



# **ENVIRONMENT, ENERGY AND CLIMATE CHANGE**

A Sourcebook for Political Parties



Konrad  
Adenauer  
Stiftung

# **ENVIRONMENT, ENERGY AND CLIMATE CHANGE**

A Sourcebook for Political Parties



## **THE KONRAD-ADENAUER-STIFTUNG**

Freedom, justice and solidarity are the basic principles underlying the work of the Konrad-Adenauer-Stiftung (KAS). KAS is a political foundation, closely associated with the Christian Democratic Union of Germany (CDU). As co-founder of the CDU and the first Chancellor of the Federal Republic of Germany, Konrad Adenauer (1876-1967) united Christian-social, conservative and liberal traditions. His name is synonymous with the democratic reconstruction of Germany, the firm alignment of foreign policy with the trans atlantic community of values, the vision of a unified Europe and an orientation towards the social market economy. In our European and international cooperation with more than 70 offices abroad and projects in over 120 countries, we make a unique contribution to the promotion of democracy, the rule of law and a social market economy.

The office in Cambodia has been established in 1994. KAS in Cambodia is mainly operating in the following fields: Administrative Reform and Decentralization, Strengthening Political Parties and Parliaments, Legal Reform, Media Development, Political Education and Social Market Economy, as well as Foreign Policy Consultancy.

© Copyright 2013 by Konrad-Adenauer-Stiftung, Cambodia

### **Publisher**

Konrad-Adenauer-Stiftung  
House No. 4, Street 462, Khan Chamkar Mon, P.O. Box 944  
Phnom Penh, Kingdom of Cambodia  
Tel: (855-23) 996 861/ 726 221, Fax: (855-23) 213 364  
Email: [Office.Phnompennh@kas.de](mailto:Office.Phnompennh@kas.de)  
[www.kas.de/kambodscha](http://www.kas.de/kambodscha)

Graphic Design & Layout by Christine Schmutzler  
Photos Cover, Page 53, 54 and 60 by Christine Schmutzler

Printed in Cambodia  
ISBN: 978-99950-982-2-3

# CONTENTS

Preface .....	1
Acknowledgement.....	1
<b>INTRODUCTION</b> .....	<b>3</b>
<b>CHAPTER 1</b> .....	<b>5</b>
1. Introduction .....	5
2. History and Key Characteristics of Five Party Identities.....	6
2.1 Christian Democracy.....	6
2.2 Center Right.....	8
2.3 Social Democracy.....	9
2.4 Liberalism.....	10
2.5 Green Politics.....	11
3. Models of Political Thought .....	12
3.1 Policy Area Environment.....	12
3.2 Policy Area Economy.....	12
3.3 Policy Area Taxation.....	13
3.4 Policy Area Trade.....	14
3.5 Policy Area Foreign Policy.....	14
3.6 Policy Area Social Policy.....	15
3.7 Criticism and Defence.....	16
4. Policies on Environment and Energy .....	19
4.1 Policy on Environment.....	19
4.2 Policy on Energy.....	21
5. Examples of Political Parties' Positions on Environment and Energy.....	24
5.1 Asian Parties.....	24
5.2 European Parties.....	33
<b>CHAPTER 2</b> .....	<b>43</b>
1. Introduction.....	43
2. Tools and Examples for Effective Communication .....	44
2.1 Political Speeches.....	44
2.2 Communication Material on Environment.....	48
2.3 Press Conferences.....	49
2.4 Press Releases.....	49
2.5 TV Debates.....	50
2.6 Party Websites.....	50
<b>CHAPTER 3</b> .....	<b>53</b>
1. Introduction to the Notion of Sustainable Development.....	53
2. The Notion of Climate Change.....	55
2.1 Definition.....	55
2.2 Implications at Global, Regional and Local Levels.....	56
3. The Notion of Energy Security.....	75
3.1 Definition.....	75
3.2 Implications at Global, Regional and Local Levels.....	77
4. The Notion of Natural Resources Management.....	92
4.1 Definition.....	92
4.2 Implications at Regional and Local Levels.....	93
Abbreviations.....	110



## **PREFACE**

Only political parties which are rooted in society and disposed of ample organizational structures are capable to fulfill their functions, consisting of aggregating and articulating social interests, developing political programmes, promoting participation and organizing the government.

In order to enable political parties to contribute effectively in governance and development in Cambodia, they need to strengthen themselves organizationally. An important aspect of this is to increase the capability of Cambodian political parties to present coherent and relevant programmes of government for consideration by the people during and in between elections. Programmatic political parties are needed to ensure that the electorate are able to choose their elected representatives in the legislature on the basis of issues and programmes rather than personalities and regional affiliations.

The Konrad-Adenauer-Stiftung in Cambodia is undertaking a series of training workshops in 2013 to enable Cambodian political parties to introduce into their respective political party platforms their views and positions on issues relating to the environment, energy, and climate change (EECC). This sourcebook on addressing EECC issues in political party platforms is important in ensuring that the participants in the courses have sufficient information resource materials as basis and guide to the intelligent and informed formulation of party stands on such issues. The sourcebook is meant to strengthen the impact of the presentations during the course, and to give the participants adequate inputs for undertaking the various workshops and exercises scheduled in the course. The sourcebook is also intended to provide the participants with information materials they can use beyond the course to share with their party colleagues in building their political parties to be more programmatic.

*Denis Schrey, Country representative, Konrad-Adenauer-Stiftung, Cambodia*

## **ACKNOWLEDGEMENT**

This sourcebook is the result of cooperation between Konrad-Adenauer-Stiftung (KAS) and the Cambodian Center for Independent Media (CCIM). We would like to thank Clothilde Le Coz from CCIM for her editorial and conceptual support as well as to Janina Kandt, Andreas Breitbach and Sinah Sterry, all interns at the KAS Office in Cambodia, who substantially contributed to the research and contents of the book. Last but not least we would like to thank Christine Schmutzler for her formatting and design support as well as Alastair Carthew for his proofreading.



# INTRODUCTION

In 2009, six major environmental problems were identified facing the Asia Pacific region: rapid urbanisation, rapid deforestation, overfishing, the impact of global warming, air pollution of big cities and safe water supplies. Although there are big development gaps between the bigger and small countries, middle income and least developed countries in the Asia Pacific region, most countries face similar challenges on how to sustain economic growth without compromising on environmental degradation in a region where more than half of the global population lives. Increasing middle classes in many countries with changing consumption patterns lead to increasing pressure on the ecosystems. In many, especially least developed countries the infrastructure provision (energy, roads, waste water management etc.) can hardly keep up with rapid economic and urban development.

Cambodia is no exception. Its economic development, increasing foreign direct investment and changing consumption patterns of the urbanised middle class increase the demand for energy as well as the pressure on identifying new energy sources. Nevertheless, as 80% of the Cambodian population still live in rural areas, the average individual energy consumption is still comparatively low compared to other countries in the region.

*Cambodia also faces regional environmental pressures derived from increased demand of seldom woods, increased pressure on existing fish stocks due to regional hydropower projects and increased urbanisation...*

In this phase of economic development and expansion the region, and especially Cambodia, has to adapt to changes in global weather patterns and needs to develop adaptation strategies and actions to deal with Climate Change, to which it has hardly contributed in the past. Cambodia also faces regional environmental pressures derived from increased demand of seldom woods, increased pressure on existing fish stocks due to regional hydropower projects and increased urbanisation without the appropriate provision of urban services through local governments or private service providers.

Political parties play a crucial role to advocate for change and to promote ideas, concepts and solutions for Cambodia's future economic and environmental development. They are the main space where particular interests are represented and can be communicated to citizens. So far in Cambodia political parties have not really prioritized explaining to citizens what they stand for and which solutions they suggest to solve societal problems. Konrad-Adenauer-Foundation (KAS) is, however, confident that an increased access to information and higher levels of education for the youth will create new expectations for political parties to



share and defend their views and ideas with the voters and the media. This will, in turn, urge increased political accountability and transparency – putting political programmes at the heart of the political life.

