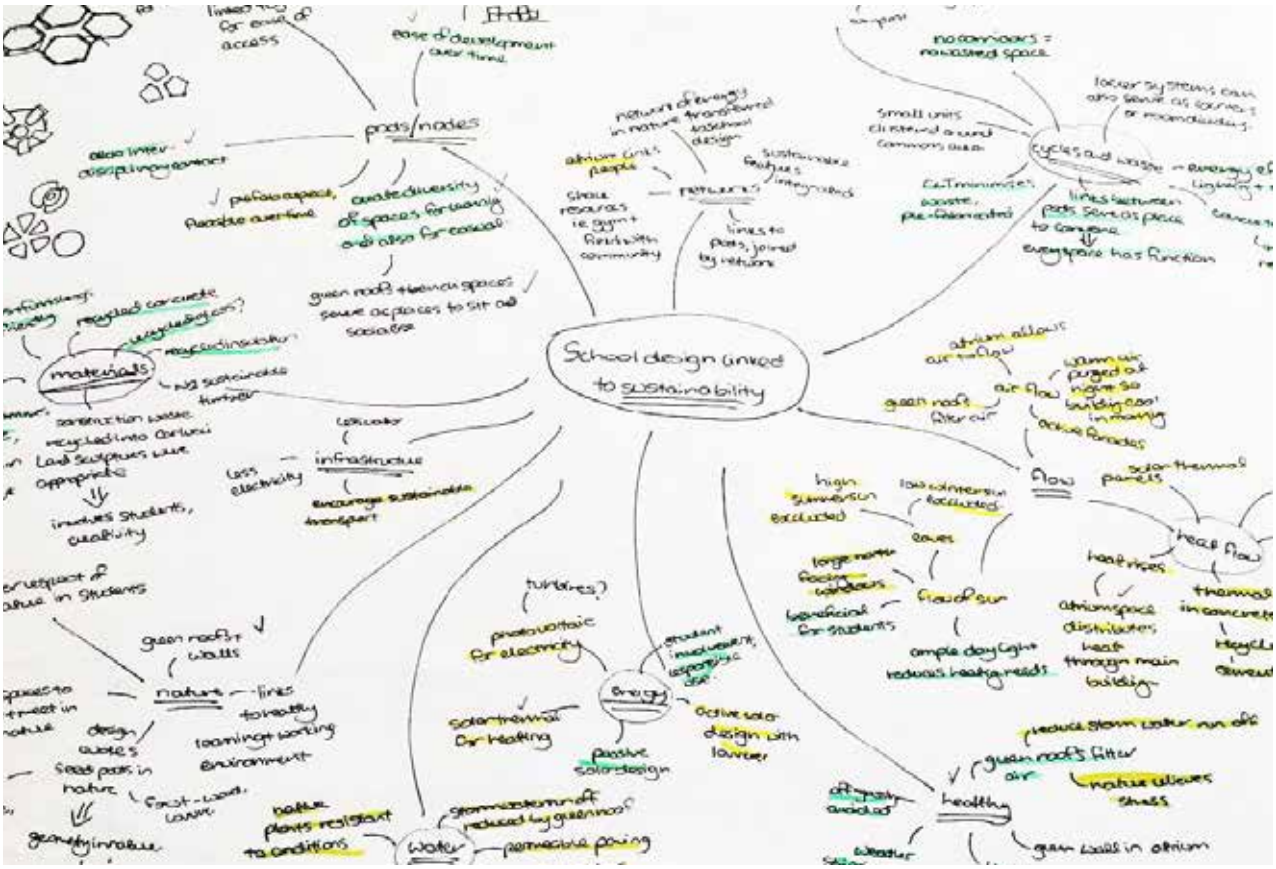
1. Why is it suitable or necessary for schools themselves to be made pioneering learning spaces for sustainable development?
Write down your best arguments.

2. Specify and discuss the aspects that were crucial for Nora to develop her own concept for an environmental school

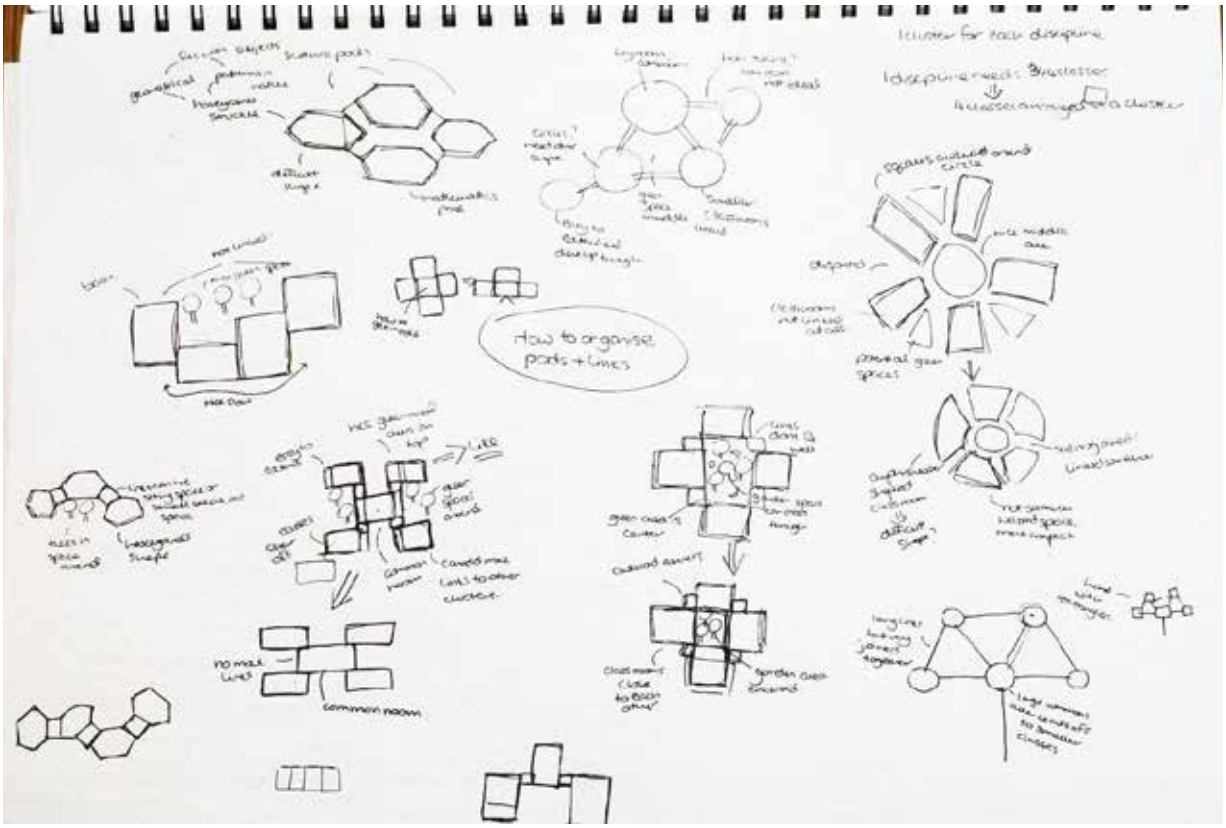
3. Basic concept and role models

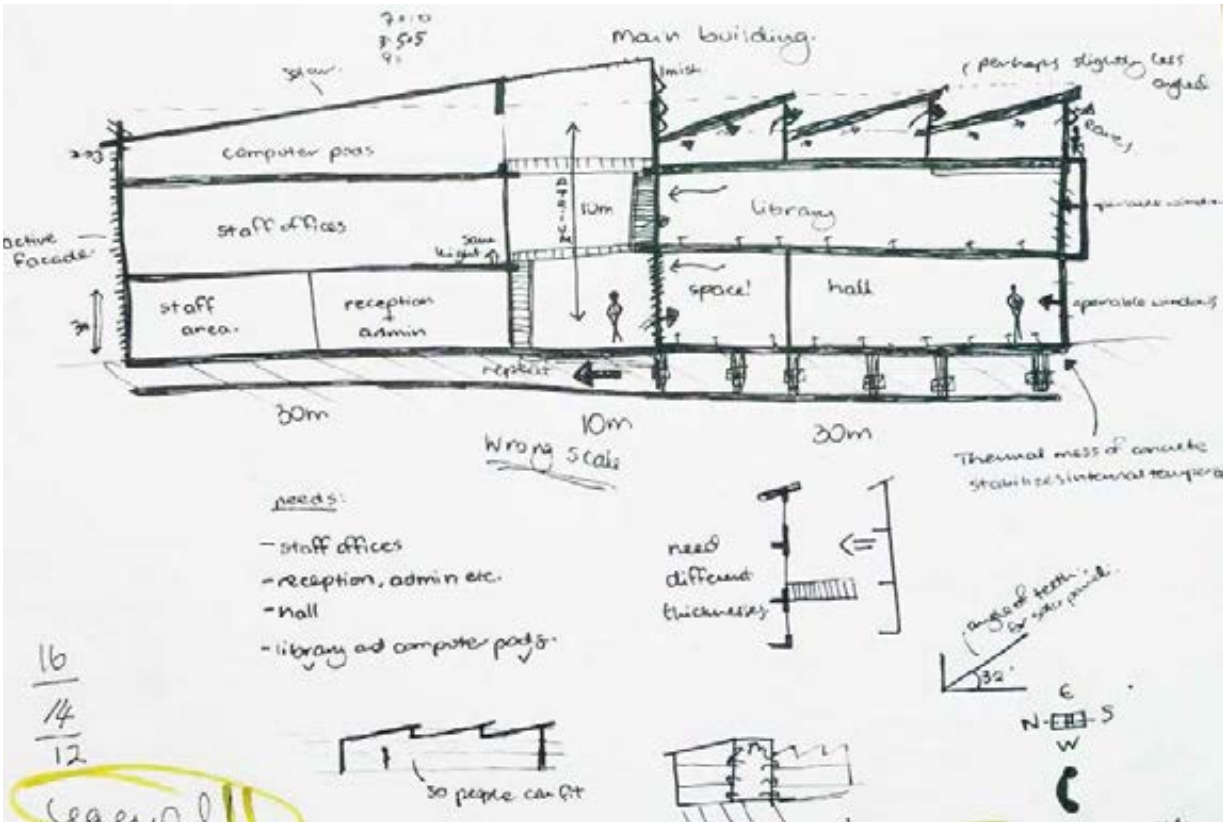
a) Develop the essential key points on which Nora bases her architectural model. Discuss this with each other.

b) Compare your ideas and her plans with Rudolph Steiner's ideas. Research this.



Noras brainstorming © Nora Guzu





Layout sketches © Nora Guzu

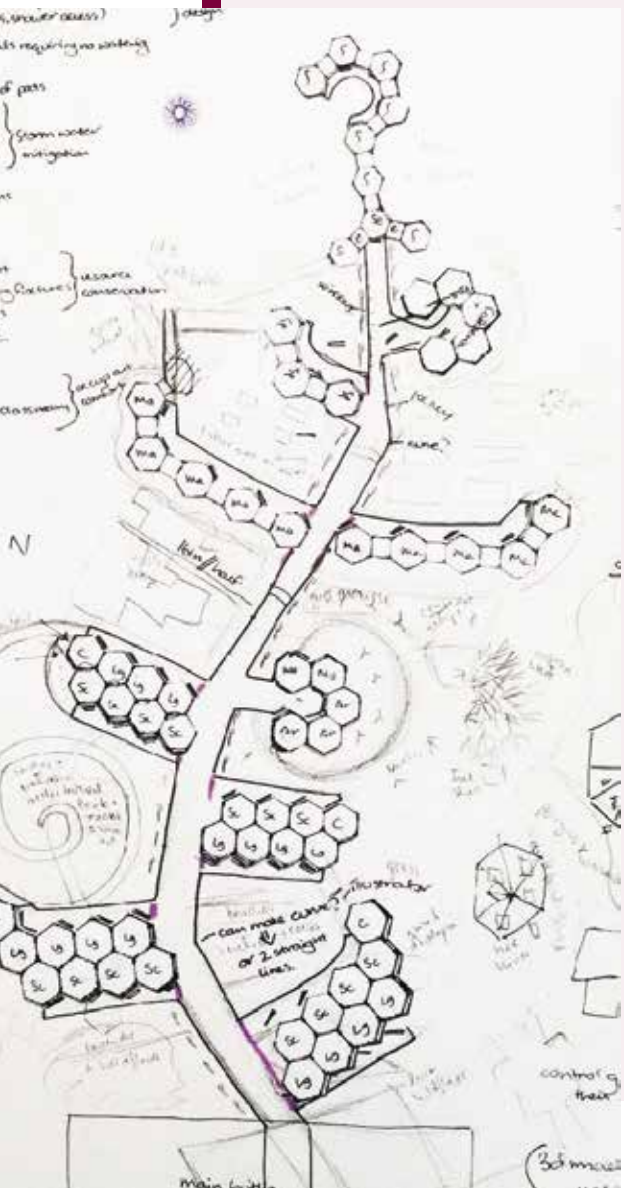
4. Obtain detailed information on the architectural style of Metabolism.

5. Her graphical boards provide additional information on the building site, the school grounds, the classrooms and the main building of her school of the future.

a) Using each board and the supplementary text passage to summarise her particular concerns and the unique points of her ideas.

b) Try to assess her highly complex vision of schools. What is striking to you? What aspect(s) do you immediately support.
Where do the problems lie in her plan and/or in its implementation?

6. You could take an active role in following along with the motto of "Our vision of a school of the future" in a variety of ways and should at least draw up a model of your ideas and your dreams of ideal learning spaces.



a) You could certainly express your ideas and desires on flyers, in an exhibition, on posters, as models, in short films, advertisements, interviews, short plays or other ways; you could also start and encourage a discussion. Your ideas can be based on the ability to improve and redesign existing premises so that you feel truly comfortable there.

b) Clear up any disruptive factors or obstacles present in your specific ideas in discussion with your school administrators, student council and representatives and believe in your vision. You will experience your successes together, both big and small, and have a lot of fun working on the design options for your ideas about the future.

c) You will always find supporters – including many teachers – and sponsors if you demonstrate your enthusiasm, community spirit and drive, but also your sense of reality.

d) Don't forget to evaluate your project and bring it to wider public attention.