For the next three years (2013-2015), Konrad-Adenauer-Foundation in Cambodia will focus on strengthening political parties' knowledge and skills to develop programmes on selected political issues of key relevance to those parties and the citizens of Cambodia. KAS believes that political parties should be professionally led and provide the parties' positions on current issues facing society.

### **PURPOSE AND STRUCTURE OF THE SOURCEBOOK**

To improve political parties' knowledge on energy, environment and climate change, KAS has developed this first Thematic Sourcebook to serve as a knowledge source and tool to improve their political understanding of environmental and energy challenges in Cambodia, the region and the world. It aims to help parties better understand the relevance of developing a programme and to provide examples of effective communication relating to political party positions and programmes through political speeches and campaigns.

**CHAPTER 1** will focus on the historical development of party identities in Europe as well as the recent progression in Asia focusing on the building of party programmes. It presents the five different political orientations of Christian democracy, centre right, social democracy, liberal and green parties. It demonstrates that a party identity itself is, in particular, the result of the party's historic background and subject to continuous change. Moreover, the models of political thought are linked with different political areas, thus enabling the parties to develop their own programmes according to their specific profile.

**CHAPTER 2** will provide additional information on political communication and the importance of conveying a message to citizens. It outlines the different party communication tools as the connecting link between society and the State. External communication can include a variety of communication distribution channels through mass communication and political marketing.

**CHAPTER 3** will give an overview on the key definitions and concepts of Sustainable Development, Climate Change, Energy Security and Natural Resource Management. It will not only illustrate the international and regional approaches to the topics, but also focus on the Cambodian national situation and express the government's position.

# CHAPTER 1

## Party Identity and Party Programmes

### 1. Introduction

Party programmes emerge out of the identity of a party. The party identity itself is particularly the result of its historic background and subject to continuous change. Accordingly, social and cultural alteration may have a strong impact on the identity of a party and influence the content of the programme. Only the keystones of the party programme are pre-assigned.

Party programmes fulfill different functions. The basic party programme constitutes the identity of a party and offers a general orientation to the citizens and voters on its guiding principles and ideas. Through a programme, they can explain how it differentiates itself from others and show its political ambition, basic values, and mission for its country in every aspect of society (political, economic, social...).

The party programme is a global document presenting long-term ideas and action, without any time constrain. This can be done ahead of an election or for a specific action.

A programme is elaborated and approved by the highest number of affiliates. The more the members get integrated in the process of the elaboration of the party programme, the better they will know and defend the basic party lines in public discussions.

To elaborate or update a party programme, many parties form a special commission to decide on the topics to be mentioned and issue a first draft, which may be presented to other party or expert committees. After several reviews, an advanced draft programme may be presented for discussion to all party members and the final version discussed and approved during a national party convention.

Often, parties do not put much effort into the development of a party programme and pay little attention to it, as they are mostly identified more through their representatives than through their programmes. However, a

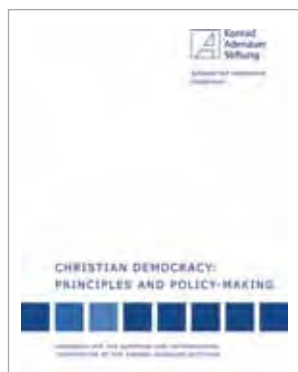
*A comprehensive programme is important for the profile and identification of its members with the party for it proves whether a party can find solutions to social concerns with political suggestions.*

comprehensive programme is important for the profile and identification of its members with the party for it proves whether a party can find solutions to social concerns with political suggestions.

This Chapter of the Sourcebook will present five different party identities, their history and characteristics.

## 2. History and Key Characteristics of Five Party Identities

### 2.1 CHRISTIAN DEMOCRACY



Christian Democracy is a political movement that originated in Europe – specifically in the countries of Belgium, Germany, France, Italy, the Netherlands, Austria and Switzerland – during the mid-19<sup>th</sup> Century. Organizationally, the movement was rooted mainly in the cultural and charitable Catholic associations and worker’s unions out of which political parties would later form. In particular during the period following the Second World War, emerging Christian Democratic parties succeeded in attracting and integrating members of all strata of society owing to their cross-cultural appeal. With regards to Germany, the formation of a political union comprising Christians of both denominations coupled with the union of bourgeois-liberal and conservative supporters by the first German federal chancellor and long-standing Christian Democratic Union chairman Konrad Adenauer was of major significance for the lasting success of Christian Democracy in Germany.

For decades Christian Democratic parties have helped shape the politics of numerous European countries while also playing a major role in initiating and shaping the European integration process. The spiritual and political foundations of Christian Democracy are rooted in the troika of the social ethics of Christian churches, the liberal tradition of the enlightenment and the nurturing of civic values where the smallest social unit is understood to be the family.

Christian Democracy’s founding belief is the Christian view of humanity. Thus, in such a belief, every individual is considered unique and must be treated with dignity. According to the Christian view of humanity, man is certainly not a mere indistinct member of a particular social class as expounded by Marxism as he is unique. Moreover, in contrast to totalitarian ideologies, the Christian idea of humanity does not strive to form a ‘new man’ but accepts each person as he is including all his strengths, weaknesses and limitations. The belief in

the inviolable dignity of the individual should not lead one to think that man is atomistic and unsociable. On the contrary, the Christian view of humanity emphasizes man's dual nature: man is both an individual with inalienable rights *and* a social being that can only realize his potential through coexisting with other people. The individual's right to participate actively, equally and responsibly in politics and society is derived from Christian Democracy's understanding of man's dual nature.

Stemming from the belief in the dignity and freedom of each individual coupled with the understanding of man as an active, conscientious, responsible being equipped with the power of judgment, Christian Democracy postulates the following fundamental political beliefs and objectives:

- the recognition of free and constitutional democracy as the only political system within which the fundamental values of Christian Democracy can be realized. In the discourse with Socialists, and at the turn of the century (19<sup>th</sup> to 20<sup>th</sup>) particularly with Communists, this also included the conviction that social and political change has to be achieved through gradual improvements (e.g. constitutional development) instead of revolutionary upheavals;
- the legal right to freely strive for political and economic self-realization and personal happiness while acting responsibly towards oneself and others. Therein lies the fundamental ideas of liberalism, the rule of law and Christian social ethics;
- the acceptance of responsibility and the willingness to share responsibility, the principle of political decentralization and personal responsibility as superior to centralized and authoritarian paternalism. Therein lies the principle of subsidiary;
- solidarity with those who are weaker as an expression of the commandment of charity and political reason. Therein lies the charitable goal of Christian social ethics including the commandment of responsibility and charity towards the poor and needy.

These fundamental political orientations and objectives continue to remain intact. Contemporary Christian Democratic parties continue to associate liberal ideas with conservative values and Christian social ethics. These fundamental values are freedom, justice and solidarity and they are applied to both the political and economic process as well as to social life.

*"These fundamental values are freedom, justice and solidarity and they are applied to both the political and economic process as well as to social life."*

Against the background of increasing secularization, the key challenge facing Christian Democratic parties today is the need to find solutions to urgent everyday problems founded upon Christian values that are supported by the majority of voters. The Christian idea of man and the associated fundamental values of freedom, solidarity, subsidiary, justice and the pursuit of the common

good offer a broad platform for all people including those without a particular faith to actively participate in shaping politics, society and culture.

*Source: Christian Democracy: Principles and Policy Making, Handbook of the Konrad Adenauer Foundation*

## 2.2 CENTER RIGHT



"A political ideology generally characterized by a belief in individualism and minimal government intervention in the economy and society; also a belief in the virtue of the status quo and general acceptance of traditional morality." *(Mark O. Dickerson & Tom Flanagan: An Introduction to Government and Politics, 5th Edition).*

The term "right" in political ideology originates from the French Revolution. In the 1789 Estates General, the nobility of the Second Estate, sat to the president's right. Defending aristocracy, monarchy and established church, "right" ideas eventually became associated with the values of tradition and a resistance to change.