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youthinkgreen Nepal

FUTURE AND IDEAS WORKSHOP – FROM *YOUTHINKGREEN'S* WORKSHOP

By Nadine Böttcher and Georgina Guillen-Hanson

Nishchhal Kharal and Monika Chaulagain (b. 1992) from Nepal can hardly believe it. They received first prize for their model of an eco-house from plastic waste, clay and string. Their ideas won a competition for socio-environmental innovations at their university. They are enjoying the recognition and encouragement of their professors and fellow students. Their journey was arduous but successful – because they formed a strong team and followed their vision. And it's precisely these important skills that we at youthinkgreen aim to promote with our ideas workshop. In this case, the journal entries of the two young people from Nepal serve as an excellent example and valuable inspiration.

When we organise and hold an ideas workshop for youth groups, we don't go into it aiming to achieve any specific results. On the contrary: Instead of ready-made answers, we come armed with many questions: What could motivate each young person to address sustainable lifestyles? How can they develop their own vision of a worthwhile socially and ecologically sustainable future? What group processes promote brainstorming and the implementation of a shared vision? And last but not least: How can we encourage them to transform their own visions into policy options and plans and implement these step by step?

This very open-ended approach to the ideas workshop is a process that, in our experience, has really proven itself and is one that we are therefore always happy to incorporate into our programmes and projects, such as "Climate ambassadors", the 1st World Youth Sustainability Summit, "Consumer transformation" or "Create your legacy". Curiosity and a thirst for knowledge, the question of how our future might look and the search for answers to these questions all shape our human existence. Symbolically speaking, we all have a little voice inside us constantly urging to question ourselves and our environment and to cast doubt on what already exists. It is this innate, irrepressible curiosity of people who are able to advance developments through countless hours of inspiration and hard, sweaty work as long as these are translated into actions, tests, projects, etc.

This curiosity, thirst for knowledge and creativity can be moulded into a tangible, com-

prehensible idea in the following steps, which can then be implemented as a project or campaign. Nishchhal and Monika from *youthinkgreen* Nepal express their motivation as follows: "We want to provide you with inspiration through our thoughts and ideas, to foster your ambition and the desire to make the world a better place – for all of us."

1. Building block: analyse the starting point/reality

Some **key questions** related to everyday issues, such as health, mobility, nutrition, communication, leisure time, housing, possessions, etc., which can be arranged according to importance and placed in different contexts, help us to describe the reality of our present lives. Using these **key questions,** we can later formulate our personal ideas for the future, discuss and exchange these ideas with others in the group and develop a common vision for the future on this basis.



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Key questions:

- What problems (social, environmental, economic) do I see?
- What bothers me and why?
- What do I like and should that remain in the future?

THOUGHTS
on this from Nishchhal and Monika from *youthinkgreen* Nepal – developing their vision of the "house of plastic bottles":

We grew up with this sense that we are poor. Whenever we see people with white skin and blond or brown hair, we get the impression that they must be happier than we are. Nepal has a lot to offer, especially for tourists: many large natural parks, pristine lakes, the birthplace of Buddha and Mount Everest. This makes us proud to be Nepali. But environmental protection and waste management are still stuck in their infancy here.

We first began to gather all the facts about plastic and its impact on our beloved nature. We'd like to share our primary findings with you:

Considerable consumption of polymers, which contain carbon, oxygen, nitrogen and sulphur, is required to produce a single plastic bottle. The use of plastic bottles is ubiquitous around the world due to low production costs. But because of its short life cycle and its extremely slow rate of decomposition, it is undeniable that the large amount produced has become a destructive force for the environment. Bottles that are not recycled either end up either in a landfill or out in nature. We want to change that.



© REUTERS/
Laurence Tan



First house worldwide built with PET-bottles in Honduras. It has a green roof and was only solidified with soil
©Andreas Froese, www.eco-tecnologia.com

2. Building block: Creating a vision

If we've analysed current real conditions, we should then look optimistically towards the future. In school we are often encouraged to be realists and think practically. Dreaming, crazy ideas and grand thinking often fall by the wayside, yet straightforward visions and the ability to think outside the box are important for bringing about effective change.

Of course, we are not recommending drafting a single plan for the entire world and wanting to turn everything on its head. Instead, your ideas should specifically address changes to your own town/city, your sport club, school or university. Before or directly after developing an idea, it is also useful to consider which overarching concepts or topics (e.g., housing, mobility, school, work, shopping, etc.) can be used to combine our many individual thoughts in order to analyse important correlations.

Asking ourselves how we imagine *our personal future* is a good way to jump into the workshop and incorporate all team members in the process from the start. It is especially helpful to address specific processes and situations from real life or the everyday world.

Key questions:

- What values do we want to reinvigorate, carry on or convey with our vision?
- What needs are met in a more sustainable way?
- What products and services do people need or consume and why?

THOUGHTS
on this from Nishchhal and Monika from *youthinkgreen* Nepal – developing their vision of the "house of plastic bottles":

We do not dream of following in the footsteps of industrial countries such as the US, for example, and simply take up their form of economic growth with all its negative consequences. We wanted to incorporate the protection of and respect for the natural world into our vision for the future. We wanted to do something that would allow the people who live below the poverty line to make their dreams a reality, for example, to one day to live in their own homes.

We did a lot of thinking and brainstorming to find out what different options and scenarios are out there. People say the world is becoming a global village, but, in our view, that is only partially true. Our aim was not to make our villages more global, but to shape them in a way that was more environmentally and socially sustainable. We had the idea to use plastic to build this kind of eco-village. Cool, isn't it?



© Kara M. Santos for IPS News



© A School for Community (ASC) Nepal

3. Building block: Build bridges

This step involves drawing up an action plan to bring our current reality in line with our vision for the future, or to combine the two. This action plan will help us to examine our vision from a more long-term perspective so the idea does not burst like a soap bubble at the first obstacle. It shows what changes must be made now so that our image of the future can soon be a reality.

Role playing offers an alternative to an action plan. Here, we take the perspective of different social actors and familiarise ourselves with their arguments and viewpoints. This method is ideal for identifying specific actions and supporters needed to realise this vision for the future.

Key questions:

- What are the biggest differences between today's reality and our vision for the future?
- What do I like about today's reality and would like to keep in future?
- What should be different in the future?
- Who can help us to achieve this vision, and what actions are required?

THOUGHTS
on this from Nishchhal and Monika from *youthinkgreen* Nepal – developing their vision of the "house of plastic bottles":

We could never have imagined how destructive our behaviour ultimately is when we use plastic bottles (and even pay money for them), which then end up in the sea.

We thought about what how we could reuse plastic bottles. And we suddenly came up with the idea of building a house out of plastic bottles. We started by doing research online. There, we found an existing concept for a plastic bottle house. This concept was developed by Andreas Froese, a German architect and an environmental entrepreneur. He travelled to Latin America, but also Africa and India, to work on some 60 projects with his company, Eco-Tec.

He built a dozen homes as well as several water tanks. So we weren't alone in our idea; on the contrary, they seemed very promising. We were inspired by his concept and wanted to implement this in Nepal.



2000 l Water tank in shell
©Andreas Froese, www.eco-tecnologia.com

OUR AUTHORS



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Nadine Böttcher (*1986) and Georgina Guillen-Hanson (*1979) run workshops at and organise youth meetings at *youthinkgreen*. They develop new projects for sustainable development and coach youth groups in further developing and implementing their ideas.



4. Building block: Define an idea prioritise options for taking action

The **key questions** for the last step are:
- What would I like to do?
- What am I motivated by?
- What do I consider to be a labour of love?

Once we figure out what issue to focus on, it is important to prioritise specific actions and any relevant social actors so that it is clear to all involved what the starting point is and what specific expectations are linked to these campaigns. It's essentially a matter of outlining how to implement the idea so that even the smallest details can be scrutinised in turn. In doing so, we need to answer the following questions:

- What would I like to do? Describe your idea/ mission in five sentences.
- Why would I want to do that? This is about personal motivation, as well as to the need to focus on the issue.

Based on these two questions, we can develop a coherent and flexible implementation plan (project plan) with short-, medium- and long-term goals. In addition, we need to define actions by priority (high, medium and low importance), determine responsibilities and develop criteria against which to measure how we realise things. If you want to make your idea a reality, go through the project workshop in Topic 2 now.



Picture material: YTG Nepal





THOUGHTS
on this from Nishchhal and Monika from *youthinkgreen* Nepal – developing their vision of the "house of plastic bottles":

What is the difference between a plastic house and a normal building? The principle of the plastic house is to fill empty bottles with soil, sand or debris and to connect them with a durable string or cord. This is then coated with mud or mortar. A small house can be built using 10,000 bottles – bottles that would otherwise end up in the bin or being burnt. In Nepal, plastic bottles are very common in areas where tap water is not clean enough for drinking, particularly at conferences, parties and gatherings. In contrast to conventional brick walls, walls made out of plastic bottles do not cause deforestation or CO_2 emissions. The sound and thermal insulation is good. There is space for electrical lines without having to drill slots into the masonry. The plastic makes these "bottle bricks" more flexible, meaning walls do not collapse in earthquakes. But they are still so strong that they are bulletproof.

A building made of plastic bottles is cheaper than a building made of bricks since the main material is a waste product. The design is easy to learn, and you can build without needing any equipment. It can earn the builders an income. In any case, there is no recycling in Nepal so you get the bottles for free. The other materials, such as red mud, straw and bamboo, are cheaper than cement and bricks in rural areas. No professional engineers or construction workers are needed because the community is actively involved and helps. If we think about the benefits of plastic houses, we imagine that we are gradually kitting out our country with eco-villages in order to protect the environment and to achieve a better standard of living for the marginalised population. We would be so delighted if we could find additional allies, supporters and emulators for our idea of eco-villages with plastic bottle houses in rural Nepal; after all, no one can tackle projects as large as this alone.







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And this is no longer just a daydream for Monika and Nishchhal. They began implementing their idea by presenting their model of a plastic house at an SET (social, environmental and technology) programme exhibition organised by St. Xavier College. And to their surprise, they even won the programme's competition and met with employees from non-governmental organisation ASC ("A School for Community"), who wanted to implement a very similar project in rural Nepal (Pharping) but using glass bottles instead since these are also normally thrown away in Nepal and not recycled. Have a look at the pictures and see what can come out of a simple idea over time: a community and learning centre for the residents of Pharping!

INFO: A SHORT GUIDE FOR THOSE WHO WANT TO EMULATE THIS – WHAT WE NEED:

- Empty **PET bottles**: Some 500 trillion are produced every year worldwide, and, according to studies conducted by the United Nations, most end up in the sea at some point. Any size bottle can be used.
- A **funnel**. We can make a funnel by cutting the bottom off of a PET bottle.
- A **stick** to pack down dirt; this can also be a piece of **pipe** or construction steel.
- Dirt or sieved **rubble** for filling.

Amount of time needed: about three minutes for a two-litre bottle. A house with 60 square metres of living space and a water tank requires around 6,000 bottles. That means 300 man hours, or 7.5 weeks of work for one person, given a 40-hour week.

www.meingruenerpunktblog.de/vom-mullproblem-zum-mauerersatz-pet-flaschen-als-baumaterial/



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MORE THAN TOMORROW'S MUSIC – COURAGE TO ACT: OUR *YOUTHINKGREEN* SONG

Under the motto "Courage to act", more than 170 young climate ambassadors from 30 countries presented to the public youthinkgreen's various activities as well as their own environmental and sustainability initiatives at the 1st World Youth Sustainability Summit at the Allianz Forum in Berlin on 16 May 2013.
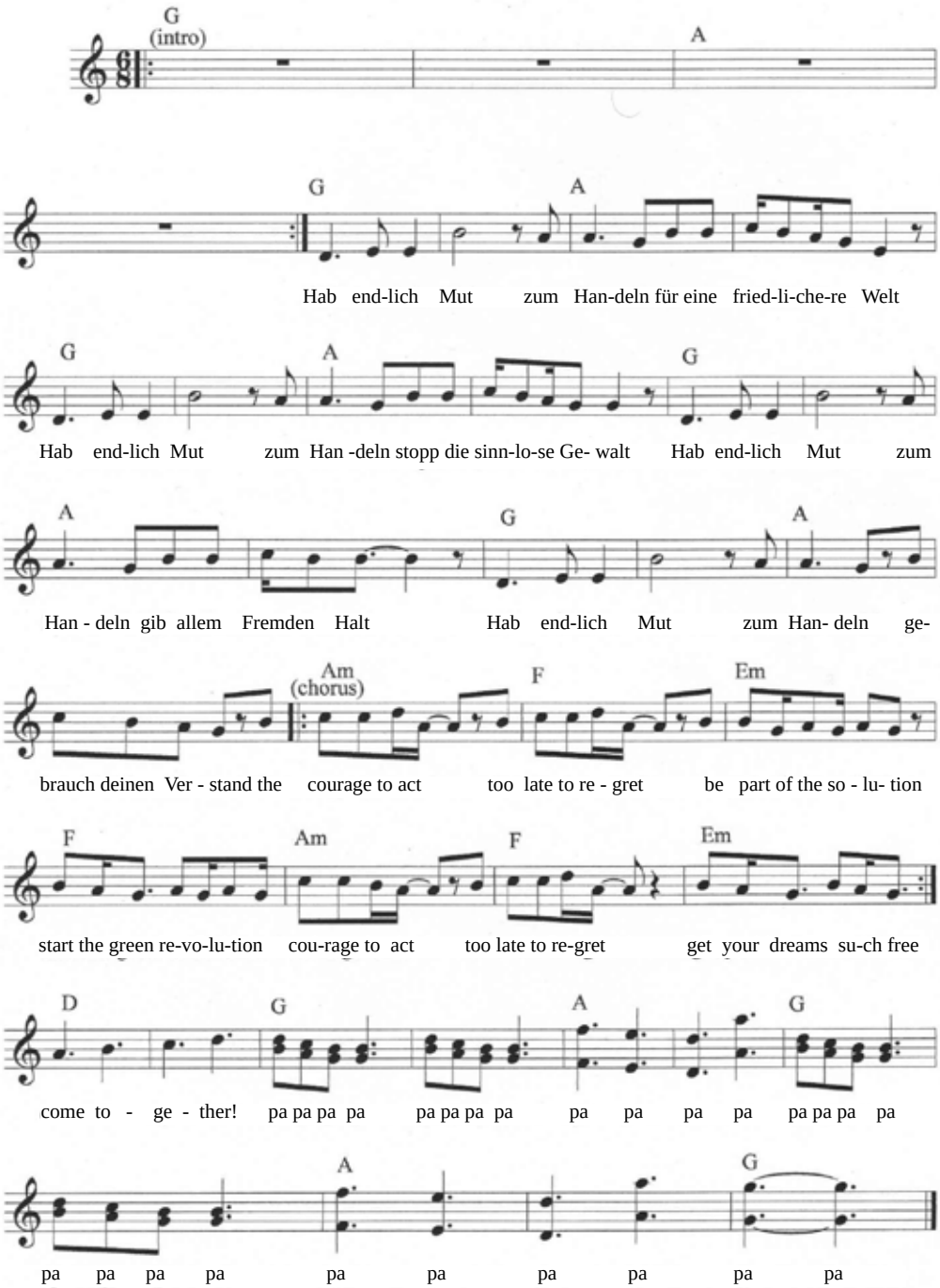
In an exceptional multimedia revue, which included short presentations, film clips, sketches, music, welcoming speeches and interviews – they provided deep insight into their diverse and global commitment. One emotional highlight was the song "Courage to Act". The young people composed the song under the guidance of Daniel Arruda. They had arrived with the basis for the lyrics – their thoughts, hopes and desires – in verse form in their respective native languages.