The term "Conservative" came into use as a slogan of the Tory Party in Britain, renamed The British Conservative Party after the passage of the Parliamentary Reform Act of 1832. This re-branded party appealed to traditional right-wing values by being proponents of the established church, national pride and institutions such as the monarchy. Today, most center right parties consider the term conservative to be much further to the right on the ideological spectrum.

Since then, center right parties focused on the importance of institutions, but also on social issues and the economy. As a reaction to the rapid inflation and slow growth of the mid-1970s, which they viewed as the result of an over-worked government and the inefficiency of government spending, most have since favored limiting the government's involvement in the economy. Center right parties believed that growth would eventually lead to increased nationalism and therefore less class conflict.

Also in the mid-1970s, center right parties became increasingly involved in social life as crime, births out of wedlock and drug use increased. Members of the center right said that these problems were a result of government and communal pampering of individuals through social welfare policies and that the state needed to let people challenge themselves instead of relying on government support. Today, most parties continue to be concerned about the consequences of the welfare state, claiming that it may grow too big and threaten economic well-being and expansion Liberal.

“Conservatives generally believe that there exists a transcendent moral order, to which we ought to try to conform the ways of society. Conservatives uphold the principle of social continuity. They prefer the devil they know to the devil they don’t know. Order and justice and freedom, they believe, are the artificial products of a long and painful social experience, the results of centuries of trial and reflection and sacrifice. Conservatives are chastened by their principle of imperfectability. Human nature suffers irremediably from certain faults, the conservatives know. Man being imperfect, no perfect social order can ever be created.”

*Source: Russell Kirk, The Conservative Mind*

## 2.3 SOCIAL DEMOCRACY

According to the Encyclopedia of Democracy, social democracy is “an egalitarian politics that includes a strong commitment to the modern welfare state and to the redistributive function of the state. Social democrats affirm the classic liberal principles associated with representative democracy and the mixed economy, embrace political reformism (as opposed to the revolutionary tradition stemming from Karl Marx), and give allegiance to the moral ideal of social justice.”

Social democracy is based on the idea that social revolution is necessary to remove power from the hands of the capitalists and place it in the hands of the workers.

This principle comes from the philosophy of Karl Marx developed in the late 1800s. To him, capitalism enabled industry owners to exploit labor by extracting their added value to production in order to make a profit. Only a revolution led by the working class can lead to a social and economic system.

Social Democrats’ view is slightly different. It emerged in the 20<sup>th</sup> Century among reformist socialists who believed that reform would lead to socialism and democracy, rather than revolution. Social Democrats advocate within existing political and economic systems for the nationalization of large business, the installation of social service programmes, such as public education and healthcare, and the implementation of a welfare state with progressive taxation.

In the 1920’s, the Social Democratic Party in Sweden became the first major party of its kind to be elected in Europe. It implemented policies to improve the living conditions of their constituents, such as providing public housing, unemployment relief, minimum wages, income and inheritance taxes and old age pensions. The government took these socialist policies to a new level as the Great Depression of the 1930’s hit Europe, providing public employment in the government to those that lost their jobs that helped redressing the



economy. United States President Franklin D. Roosevelt adopted similar policy ideas, increasing public expenditure on social programmes and infrastructure development to move the country out of the depression.

Today, Social Democrats still see a value in the state providing public services, (roads, bridges, education, and health care), and considering the redistribution of wealth through taxation.

## 2.4 LIBERALISM

“Liberal” signifies openness to change and respect for individual liberties within a societal framework in which all have equal opportunity.”

*(Mark Silverman, TurnLeft.com).*

*“This form of economic liberalism became known as “Laissez-Faire” economics and remains a major tenet of Liberal Party ideology today.”*

As an early doctrine, Liberalism was developed within the political framework of monarchy, focusing on increasing the rights of the individual in relationship to their government. Liberalism as an early political philosophy is based on representative democracy, focusing on limited government and individual freedoms. The development of Liberalism in the late 18th and early 19th Centuries coincided with major changes to the political and social environments within Europe. Arguments to end aristocratic and monarchic systems in favor of representative democracy went hand-in-hand with the spread of economic liberalism and the desire to end feudal systems of property ownership. Adam Smith, one of the most influential economic theorists of all time, published *The Wealth of Nations*, arguing against government intervention into the economy and trade. Smith proposed the theory of the “invisible hand,” a self-correcting mechanism in the economy that works without outside government interference. This form of economic liberalism became known as “Laissez-Faire” economics (in English: “Leave alone to act freely”), and remains a major tenet of Liberal Party ideology today.

However, in the first half of the 1900s, “laissez-Faire” capitalism was widely questioned, and many Liberal governments in Europe began to support aspects of the welfare state, including the provision of health, education, and anti-poverty measures by the government. Once economies began to recover, Liberals reverted back to the ideas of “Laissez-Faire” economics and promoting a limited role of government in the provision of social services.

<http://www.npenn.org/cms/lib/PA09000087/Centricity/Domain/244/Defining%20Conservatism%20%20Liberalism.doc>

## 2.5 GREEN POLITICS

This ideology is the most recent. It was developed in the 1970s, inspired by the ideas of the book entitled "The Limits to Growth", stating that mankind will reach the limits of planet Earth within the next 100 years, if industrialization, environmental pollution, food production and resource extraction continue to grow.



[http://en.wikipedia.org/wiki/Green\\_politics](http://en.wikipedia.org/wiki/Green_politics)

The philosophical roots of Green politics can be traced back to enlightenment thinkers such as Rousseau in France and, later, the author and naturalist Thoreau in America. Organized movements began in late 19th Century Europe and the United States as a reaction to the Industrial Revolution with its emphasis on unbridled economic expansion.

Adherents to green politics tend to consider it to be part of a 'higher' worldview and not simply a political ideology. Green politics draws its ethical stance from a variety of sources, from the values of indigenous peoples, to the ethics of Gandhi. These people influenced green thought in their advocacy of personal responsibility of every individual to make moral choices.

Today, green politics and parties are based on four pillars:

- ecology: reduce the negative impact of human living on earth by redefining the relationship between both;
- social justice: reject any discrimination based on gender, class, income, origin;
- grassroots democracy: organize the party and the society;
- non-violence: reach their goals using non-violent means and questioning wars and human intervention.

In European politics, Green parties most often link up with Social Democrats, but some might have been linked to center right Parties as well. The first political party to be created with its basis in environmental issues was the United Tasmania Group, founded in Australia in March 1972 to fight against deforestation and the creation of a dam that would damage a lake. In May 1972, a meeting at Victoria University of Wellington, New Zealand, launched the Values Party, the world's first countrywide Green party to contest Parliamentary seats nationally. One year later in 1973, Europe's first Green party, the UK's Ecology Party, came into existence.

*"The philosophical roots of Green politics can be traced back to enlightenment thinkers such as Rousseau in France and, later, the author and naturalist Thoreau in America."*



## 3. Models of Political Thought

### 3.1 Policy Area ENVIRONMENT

*"The preservation of the natural environment is an element of responsible freedom."*

#### CHRISTIAN DEMOCRACY

The preservation of creation is the mission statement of Christian Democratic environmental policy. As part of creation, man is responsible for nature and the environment. This responsibility demands the development of a policy that ensures life-sustaining natural resources remain intact. The preservation of the natural environment is an element of responsible freedom.

#### CENTER RIGHT

Generally hesitant to impose environmental restrictions on businesses to favor free trade. Some parties try to portray global warming as a non-problem. Other parties, such as the UK Conservative Party, are adapting environmental degradation, including calling for taxing pollution to cut carbon emissions.

#### SOCIAL DEMOCRACY

Environmental protection should be regulated by the state. Research and development of an alternative energy sector should be encouraged. An environmental tax, such as a carbon tax, ensures the economy reflects accurate costs of environmental degradation.

#### LIBERALISM

The environment should be protected from human damage. Cooperation with businesses can create environmental safeguards. Sustainable development should be forced through legislation.

#### GREEN POLITICS

Opposed to nuclear power and the buildup of persistent organic pollutants, supporting adherence to the precautionary principle, by which technologies are rejected unless they can be proven to not cause significant harm to the health of living things or the biosphere.

### 3.2 Policy Area ECONOMY

#### CHRISTIAN DEMOCRACY

In favor of social market economy as the guiding economic model (combination of economic principles coupled with social services to bring about a fair social balance). Each individual has the right to free development and expression of his or her personality (free entrepreneurial initiatives). The profit gained through production is used for the maintenance of the owner-

entrepreneur and his family. At the same time, it is reintroduced into the economic cycle, for example through the creation of jobs or the purchase of new machinery and facilities. Owner-entrepreneurs are liable for their entrepreneurial decisions. Promotion of medium-sized businesses as they provide employment for the majority of the employees, train the highest number of apprentices and contribute about half of the GNP. Understanding of government control and economic governance: "As much state as necessary, as little state as possible".

#### **CENTER RIGHT**

Favored capitalism and free enterprise. Laissez-faire capitalism and little government intervention in the economy.

#### **SOCIAL DEMOCRACY**

The economy should be capitalist, but well regulated to protect the weak. The government should provide education, healthcare, childcare, and infrastructure development. The interests of workers should be protected through unions or worker cooperatives, and firms should be regulated to prevent workers from exploitation.

#### **LIBERALISM**

Individual property rights and freedom to form contracts are the foundations for freedom. There should be no government intervention in the economy as it distorts the free market.

#### **GREEN POLITICS**

Health of the biosphere is very important to human well-being. Conventional capitalism is not reasonable, as it tends to emphasize economic growth while ignoring ecological health.

*"Health of the biosphere is very important to human well-being."*

### **3.3 Policy Area TAXATION**

#### **CHRISTIAN DEMOCRACY**

The state should create an uncomplicated and fair taxation system that leaves enough room for medium-sized businesses to make investments and to create jobs. The taxation system should be free of bureaucratic hurdles; or at least help minimize these hurdles, ensure that medium-sized enterprises are considered in public tenders and enable them to obtain low interest loans for business startups.

#### **CENTER RIGHT**

Limited taxes primarily dedicated to support the military and the police.

**SOCIAL DEMOCRACY**

Taxation and resources redistribution create public social programmes. Taxation depends on the individual's level of income.

**LIBERALISM**

Taxation should be as limited as possible and dedicated for the state to provide vital government services.

**GREEN POLITICS**

Stop subsidizing companies that waste resources or pollute the natural world and create a Green Tax that will encourage both producers and consumers to make ecologically friendly choices. Governments should not levy taxes against strictly local production and trade.

**3.4 Policy Area TRADE**

**CHRISTIAN DEMOCRACY**

The state sets competition rules, protects the freedom of trade and the freedom of contract, and ensures that an adequate infrastructure is available to facilitate the exchange of goods and services in the respective markets, for example, through public investments in transport routes and communication networks.

**CENTER RIGHT**

Free trade and tariffs should be abolished since they are protectionist.

**SOCIAL DEMOCRACY**

Trade policies protect the interests of domestic labour and industry. Fair trade is preferable to unrestricted free trade.

**LIBERALISM**

Free trade is the best economic option. Trade barriers and government subsidies to business hinder the positive effects of free trade on international markets.

**GREEN POLITICS**

Economic globalization is a threat to well-being, which will replace natural environments and local cultures with a single trade economy, termed the global economic monoculture.

*"Fair trade is preferable to unrestricted free trade."*

**3.5 Policy Area FOREIGN POLICY**

**CHRISTIAN DEMOCRACY**

It is the main goal of foreign policy to secure peace and freedom in the world.

Of chief concern for Christian Democratic foreign policy is the widening and deepening of European integration, the expansion of transatlantic ties, and the solving of various pressing global issues. From a Christian Democratic perspective, the global implementation of human rights is a prerequisite for the safeguarding of freedom, justice and peace in the world. It thus forms the ethical foundation of external relations. The international community has to dedicate itself to the strengthening of the economies of developing countries, to the creation of fair trade opportunities, and to the promotion of social security and the rule of law.

*"From a Christian Democratic perspective, the global implementation of human rights is a prerequisite for the safeguarding of freedom, justice and peace in the world."*

#### **CENTER RIGHT**

World politics is a relentless struggle for power between nation-states. As such, military is more valuable than international organizations.

#### **SOCIAL DEMOCRACY**

Promotion of democracy and human rights, effectively regulated by international institutions.

#### **LIBERALISM**

There are differences among liberals on international relations. Some support the United Nations and international institutions to prevent war. Some are against intervention and sceptical of the use of collective security.

#### **GREEN POLITICS**

Green politics opposes the War on Terrorism and the curtailment of civil rights, focusing instead on nurturing deliberative democracy in war-torn regions and the construction of a civil society with an increased role for women.

### **3.6 Policy Area SOCIAL POLICY**

#### **CHRISTIAN DEMOCRACY**

Social adjustment encompasses all government measures that serve the safeguarding of a basic income and decent living in the case of illness, premature incapacity to work (accident or invalidity), death of the main breadwinner, old age, or during periods of unemployment.

The state does not have the function of a social-political "redistribution machine" being financed through the collection of high taxes. Christian Democratic social policy aims to provide temporary relief to those in need if they or their families are no longer capable of providing for themselves (principle of solidarity). The key objective is to empower the individual to take his own decisions and for him to remain independent of permanent government support while eschewing a culture of dependency.

Social insurance should be financed with contributions from both employers and employees and manage itself independently from the state.

**CENTER RIGHT**

Church and state should be separated but a society best functions when influenced by religious beliefs. Crime and poverty cannot be solved by social engineering.

**SOCIAL DEMOCRACY**

Social policies are progressive and secular, and include support for gender and ethnic equality.

**LIBERALISM**

Certain standards of healthcare and education should be available to everyone. The state should not determine personal values, whether of religion or lifestyle. However, there are differences among liberals as to the extent government should supply these services in an attempt to balance both individual and collective responsibility.

**GREEN POLITICS**

Promote long-term jobs for young people. Set up minimum income schemes set at a level which guarantees that people will not live in poverty and will be able to live a dignified life.

**3.7 CRITICISM AND DEFENCE**

**Christian Democracy**

<b>CRITICISM</b>	<b>DEFENCE</b>
Christian democrats are basically social democrats with religious rhetoric (the religious background causes too generous spending in a welfare-state).	The principle of solidarity is a fundamental Christian value; temporary relief has to be provided to the ones in need without creating dependency.
Alliance of politics with religious values is not up to date.	Christian values are as relevant as ever and have to be kept alive in modern and rather secular society.
The restriction on only one religion must be understood as a sign of intolerance.	The focus on the Christian religion is part of the evolutionary history; other religions are treated respectfully without exception.
The taxation system favors the wealthy instead of unburdening the working class.	Excessive taxation will harm the economy because businesses are unlikely to make investments or to create new jobs.

## Liberalism

### CRITICISM

Economic liberalism leads to inequality between states, with powerful states exploiting smaller ones.

Liberal societies are characterized by long-term poverty and discrimination against lower classes.

Liberalism holds international institutions as benevolent forces, when they in fact may be acting in their own self-interest, possibly at odds with those seeking peace.

Individual freedom outside of the economic realm can lead to apathy, selfishness, and immorality.

### DEFENCE

Liberals states are generally wealthier than states with more market regulations.