You can also find the documentary film online (https://vimeo.com/75848065).



Courage

Daniel Arruda



The courage to act
Soon late too regret
Be part of the solution
Start the green revolution

The courage to act
Soon late to regret
Live your dream
Let's think green
Come Together!

Englisch	Deutsch	Original
Let us talk. There is still a chance to help our land. Even if they say we are wrong, the fault is theirs!	Lasst uns reden. Es gibt immer noch eine Chance, unserem Land wirklich zu helfen. Auch wenn sie sagen, es sei falsch, dann ist es ihre Schuld!	Tupoyeni Opunethimbo Loku kwatherilebu Nando taati otwapuka Epukoolawo (Namibia)
Act today because tomorrow it's too late. The earth is ours and needs our help. Act today, whatever that is. We are going to bring back even the last hope!	Handelt heute, denn morgen ist es zu spät. Die Erde gehört uns und braucht unsere Hilfe. Handelt heute, wie auch immer es aussieht. Wir werden der Jugend die Hoffnung zurückgeben.	Vepro sot, se neser eshte vone, Torka eshte jona, kerkon ndihmen tone Vepro sot, çfaredo qe te jete Do ta rikthejme dhe te me voglen shprese (Kosovo)
The change is only possible with you if you have thought of sustainabie development Youth, oh youth awake! »We« for change!	Eine Veränderung ist nur möglich mit dir, wenn du den Gedanken der nachhaltigen Entwicklung trägst. Jugend, hey Jugend, wach auf! »Wir« für die Veränderung!	Pariwartan timibataie Samvawa cha yaha Digo bikashko chintan cha jaha Yuwa, hey yuwa uutha aaja bata Parewartan ka lagiee hami (Nepal)
It's not about doing less Life's about doing more It's time to take action It's our world we're standing for!	Es geht nicht darum weniger zu tun, im Leben geht es darum mehr zu machen. Es ist Zeit zu handeln, wir verkörpern unsere Welt!	It's not about doing less Life's about doing more It's time to take action It's our world we're standing for! (USA)
Enlighten the dream Achieve the wish Open the wings It might be crazy, but doesn't matter sing together:	Mach dir einen Traum, versuche deinen Wunsch zu erlangen, öffne die Flügel. Das könnte vielleicht verückt klingen, aber das ist egal: Wir singen zusammen!	点亮梦想 放飞希望 展开翅膀 也许疯狂 那又怎样 一起歌唱 (China)
Let's change, we are the generation that will change something The change lies in our hands, let's do it without delay!	Lasst uns etwas verändern, wir sind die Generation, die etwas schafft! Der Wandel liegt in unseren Händen, lasst ihn uns ohne Verzögerung anpacken!	Yalla bina neghayar, ehna gil el taghyir يلا بنا نغير ، احنا جيل التغيير Fe edena neghayar ktir, yalla men gher taakhir في يدنا نغير كتير، يلا من غير تأخير (Ägypten)

List of keywords

Keywords **Pages, f. = following**

Accountability . . . . . 137, 243, 314, 318, 384 f., 417
Addis Abeba 385, 631
Additives 495
Affluent society 484
Agenda 21 . . . . . 155, 241, 626
Agrarian Services, -Industrie 243, 288
Agriculture, ecological 61, 491
Agrofuels . . . . . 288 f.
Airport, -travel, -plane 284, 466, 410
Alga . . . . . 349 f., 491
Allergies 488
Amsterdam . . . . . 460 f.
Andes 167, 248
Animal keeping . . . . . 42, 490 f.
Animal tracks . . . . . 274 f.
Antarctic . . . . . 309, 355 f., 363, 552
Anti-nuclear power-movement 434
Anti-discrimination 37
Approach to sustainability 241
Architecture . . . . . 461, 641 f.
Arctic . . . . . 307, 309, 355 f., 370
Argentina . . . . . 321, 337 f.
Aridification 57
Artistic activity 155
Asylum, asylum politics and rights . . . . . 370, 385, 390 f.
Australia 265, 337, 556
Austria . . . . . 77, 416 f.
Autonomy . . . . . 242 f., 525
Battery . . . . . 507, 509 f.
Bees 283, 645
Bike-Bus . . . . . 187 f.
Biodiversity 139, 246, 252, 350, 469, 490
Biological oxygen demand 596
Bolivia . . . . . 232, 248 f., 339
Boulevardisation 291
Brasília . . . . . 478 f.
Brazil . . . . . 253, 320 f., 442 f., 500, 511, 518
BRICS-States 442
Building, sustainable . . . . . 458 f., 586, 641 f.
Bulgaria . . . . . 51, 162 f.
Business administration 283, 417
Campaign . . . . . 24 f., 314, 389 f., 436 f., 452, 605
Canada 355, 358, 361, 448
Capitalism . . . . . 24, 256, 370 f., 398 f., 525 f.
Car, automobilindustry . . . . . 131, 157 f., 289, 315, 429, 466 f., 478 f., 527, 574 f.
Carbon black 283, 427
Carbondioxide . . . . . 159 f., 283, 288, 349 f., 425, 449 f.
Carbon storage 365
Carsharing . . . . . 142, 144, 159 f., 410, 468 f., 498, 501, 502, 518, 527
Catastrophe . . . . . 204, 211 f., 243, 268, 286, 307, 371, 548, 551, 571 f., 631
Cattle . . . . . 42, 321 f., 496
Change (see also "Changemaker") . . . . . 522 f., 531 f., 655 f.
Changemaker . . . . . 22 f.
Change, social/transformative . . . . . 530 f.
Chemikals 441, 448, 585
Chernobyl 434, 582
Children's Rights convention 376
China . . . . . 448 f., 425 f., 440 f., 506 f., 553, 556, 575, 586
City, -development, -planning . . . . . 461, 478 f., 527
City walk, critical of consumption 521
Civic participation, citizen's decision 140, 435
Civil pacts 376
Clearing 42, 168, 288, 307, 328, 490
Climate ambassador . . . . . 50, 91, 101, 106 f., 167, 210 f., 433, 653, 661
Climate conference . . . . . 31, 100 f., 143, 147 f., 367, 383 f., 448, 629
Climate consquences, -research . . . . . 230, 309 f.
Climate justice . . . . . 366 f., 382 f.
Climate policy, international . . . . . 54 f., 105, 378 f., 443, 615
Climate protection, -measurments . . . . . 105 f., 367, 627
Climate refugee . . . . . 117, 358, 367 f., 388 f., 391
Closed loop recycling management 262, 404
Club of Rome 23, 234, 559
CO_2-emissions (see also "Carbon dioxide") . . . . . 40 f., 454, 429
Coal, coal-fired power station . . 173, 235, 311 f., 424 f., 440 f., 557, 563, 617
Collapse 23, 231, 551
Colonialism/colonist 250, 370
Columbia . . . . . 116 f., 126 f., 132, 617
Commitment, social 20, 95, 172
Common property 341
Common welfare economy 399, 423
Communication, non-violent/intercultural 37, 550. 576
Community garden . . . . . 181, 411, 592, 620 f.
Concern . . . . . 243, 292, 307, 335, 370, 425, 484 f., 518, 564, 596
Conference of Parties (COP) 57
Conference of Youth (COY) 57
Constitutional law 417
Consumption, alternative/collaborative . . . . . 177, 190 f., 498 f.
Cooking . . . . . 328 f., 484 f.
Copenhagen 315, 449
Coral, bleaching . . . . . 307, 345 f., 552
Cosmetics 182, 188
Couchsurfing 518
Crime 137, 291, 371
Criticism of power 36
Cuba 401, 407, 587
Cultural pessimism, change 522, 525
Dam . . . . . 252, 320 f., 594
Damaraland . . . . . 144 f.
Dam, hydroelectrical 377, 597
DBJR (German Federal Youth Council) 390, 392
Decarbonization 427
Deforestation (see also "uprooting") 42, 168, 327, 329, 448
Deregulation 370
Desalination plant 553, 556
Desertec . . . . . 558 f.
Desertification 448
Development cooperation 366
Digitalisation 20, 409, 564
Digital Mapping 159
Divestment 314

Documentary . . . . . 60 f., 77 f., 292
Doha . . . . . 56 f., 100 f., 150
Downsizing 463, 476
Drinking water . . . . . 168 f., 333 f., 370, 490, 564, 599
Dublin principles 340
Earth Overshoot Day 399
Earth's limit 23, 402
Eco house, green electricity, eco-system . . . . 22, 51, 240 f., 306 f., 349f., 363 f., 399, 424 f., 437 f., 451 f., 493, 518, 524, 563, 629
Eco-socialism . . . . . 526 f.
Ecuador . . . . . 232, 249 f.
Education, education system . . . . . 47, 626 f.
Efficiency house plus (see also "Plus energy architecture") . . . . . 461 f.
Egypt . . . . . 93, 112, 116, 172 f., 225
Election right . . . . . 20, 24 f., 431
Electricity . . . . . 45, 173, 434 f., 558, 581
Electricity (save) . . . . . 34 f., 43 f., 175, 292 f., 321, 425 f., 434 f., 456 f., 509, 558 f., 582 f.
Empowerment 370
Energy carrier, fossil . . . . . 139, 270, 310, 367, 424 f., 440
Energy demand, -efficiency, -concern, -security -saving lamp, -consumption . . . . . 35, 359, 425, 459, 240 f., 329, 426, 434, 440 f., 459, 461, 468, 473, 582, 584, 587, 284, 353, 402, 425, 463, 616
Energy law, feed-in law 236
Energy transition 424-455
Environmental movement . . . . . 553, 583 f., 588 f.
Environment commercial . . . . . 201 f.
Erosion 260, 349, 358, 449, 551, 574, 645
Escape . . . . . 117, 130, 137, 358, 367, 368 f., 389 f.
Ethiopia . . . . . 375 f., 385, 631 535 f., 592, 614, 621, 654
Etiquette manual for the forest 268
European Union 391, 459, 606, 608
Exchange platform, -party 90, 34, 164
Export markets 443, 445
Fairtrade 94
Farms 59, 493, 527
Federal Government Germany 32, 51, 148, 231, 240, 312, 389, 391, 425, 430, 582, 608
Fertilizer 289, 335, 353
Film industry 548, 551
Financial market 243, 307
Fine dust 283, 449
Finished products 492
Flavor enhancer, flavor memory . . . . . 42, 124, 487, 494 f.
Flight from the land 117, 130
Fluorchlorinated hydrocarbons 356
Food . . . . . 22, 35, 124, 196, 243, 449 f., 487 f., 552
Foodcooperative (Food-Coop) 35, 497
Food, food chain, food scarcity . . . . . 42, 230, 277, 284, 288, 307, 347 f., 375 f., 411, 449 f., 484 f., 551 f., 623
Footprint, ecological . . . . . 34 f.
Forestry . . . . . 266 f.
Fracking (see also "Shale gas") . . . . . 441, 470, 440 f.
Free market economy . . . . . 416 f., 422
Free rider, free rider attitude 284
Freiburg . . . . . 581 f.
Fresh water . . . . . 230, 307, 335, 551 f.
Fruits . . . . . 50, 170, 335, 402, 487 f., 591, 614, 620 f., 645
Fuelwood . . . . . 270 f., 328
Fukushima 312, 439, 582
Full employment 412
Future, -questions, -tax, -trends . . . . . 234 f., 240 f., 416 f., 551 f., 563 f., 571 f., 574 f., 641 f., 653 f., 661 f.
Ganges . . . . . 595 f., 600
Gender justice 37
Generation justice 20, 22, 25, 628
Generation Y . . . . . 20, 574 f.
Geodata 278
Geo-Engineering 353
Give-Box 178, 180
GIZ 56, 159, 175
Global Footprint Network 284, 408
Global Governance 371
Globalisation, critics 29, 59, 114, 137, 147, 164, 283, 306, 572, 623
Global learning 271, 629, 632
Great Barrier Reef 310
Green Economy 377, 399
Green Growth 399
Greenhouse gas . . . . . 349, 368, 425, 440 f.
Greenland 310, 357, 360, 363
Green thread . . . . . 97 f.
Green-Washing 295
Ground water level 335, 553, 593
Growth transition . . . . . 524, 526 f., 529
Hand Print . . . . . 120 f., 178, 633
Hanoi . . . . . 130 f.
HDI (Human Development Index) 401
Heatwaves 309, 366, 376, 392
Help for self-help . . . . . 328 f.
Hollywood 548, 551, 559
Human rights, violation of human rights 333, 335, 343, 377, 380
Hybrid seeds 491
Hygiene 599
Ice sheet, ice melting . . . . . 168, 235, 308 f., 357 f., 552, 563
Idea of man 298, 419
ILO-convention 338
IMF (International Monetary Fund) 250
Inclusion 37, 385
India . . . . . 91, 102. 116, 142, 149, 442 f., 591, 593 f.
Indigenous people/culture . . . . . 168, 249 f., 307, 320 f., 337 f., 340 f., 361, 376 f., 513
Individual traffic . . . . . 131 f., 467 f., 473, 482, 531
Infrastructure . . . . . 35, 140, 386, 429, 448, 466, 471 f., 479, 527, 595
Innovations, social 400, 527
Innuit 357, 360, 370
Interest system 525
Interview as a mean of research . . . . . 63 f., 70 f.
Insular state . . . . . 368, 375 f.
Investment, security . . . . . 377, 387, 424, 427 f., 443, 450, 558 f., 593
Irrigation technics 556
Israel . . . . . 598, 614 f.
Italy 181, 219, 350, 417, 558
Journalism (see also "Media") . . . . . 60 f., 76, 84, 291 f.
Jute . . . . . 153 f., 607
Kenia . . . . . 29 f., 327 f.
Kigali . . . . . 591, 605 f.
Kuznets-Curve . . . . . 402 f., 408
Kyoto-protocol 57, 110, 384