The economic success of the state is linked to the desire to overcome economic inequality. The modern industrial state has brought prosperity to a greater number of people.

The opportunities for states to interact, both inside and outside of politics, are leading to peace.

The purpose of the law is to protect the citizen from harm, not legislate morality.

## Social Democracy

### CRITICISM

Social democratic systems restrict individual rights, especially economic freedoms through an intrusive and overly powerful state.

The regulations placed on the market limit economic efficiency and growth, leading to a reduced national GDP.

State provision of education, health care, childcare, and other services limits individual choice.

The working class is more taxed than the rich who can evade taxes, thereby impeding the efforts of the working class to build wealth.

Large government budget deficits are encouraged.

### DEFENCE

Involving the government involvement in the economy and society is necessary to prevent unequal distribution of resources and basic public services.

A regulated economy affects the wealthy while the poor and working class benefit from redistributive programmes. Regulations lead to a higher standard of living for a larger population and reduce the threat of extreme poverty in a society.

Some services must be provided and guaranteed by the state because they are basic needs and should not be subject to the competition.

Taxes depend on individuals' levels of income.

Conservative administrations in the United States and Britain have also been responsible for large deficits.

## Center Right

CRITICISM	DEFENCE
The foreign policy is too aggressive and can lead to security destabilization.	A country should intervene where it deems necessary.
The plight of the poor is ignored and the economic policies widen the gap of financial disparity.	The gap between the rich and the poor encourages people to work hard and innovate.
Policies impose moral standards based in religion.	Policies defend the traditions of society, much of which was initially founded on religious values.

## Green Politics

CRITICISM	DEFENCE
The Tax shift will affect the poor countries more than the rich ones who can adapt.	The poor are often the first and greatest victims of environmental degradation and do not have the resources to adapt or move away. Protecting ecosystems therefore protects the poor even more than the rich who can better adapt or move.
Green Parties advocate going against economic progress.	Industrial nations are still using the most resources and contribute most to climate change. The poor world should be developed with renewable rather than finite/carbon-based energy sources.
Green opposition to heavy industry goes against the interests of rapidly industrializing poor countries.	Emerging nations from the South would benefit environmentally and economically given the rising cost of fossil fuels by leapfrogging the industrial stage and moving directly to the post-industrial stage.
Greens are against opening up rich country markets to goods from the developing world.	Greens favor fair trade over free trade. In Europe, they advocate the lowering of trade barriers and argue for the elimination of export subsidies for agricultural products in the industrialized nations.
Greens oppose technologies such as genetic modification	The policies of sustainable growth encourage 'clean' technological innovation like renewable energy and anti-pollution technology.

## 4. Policies on Environment and Energy

For most German parties the past years have revealed the political importance of environmental and energy policies. The topics of climate change, energy security and natural resource management have become more important and are closely followed by potential voters. The debate is still politically young but the following tables will give an overview about the thematic positioning of the different political parties on environment and energy. The political situation in Germany is therefore an example of how to better understand the spectrum of political views as applied to environmental and energy policies.

### 4.1 Policy on ENVIRONMENT

#### CHRISTIAN DEMOCRACY

- Guideline: orientation toward a pragmatic and integrated environmental policy.
- Target: environmental policy is a self-evident part of reasonable politics; but requires measured political autonomy of the subject matter.
- Environmental issues as part of further development in the sustainability of a future society fits with the central-and historic-party profile of a market economy (economics + social affairs + ecology).
- Priority is still the economy, labor, business, innovation and technology development.
- The development of a young green economy and green technology is thereby supported but within party politics it is defensively marketed.
- Difficulties with, as well as historic "timidity to," occupying the environmental policy field because of a (somewhat misunderstood) political competition with the Greens.
- Successful environmental policy has been undervalued for decades.
- No successful resistance has been mounted to appropriation of the topic and interpretation of sovereignty held by the Greens.
- Motto: "If we are also in favor of the environment, people do not choose us but the original (the Greens)."
- Overall, the party seeks no profiling on the issue of the environment.
- High-profile environmentalist politicians from its own ranks are hardly "used".
- Targeting the public with a constructive environmental argument was, and still is, set aside by the party.



### CENTER RIGHT

- Environmental policy is not a central topic for the Centre-Right.
- As far as it is taken up, environmental policy follows the central nationalistic tenets i.e. protection of the fatherland and keeping the environment intact. Man is part of nature, but conservation of the environment must also be accompanied by cultural and societal developments without limitation.
- In the context of conserving nature target groups are especially conservative, national groups such as nature lovers, hikers or youth organizations (e.g. scouts) in rural areas.

### SOCIAL DEMOCRACY

- The historical self-image as the party of workers and trade unions does not include environment as a core topic.
- Accordingly, the environment and the economy are seen partly in contrast and partly as an innovative combination serving social development.
- Political cooperation and regular government coalitions with the Greens confirms that the Social Democrats include the environmental sector in their core competences.
- The party and its temporary environment ministers, nonetheless, understand the need to provide professional work in the environmental sector.
- Government control and guidance is a consistent guideline in this context.
- Media marketing of claimed political achievements is quite good.

### LIBERALISM

- Environmental policy has lower priority than a liberal economic policy.
- Environmental issues have long been seen in the context of opposing successful economic development (cost, requirements, restrictions, bureaucracy).
- The possibility of a “harmonious” combination of economy and environment via economic opportunities and successes, such as a growing green-tech industry, or the so-called “technology country Germany” helped reconcile Liberals with the environmental theme.
- Even so, the Liberals consider environmental laws, regulations and administration in Germany as being far too excessive.

### GREEN POLITICS

- Environmental policy is a trademark strongly identified with the Greens.
- When the Greens emerged as a protest party during the post-war economic miracle, it adopted the environment as an issue of public concern (growing environmental damage in an industrial society). It was a good opportunity

to attract and organize voters and followers to the party's left-wing politics through an emotional issue, such as the environment.

- Left politics in a green coat: the anti-movement (anti-war, anti-imperialism, anti-capitalism) included the Greens as a peace movement. The profile and the electoral clientele of the Greens have permanently expanded in recent years (new conservative-civic facets) through a "maturation" process involving today's 50-60 year-old protagonists.
- The party has successfully defended the sovereignty of interpretations relating to environmental issues.
- This means that being "green" and "eco" in today's materialistic society is as important as other aspects such as a modern and high-priced lifestyle (sports, health, nutrition)
- Political representatives of the Greens embody and suggest authenticity and "feel-goodism," thus standing out from functionaries in other parties.

*"...being "green" and "eco" in today's materialistic society is as important as other aspects..."*

## 4.2 Policy on ENERGY

### CHRISTIAN DEMOCRACY

- Traditionally, the party seeks the primary vote in favor of safe and affordable energy within the economic and industrial profile of Germany (fossil energy and nuclear energy).
- In the context of jobs and a history of economic prosperity, as well as the development of industrial nations, Germany retains a commitment (and subsidy) to the main domestic energy source, coal (hard coal and subordinate lignite).
- These reasons and responsibilities qualify the party for a quick transition to renewable energy.
- The public acceptance of nuclear power (anti-nuclear movement) has been decreasing since the 1970s. It was massively strengthened after the Chernobyl accident in 1986 and the unresolved issue of the final storage of radioactive waste. That is why the Socialist-Green government decided on an exit strategy in 2000 against the votes of the Christian Democrats (2000: exit).
- The combination of a labored global climate debate in the 2000s and public unacceptability of nuclear power in Germany (an exceptional position in Europe) required the accelerated expansion of renewable energy.
- For financial reasons the Christian Democratic government chose to extend the duration of nuclear power plants again (2010: exit of the exit).
- After the Fukushima accident in 2011, the accelerated and definitive end to nuclear power plants was agreed upon (2011: exit of the exit of the exit).