Land rights 251, 377
Land, -use, -grabbing 342, 490
Learning culture, enjoyment of learning . . . . . 423, 636 f., 523, 542
LED 285, 347, 559
Legal system . . . . . 252, 257, 376 f.
Lifestyle . . . . . .22, 43 f., 120 f., 230 f., 298 f., 409 f., 458 f., 575 f., 615 f.
Lima . . . . . 102, 116, 167 f.
Lime . . . . . 272, 275 f., 349 f.
Lithium . . . . . 337 f., 474, 510
Living . . . . . 129, 170, 262, 427, 429, 456 f., 460, 462, 464, 479, 484, 507, 586, 590, 615, 655
Local public transportation . . . . . 132, 467 f., 587 f.
LOHAS 240
Malnutrition 376
Management culture, transformative . . . . . 383 f.
Maori 643
Meat consumption 50, 57, 279, 284, 322
Media law 77
Media, quality media . . . . . 201 f., 282 f., 291, 68
Medicinal spring 262
Mentality 196, 525, 622
Metabolism 642, 652
Metals . . . . . 474, 510 f.
Mexico . . . . . 40 f., 44, 587
Micro-alga (so-called Zooxanthellae) 349
Micro biogas plant 329, 331
Migration . . . . . 389 f., 566
Milk 59, 487, 494
Millennium Development Goals (MDG) 340
Minerals . . . . . 339, 347 f., 360
Mining . . . . . 137, 335 f., 406, 511
Mobility (see also "Traffic") . . . . . 157 f., 466 f., 478 f., 574 f.
Modernisation, ecological . . . . . 119, 399 f., 526
Monoculture 276
Monsoon 310, 596
Mud flats . . . . . 364 f.
Mushrooms 261, 268
Music . . . . . 48, 121, 124, 197, 506, 523, 538 f., 661 f.
Mykorrhizae 261
Namibia . . . . . 54 f., 88, 90, 109 f., 123 f., 141
Nation-state . . . . . 370 f., 384, 572
Naturopathy . . . . . 262 f.
Needs, material and immaterial . . . . . 20, 24, 37, 114, 241 f., 246, 341, 375, 385, 398, 522 f., 636
Neoliberalism . . . . . 250 f., 257, 370
Nepal . . . . . 653 f.
Networking . . . . . 97 f., 481, 499, 572
Neurology 51, 411
New Zealand . . . . . 484, 559, 592, 620 f., 641
North-West-Passage 357
Nuclear energy, power . . . . . 25, 140, 321, 425 f., 434 f., 582 f.
Nutrition . . . . . 137, 370 f., 417, 429, 453, 486 f.,
Ocean, ocean acidification . . . . . 40 f., 57, 307 f., 344 f., 349 f., 355 f.
Olivine . . . . . 352 f.
Omo Valley . . . . . 377 f.
Osnabrück . . . . . 50, 90 f., 106 f., 142, 148 f., 152 f., 271 f., 284, 430
Overcompensation 525
Overexploitation of the environment 518
Overfishing 137, 306
Ozone 356
Pachamama . . . . . 41, 251 f.
Package, package-free . . . . . 45, 409 f., 499, 607 f.
Palm oil 288, 496
Parabolic mirror 357
Path dependency . . . . . 311 f.
Peak Oil . . . . . 399, 469 f.
Peasants . . . . . 64, 320, 333, 385 f.
Permaculture . . . . . 44 , 591 f., 614, 645
Permafrost soil 358
Peru . . . . . 64, 167 f., 491
Pesticide . . . . . 289, 335, 449, 490 f., 559
PETA 42, 252
Petroleum dependency . . . . . .143. 152, 188, 252, 284, 314, 361, 370, 467 f., 557, 585, 622
Petroleum gas 143, 314, 360, 453
Pharmaceuticals 262
Phobia . . . . . 551 f.
Photovoltaic . . . . . 55 f., 410, 434, 451 f., 582 f.
pH value . . . . . 272, 276, 347 f.
Phytoplankton 350
Pioneer plant . . . . . 260 f.
Planned economy 130, 416, 422
Plant identification 266
Plants (see also "Reforestation") . . . . . 315, 322, 330, 431, 491, 620 f.
Plastic 152, 263, 329, 610
Plastic bag . . . . . 152 f., 203 f., 591, 603, 606 f.
Plus energy architecture (see also "Efficiency House Plus") . . . . . 586 f.
Polar bear 21, 357
Polar region . . . . . 307, 355 f.
Pollution of the air, (see also "Smog") 383, 426, 441, 450
Population growth 243, 557, 564
Post growth, -society . . . . . 34 f., 399, 409 f., 522 f.
Poverty, poverty reduction . . . . . .37, 56, 136, 170, 232, 242, 246, 250, 252, 256, 327 f., 371, 385, 390, 470, 474, 551, 597, 656
Privatisation . . . . . 307, 333 f., 342, 370
Products, regional 45
Project management . . . . . 92, 100, 180 f., 311
Prosperity . . . . . 235, 250, 366, 398, 401 f., 475, 478, 514 f., 526, 565, 585
Purification plant 553, 593, 596
Qatar . . . . . 57, 101 f., 106, 143, 150
Rainforest (see also "Deforestation") . . . . . 42, 167 f., 249 f., 306 f., 320 f., 479, 484, 490, 513 f.
Rain, harvest . . . . . 60, 90, 169, 276 f., 309, 327 f., 341, 352, 553, 556, 594 f., 603, 615 f.
Rare soils . . . . . 510 f.
Raw fruit and vegetables 42, 45
Real estate, industry 412, 426, 456,
Rebound-Effect . . . . . 405 f., 499 f.
Recycling . . . . . 117, 142, 155, 172 f., 180, 188, 404 f., 459 f., 510 f., 559, 606 f., 643 f., 654, 659
Reforestation . . . . . 28 f., 519
Renewable energies . . . . . 137, 174, 235 f., 377, 425, 427, 437 f., 447, 448 f., 582, 591, 617, 622
Renouncement . . . . . 40 f., 152, 155 f., 449, 484, 516 f., 531, 615 f.
Repair . . . . . 178, 356, 411 f., 480, 498, 513 f.
Research methods 66, 69
Resource productivity . . . . . 402 f., 499
Responsibility, humanitarian 391

Reutilisation 411, 460
Revolution . . . . . 165, 311, 370 f., 399, 436, 448 f., 565, 569 f., 581, 621 f., 663
Rights of nature . . . . . 116, 138, 251 f.
Rio de Janeiro . . . . . 97, 107, 112, 217, 237 f., 311, 442, 582, 626
Rio+20-conference 97, 107, 237
Risk and uncertainty society 525
Rubbish (see also "Waste") . . . . 35, 45, 50, 100 f., 117 f., 142, 151 f., 188, 300, 552, 583, 594 f., 607 f., 638, 653 f.
Rule of law 387
Russia . . . . . 361, 370, 425, 442 f.
Rwanda . . . . . 153 f., 591, 603 f.
Salt desert and salt lake . . . . . 169, 307, 337 f., 553, 556
Sanitary provision (see also "Toilets") . . . . . 333, 340 f., 599 f.
Saudi-Arabia 556, 559
Schönau . . . . . 292, 426434 f.
School building (see also "Architecture") 464, 645, 647, 649
School partnership 332, 455
School system 258, 636, 639
Screenplay . . . . . 201 f.
Sea level 234, 308, 358, 366, 375, 406, 629
Seeds . . . . . 490 f.
Self-sufficiency . . . . . 409 f., 461, 527, 592, 620 f.
Settlement policy 456
Shale gas (see also "Fracking") . . . . . 440 f.
Shanghai . . . . . 358, 425, 451 f.
Share . . . . . 199, 256 f., 329 f., 498 f., 519 f., 621 f.
Sharing Economy 500
Ship traffic . . . . . 320, 355 f., 460 f., 471 f.
Silent Climate Parade 24
Smart City 471
SMART-criteria 185
Smartphone . . . . . 35, 225, 409, 429, 468, 484, 506 f., 525 f.
Smog (see also "Fine dust") . . . . . 448 f.
Social pact . . . . . 376 f.
Social policy 251, 412
Social psychology . . . . . 523 f.
Software 499, 511, 647
Soil quality, resources (see also "rare soils") . . . . . 48, 169, 260 f., 272, 275 f., 389, 488, 490 f., 552
Solarenergy, -burner . . . . . 56, 213, 235, 312, 462, 557 f., 585, 617
Solidarity . . . . . 138, 237, 299 f., 371, 416
South Africa . . . . . 24, 58, 379, 442 f., 617
South Korea . . . . . 337, 506 f.
Sovereignty . . . . . 490 f., 527
Soy . . . . . 321 f., 490
Spring bloomers 267
States, plurinational 251
Storytelling . . . . . 60 f., 292
Stratosphere 356
Student company 415, 483
Sub-Saharan-Africa 557
Subsistence, economy . . . . . 377, 411 f., 168
Sufficiency . . . . . 410 f., 527
Sun . . . . . 169, 175, 235, 262, 350 f., 424, 448 f., 451, 557 f., 617
Supply reliability . . . . . 424, 442 f.
Symbols, worldwide connecting . . . . . 97 f.
System changeover 526
Tax reform, ecological 405
Teambuilding 183
Technology, -transfer . . . . . 443 f., 165 f., 234, 409, 551 f., 574 f., 584
Tel Aviv . . . . . 591, 614 f.
Teutoburg Forest . . . . . 273 f.
Theater . . . . . 162 f., 302
Thibault, Anatole François 521
Timetable 67, 185, 443
Tipping element 310
Toilets (see also "Sanitary provision") 556, 599
Traffic policy, -system (see also "Mobility") . . . . . 130 f., 157 f., 288 f., 456 f., 466 f., 587 f.
Transformation, socio-ecological . . . . . 95, 36 f., 312
Transitional Justice 385
Transition-Town . . . . . 412, 527, 592, 620 f.
Transport . . . . . 157 f., 428 f.
Tree of Hope (see also "Symbols") . . . . . 97 f., 141 f., 626 f.
Tree species . . . . . 258 f., 266 f.
Two-degree mark 298, 311, 315
Typhoon 309
Uganda . . . . . 382, 608 f.
UN . . . . . 24 f., 105 f., 150 f., 341 f., 383 f., 448 f., 631 f.
UNESCO 365, 419, 631
United Arab Emirates 556
United Nations . . . . . siehe UN
Upcycling 411, 518
Urbanisation . . . . . 137, 440, 456, 552, 593 f.
USA (United States of America) . . . . . 116, 250, 321 f., 361, 402 f., 440 f., 452 f., 501 f.
Utopia . . . . . 34 f., 563, 566
Value-added, -chain, -process 241
Vegan, veganism . . . . . 41 ., 491, 567, 615 f.
Vietnam 130, 583
Voluntary service 331
Wales 456, 459
Waste . . . . . 45, 50, 142 f., 153, 188 f., 300, 404, 409 f., 499, 593 f., 606 f., 653 f.
Waste water . . . . . 341, 404, 448 f., 556, 593 f.
Water circulation 645
Water, -scarcity, -robbery . . . . . 167 f.
Water, virtual 335, 343
WBGU (German Advisory Council on Global Change) . . . . . 95, 312, 314 f., 319, 353
Weather events, extreme 307, 375, 376, 382, 391
Wind energy 60, 312, 582
Windhoek . . . . . 54 f., 109 f., 116, 144, 149, 151, 157 f., 201 f.
Wind power 424, 451
Wood (as renewable raw material) . . . . . 64, 232, 262, 266 f., 270 f., 277 f., 429
Wood harvest (see also "Fuelwood") . . . . . 266 f., 323
Work condition and places, Work productivity . . . . . 417, 484, 508 f., 531, 405 f.
Workshop, screenplay-, project-, ideas-, writing- . . . . . 61, 65 f., 68, 84 f., 192 f., 196, 224, 562, 639, 653, 655
World Citizens, Movement 95, 112, 312, 319
World Commission on Environment and Development . . 241 f., 298, 524, 641
World Social Forums 253
World Youth Parliament 123
World Youth Sustainability Summit . . . . . 1, 57, 95 f., 103, 113 f., 117, 119, 122, 128, 131, 133, 136, 145, 151, 164, 401, 621, 628, 643, 653, 661
Yoga 40, 44, 46, 615

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- showing us your passion

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