- The ambitious extension target with regard to renewable energy (80% share of electricity in 2050) still lacks compelling solutions and financial resources (network expansion, energy mix, etc.).
- In the context of modern energy technology, research, development and high-tech products suit the policy principle of the Christian Democrats (Motto: "If not us, then who?").

#### **CENTER RIGHT**

- Energy policy is focused on the concept of autarky (self-sufficiency) and public services toward the nation.
- Therefore domestic energy sources stand at the forefront—the country's own resources should be both reinforced and exploited.
- The use and expansion of existing power stations should be given priority (coal and nuclear power).
- Research and development in the energy sector will be supported in the context of German traditional expertise (technology, engineering, etc.).
- The transition to renewable energy is backed, somewhat skeptically, but the benefit is seen in increased autarky as well as technology and innovation.

#### **SOCIAL DEMOCRACY**

- Between tradition (Labor Party, oldest party in Germany) and modernity, energy policy remains unclear: in favour of an innovative energy policy that does not threaten the industrial base and jobs.
- The search for its own profile is even more difficult because of the close cooperation with the Greens.
- The result has been an energy policy wavering off course in recent years.
- State management, control, and financial subsidies for new approaches are a characteristic of policy.
- The massive extension of renewable energy has been initiated and supported by high subsidies even though the state funded induced job growth is only partially sustainable (e.g. current crash of the young solar industry in Germany).
- Criticism of the Greens regarding nuclear power has long been shared by the Social Democrats, but mainly because of the common opposition to the conservative-liberal policy.

#### **LIBERALISM**

- The basic principles of energy policy primarily follows economic requirements: low-cost, secure, available.

- The linkage between environmental issues and climate change is not strongly made. The radical transition to renewable energy with its ambitious targets is seen as an aberration and a threat to industry (additional costs, supply uncertainty, loss of jobs and relocation of energy-intensive industries).
- The Liberals do not share the criticism of big business.
- As in the case of environmental policy, the party supports renewable energy technology but in the context of innovation, development, products and exports.
- With the help of this political “bridge” the recent energy policy decisions of the government were supported.

### GREEN POLITICS

- As in the case of environmental policy, energy policy is based on a fundamental criticism of government and “capitalist” society with its large business enterprises.
- This criticism is constantly emotional and often irrelevant as well as professionally illogical but it is successfully “sold” and appeals to many voters (emotionally rather than rationally – speech by “heart” rather than “top”).
- Thus, while the anti-nuclear movement criticises the hazards of radiation (power plant accidents, transport and storage of nuclear waste) it is, in reality, criticising economic growth, business, capital and the goals of socialists versus those of the communist alternative.
- Overall, the Greens’ energy strategy lacks content, rigor and logic e.g. in favor of renewable energy but against new pipelines to connect the network; against large-scale systems development and energy storage needed to provide 24-hour energy.
- The same applies to blocking nuclear power: the Greens’ opposition to nuclear repositories has meant that radioactive waste has been stored above ground and poorly secured for the last 50 years.

*Sources: “Christian Democracy: Principles and Policy Making”, Handbook of the Konrad-Adenauer-Foundation, “The Encyclopedia of Democracy”, vol.5, Seymour Martin Lipset, “Analyzing the Liberal Democrats”, by Richard S. Grayson, “What is a Liberal?” by Thomas, Ray, Wikipedia.*

## 5. Examples of Political Parties’ Positions on Environment and Energy

### 5.1 ASIAN PARTIES

#### PHILIPPINES – CENTRIST DEMOCRATIC PARTY OF THE PHILIPPINES



The Centrist Democratic Party of the Philippines has been established to effectively address the systemic problems of the country. Among others these problems are: reduce poverty, create jobs, increase competitiveness, protect the environment, improve the judicial system, introduce electoral reforms, enforce the rule of law and truly make democracy work. CDP has a clear political philosophy, anchored on the core value of HUMAN DIGNITY, guided by principles of Christian and Muslim social teachings – which are translated down to concrete and credible concepts and programmes.

#### TEXT #1

##### *CDP Programmatic Position on Environment*



We believe that we are the stewards of the Earth and that we are dependent on its resources. Therefore we are responsible for protecting and maintaining these for the human race. We uphold and shall enforce the 1987 Constitutional provision regarding the responsibility of the State, as the collective representative of the people, to “protect and advance the right of the people to a healthful and balanced ecology in accord with the rhythm and harmony of nature”. We believe that this right does not cover only the present generations but also the generations yet unborn and that this principle of equity also applies across communities and nations within one generation.

#### POVERTY AND ENVIRONMENT

We recognize the inter-relationship of poverty and environment where the poor: (a) live in places that are ecologically more vulnerable; (b) derive their livelihood income from natural resources; (c) are more vulnerable to environmental shocks with less coping mechanisms, and (d) can cause the degradation of the environment. We recognize therefore that in order to address the poverty situation of the country, we must ensure the protection of the environment. Such environmental change, however, is not a simple technical issue but has political implications considering the unequal distribution of environmental

costs and benefits where change signifies wealth creation for some, versus impoverishment for others. We shall therefore ensure the proper assertion of the State's responsibility, ensuring the protection and proper management of our country's natural resources, to ensure that these are done in an equitable manner while taking into consideration the true value of ecosystem services and the full costs of environmental degradation.

### **DEVELOPMENT AND ENVIRONMENT**

Further, in light of the drive towards growth and the need for resources to support such growth, we shall emphasize the need for dematerialization of production processes to allow sustainable levels of material flows. We shall therefore encourage the development of technologies that increase productivity and efficiency, recycling and more sustainable consumption patterns.

### **CLIMATE CHANGE**

We recognize the Intergovernmental Panel on Climate Change's (IPCC) findings that climate change is already an "unequivocal" phenomenon. We also realize that the Philippines is one of the most vulnerable countries to climate change impact and thereby should adopt the precautionary principle and shall take a more proactive position towards addressing climate change. We shall prioritize increasing communities' resilience to climate change impacts (adaptation and disaster risk reduction) by ensuring the conduct of vulnerability assessments and the integration of these findings into the planning process and systems of local governments. Moreover, despite the country's low contribution to worldwide greenhouse gas emissions, we shall seek means to manage emissions and encourage the development of low-carbon communities as part of our moral obligation as guardians of the Earth. Finally, in light also of the cross-sectoral nature of the issue, we shall encourage coordination and cooperation among institutions, the participation of local communities in the planning and implementation of strategies and further empowerment at the local level.

*"...we shall encourage coordination and cooperation among institutions, the participation of local communities in the planning and implementation of strategies and further empowerment at the local level."*

### **RENEWABLE ENERGY**

Development and growth demand energy. At present, there is still a sizeable Philippine population without access to electricity who rely on conventional sources of energy (i.e. firewood, charcoal, biomass). The additional time and effort for their collection/production results in lost opportunities for income and education as well as poorer health, especially for the women in the household who have these main responsibilities. Thus, in order for us to lift people out of poverty, we must provide them access to affordable modern sources of energy, since these are also prerequisites for safe drinking water, lower child

mortality rates, agriculture, lighting, transportation, telecommunications and entrepreneurship. It is with this perspective and the knowledge that our supply of fossil fuels in this world is limited that we find it mandatory to actively decrease our dependence on fossil-fuel based energies as we encourage rapid development of technologies to make almost limitless amounts of renewable energies accessible and affordable to the majority of the population.

### AIR POLLUTION

It is appropriate that people are given rightful health. The air pollution levels in major Philippine cities are above maximum particulate levels. It is estimated that more than a million people get sick and thousands die prematurely every year due to outdoor air pollution in urban areas in the Philippines. Most vulnerable are the urban poor who live on the side of roads exposing themselves to the highest level of air pollutants with the resulting detrimental effect to their health and welfare, thereby affecting their productivity and general well-being. It is our responsibility then to create more livable cities, by not only enforcing air pollution laws consistent with the Clean Air Act, but by also planning urban spaces and by developing and implementing policies and programmes that will reduce the incidence of emissions at a systemic level. Special attention must also be given to the transportation sector from which majority of these emissions stem.

### WATER POLLUTION

Water pollution has also become an increasing problem in urban areas, with almost half of the pollution coming from domestic solid waste and wastewater, leaving water bodies biologically dead. Poor solid waste management, together with the absence of sewerage systems, results in the contamination of these waters. This is further worsened by the presence of slum communities along rivers, creeks and coastal areas where communities dispose their waste into the nearby water bodies. The lack of access to safe water, whereby the poor bear the majority of the burden, results in increased malnutrition and high morbidity rates. We shall therefore ensure that proper waste and sanitation systems are set in place and fully implemented to avoid the further pollution of our waters as we seek to rehabilitate existing water bodies.

<http://cdp-philippines.org/cms/about-cdp/political-platform/>

*"The lack of access to safe water, whereby the poor bear the majority of the burden, results in increased malnutrition and high morbidity rates."*

## INDIA – GREEN PARTY OF INDIA

The Green Party of India, launched on 14 January, 2010, has two goals:

- “Our political goal is an India where decisions are made by the people and not by a few super rich individuals, corrupt politicians, bureaucrats and families associated with them.”
- “Our environmental goal is a sustainable world where nature and human society co-exist in harmony.”



### TEXT #2

#### *Green Party of India Programmatic Position on Environment*

The earth does not belong to man, man belongs to the earth. The survival of man depends on finding a balance between man and nature.

With his intellectual supremacy man always indulges in plundering natural resources. In doing so he often thoughtlessly interferes with nature, disrupts and tampers the balance of nature. Human greed and avarice together have caused extensive clearing of forests, over exploitation of resources and alarming environmental pollution. Apparently due to numerous ecological malpractices and short-sighted greedy exploitation of different ecological resources the world has to face many serious ecological problems such as global warming, industrial pollution, an energy crisis, flooding erosion, desertification etc.

Industrial activities and aviation are polluting the air and disturbing the balance of gases in the atmosphere causing a threat to the environment and climate. Ozone depletion and an increase in greenhouse gases are the two major environmental problems to have raised international concern. Even the Earth's atmosphere is being restructured by this profit-driven economy.

The backbone of the Indian economy is still agriculture. The percentage of the total population who depend on agriculture is more than 70%. Farmers were considered honourable men in the pre-privatization age of India. But now they are insulted, ignored and compelled to suicide. That has resulted in a food shortage in the country.

Due to the unfair distribution of wealth and income, 40% of the population in India is below poverty line. The top 3% control over 80% of wealth and property. The gap between rich and poor is increasing rapidly due to blind privatization. Women empowerment programmes only exist on paper. The rate of violence against women is increasing rapidly. They always are considered second grade citizens by a male dominated society. The distribution of wealth in India is even more unfair. Both of India's major political parties are dependent on a few super-rich individuals and associates. In fact, nearly all major offices in the





*"Economic development and ecological conservation must go hand in hand with human welfare. Moderate and discrete use of natural resources by maintaining their quality and preserving them for future generations is very important."*

government, whether elected or appointed, are filled by corrupt people. What chance does the average person have for exercising his or her democratic rights under these conditions? What chance do nature and the environment have?

Economic development and ecological conservation must go hand in hand with human welfare. Moderate and discrete use of natural resources by maintaining their quality and preserving them for future generations is very important. These conservation activities include preservation, maintenance, sustainable utilization, restoration and recuperation of the natural environment. Conservation avoids unplanned development which goes against ecological principles. Development without a concern for the environment can only be anti-development and it can exist only at the cost of enormous human suffering.

Another important problem needing an immediate solution is the abuse of genetic engineering. This can potentially destroy the environment and contaminate species diversity that have taken nature millions of years to evolve.

We must learn a way of life that can be sustained and develop more efficient technologies that produce as little harmful waste as possible. To build a sustainable society we must learn ways not to rival nature but to cooperate and live in harmony with it. We require a whole new economic order without destroying existing natural systems. Some life styles and economic goals are rapidly destroying the environment. Our future can be peace and a better world, or it can be endless conflict and ecological/economic disaster. The difference between the two is whether or not we act to make that difference. So we need to make changes in our personal attitudes and practices and develop environment friendly life styles or green ethics. But there is one thing that we must understand. There is little chance to retrieve the time already lost. There is no question of delay.

If a love of nature dawns in one's mind man makes his first steps toward his own humanity. Man who is deprived of the love of nature becomes an assaulter. Obsessed with the idea of assault man becomes the cause of wars and holocaust. It is only when undertaking a global awareness revolution and adopting green values that man will realize that he is only a part of the nature-and not its master.

Nature retains the resources to sustain life, but it should not be at the risk of modern luxury plundering natural resources and fomenting wastage and pollution. This is not compatible with the law of nature. We must keep our behaviour within the capacity of the Earth to handle them.

We oppose the use of physical, chemical, geochemical and biological pollution over the consumption of natural resources such as water, land, soil, minerals, forests, wild life and marine ecology. Also, we oppose all types of violence.

We are committed to women's empowerment. We have reserved our 50% of local, state and national level working committee seats for women.

Life is a rare and wondrous thing. There may be life of some sort on some of the thousands of planets that orbit the distant stars. Yet, so far as we positively know, only on our own Earth is there living creatures. The Earth is populated by millions of different types of living creatures each with its own way of living.  
<http://www.greenparty.in/>

## SRI LANKA - LIBERAL PARTY OF SRI LANKA

### TEXT #3

*Identity of the Liberal Party of Sri Lanka*



The Liberal Party shall be a Sri Lankan political party dedicated to the preservation, promotion and development of Liberalism and to the maintenance of Sri Lanka as a liberal democracy.

The ideology of the Liberal Party shall be Liberalism as it is understood in political philosophy and as defined in the Liberal Manifesto, 1947, the Liberal Declaration of Oxford of 1967 and the Liberal Appeal of Rome, 1981 of Liberal International. The Liberal Party is fully committed to individual liberty, parliamentary democracy, the market economy and the welfare state. It shall be dedicated to oppose all forms of totalitarianism, authoritarianism, racism and narrow nationalism, statism and collectivism.

The Liberal Party shall be committed to international solidarity with Liberals everywhere and to oppose the violation of human rights, racism, totalitarianism and authoritarianism in all parts of the world.

<http://www.liberalparty-srilanka.org/what-we-stand-for/constitution.html>



### TEXT #4

*Liberal Party of Sri Lanka—Manifesto for the 21st Century*

## ECONOMIC DEVELOPMENT – INDUSTRIES, FISHERIES AND AGRICULTURE

Liberals firmly believe that economic prosperity leads to social and moral development while stagnation leads to conflicts of all types, including racial, in the struggle for share of the available resources. Where there is economic prosperity there are fewer great upheavals. Economically developed countries are examples of this while many Third World countries are examples of the contrary.

### RESOURCES FOR ECONOMIC DEVELOPMENT IN SRI LANKA

Physical and human resources are the major features essential for economic development, supported by financial resources. Our main physical resources can be identified as favorable climate conditions (a tropical climate throughout the year), fertile soils and water resources with much rain in the hill country brought down to the plains on all sides during their dry seasons. The sea around our island, within a 200 km zone, is not only rich in fish but the west to east sea route runs through the southern bounds of the island, which suggests we should develop Sri Lanka as a trading centre.

### INDUSTRIAL DEVELOPMENT

Industries in Sri Lanka have generally been concentrated in the area around Colombo, except when the Government tried to encourage development on the periphery. Just after independence a number of industries were developed in the north and east but they are no longer important to the activity of the Taking a cue from this, we recommend that government concentrate on encouraging the private sector to invest in the regions. However, to do this infrastructural development is essential. This should take the form of targeting particular areas for the establishment of free trade zones.

It should also be noted however that Sri Lanka lacks most of the raw materials essential for industries, other than those arising from the soil, such as the those for essential for cement and agricultural by-products. Therefore Sri Lanka cannot really compete with other industrial countries until there are further developments in technology. Technical know- how, systematically transferred to the people in the regions, is essential. It is for this reason that, as indicated above, we propose the establishment of technical universities in the regions where training in skills will be accompanied by academic input that will enable our people to compete for jobs internationally at higher levels than at present.

### FISHERIES

Though fishing is an essential industry, the greatest resources are on the continental shelf which cannot be reached by ordinary fishermen. They should be given the technical knowledge and assisted with obtaining deep sea fishing vessels so that the scope of our fishing industry can be developed to uplift the current hand to mouth existence of most fishermen. After a gap of some years there has recently been an attempt to revive the inland fishing industry. This should be encouraged further including a concerted transportation plan. We also welcome the current move to develop technical skills at all levels and suggest this be linked with management and other skills that will increase employability.

*"Technical know- how, systematically transferred to the people in the regions, is essential."*

## AGRICULTURE

The tropical climate and fertile soil, coupled with the experience rural people, have gained over generations coupled with the colossal investment in irrigation, testify to the physical and human resources available for agricultural development. Though agriculture should be the foundation of our economy, the sudden explosion in imports has ruined the agricultural sector in the case of red onions, Bombay onions, potatoes and other highland cultivation. Again, due to changing policies paddy farmers (about 1.8 million) are unable to sell their paddy at even a price below cost, a problem they have not previously faced.

With the collapse of the agricultural sector, which was 21% of the GDP, more than half of the entire population will experience social upheavals and economic disaster. Therefore the agricultural sector will be given assistance not only to increase production but also to protect prices by way of legislation and tariffs so that the farmer can get the maximum profit in the local market. Though Liberals generally believe in free trade, we have always accepted the need for protection provided it is for a fixed period to deal with particular conditions.

Training is also an important aspect of agriculture in the modern world. But to maximize production capacity new technologies must be transferred to the producer. This strategy will not only assist with food security, but also, hopefully, the younger generation will be attracted to the agriculture sector which is currently not popular with them. The farmer in all our communities must be given a suitable status, not through platitudes, as in the past, but through economic success.

## ENVIRONMENTAL POLICY

Whilst Liberals believe strongly in economic growth, we are also deeply concerned that development should be sustainable. Protection of the environment is therefore a vital aspect of Liberal policy. It is an area where government intervention should be based on clear cut principles. For this reason we believe that there should be alterations in current legislation based around the principle of a consultative approach. We also feel that, where regulations exist, there should be provision for effective enforcement.

Though some clauses in the 1978 Constitution contribute to environmental protection, the omission of a right to life is unfortunate. This right, which should be included in the founding principles, should lead to statutory requirements for a life enhancing environment.

To prevent arbitrary or partisan decisions that affect the environment we recommend that a National Consultative Council on Environment and Development be established, with both government and non-government personnel,

*"To prevent arbitrary or partisan decisions that affect the environment we recommend that a National Consultative Council on Environment and Development be established, with both government and non-government personnel,..."*

to assist the Government on policy decisions at the macro level before specific project proposals are formulated.

We need to accept that much destruction of the environment occurs because of government personnel acting in their private capacities. This is because of the authority they wield, which prevents them being subject to the same laws as the general public. We recommend, therefore, an armed, well-equipped and motivated Wildlife Ranger Corps with adequate personnel for the task. Provision could be made for concerned young people to join the Corps as one method of doing the national service we have suggested.

<http://www.liberalparty-srilanka.org/>  
<http://www.liberalparty-srilanka.org/what-we-stand-for/manifesto/19-6-economic-development-industries-fisheries-and-agriculture.html>

### MALAYSIA – PARTIGERAKAN RAKYAT MALAYSIA



PartiGerakan Rakyat Malaysia was founded in 1968 and has been successful in obtaining mass support to strive for an egalitarian, united Malaysia characterized by racial harmony, social justice, economic equality, political democracy and cultural liberalism.



#### DOCUMENT #5

*The Logo*

The party identity is clearly reflected in its logo: the red background represents life and courage; the golden paddy represents prosperity; the white triangle represents equality, purity and justice for all and the green background represents nature and the earth, the basis of prosperity and of a good life.

#### TEXT #6

*PartiGerakan Rakyat Malaysia Programmatic Position on the Environment*

### PROTECTION OF THE ENVIRONMENT

Policies pursued by both the state and private sector must be environmentally sound. Here, PartiGerakan subscribes to the pursuit of sustainable development. Current patterns of consumption and production that are unsustainable must be discontinued and be replaced by patterns that are rational and sustainable. Efforts undertaken by the Government may not be enough. These must be complemented and supplemented by both individual and international efforts. The latter encompasses increased allocation of financial resources on the part

of developed countries toward global environmental management as well as the transfer of environmentally sound technologies from the developed countries to help Malaysia safeguard its environment, without jeopardizing growth.

[http://www.gerakan.org.my/my\\_ideology.asp](http://www.gerakan.org.my/my_ideology.asp)

## 5.2 EUROPEAN PARTIES

### GERMANY – CDU

The German CDU was created shortly after the Second World War from three streams of political thought: Christian-social, liberal and social conservatism. It was in power for most of the post-war time in Germany and has been in power since 2005. Shortly after the 2011 Fukushima earthquake, the party overhauled its policy on nuclear power.



#### TEXT #7

#### *CDU Programmatic Position on Sustainable Development*

We consider the human being as part of creation. He/she have no right to use nature arbitrarily. Nature has been entrusted to us to maintain and to preserve. We are responsible for the condition in which we leave it to future generations.

Global climate change threatens the very foundations of our existence and the chances of development of future generations. The demand for energy and the consumption of fossil energy are increasing worldwide. The increased emission of greenhouse gases and climate warming it entails have far-reaching repercussions for mankind and nature, i.e. the melting of glaciers, the rising of the sea level, pollution of the seas, floods, lack of water, destruction of species, desertification and catastrophes caused by drought – catastrophes which impoverish human beings and drive them into migration away from their natural habitat.

In our view protection of the environment and economic advancement do not contradict each other. Particularly at a time when the borderlines between ecological capacities of the Earth are becoming clearer it is relevant to say: "Sustainable economic growth is only possible when the protection of the environment and the climate are taken into account during the process". Apart from that, an economical and efficient use of resources is increasingly becoming a cost and location advantage. For this reason we advocate a social market economy, with emphasis on ecological issues, which will pursue prescribed environmental



goals with enhanced research and development, targeted incentive systems and promotion programmes, as well as an environmentally-oriented framework. We also believe that, in this case, levies should be raised on long-term consumption of resources or environmental encumbrance rather than taxes. The profits thus accrue will considerably help resolve issues concerning environmental and climate protection.

### **PROTECTION OF THE CLIMATE**

Global climate change has become a serious danger to creation and the life opportunities of future generations. We see it as an ethical duty and a paramount political assignment for the future to counteract this new development: the CDU stands for the fact that Germany should continue to be in the vanguard of, and an international pacesetter for, climate protection. Together, with as many industrialized, threshold and developing countries, we want to promote climate protection.

### **SECURE ENERGY SUPPLY**

*The basic principle of secure, environmentally friendly and economically acceptable energy supply is a wide spread of the energy mix.*

The demand for energy is growing high worldwide. In view of Germany's dependence on the importation of scarce and expensive energy raw materials, the supply of energy that is secure, environmentally-friendly and economical, is a political problem of great importance. We want to reduce the risk of dependence on imports. Sources of imports and supply routes of energy materials must be spread with energy partnerships and supply and transit states expanded and intensified. We advocate the economical use of our energy resources, the acceleration of the exploitation of our renewal sources of energy at home and the development of more efficient production technologies.

The basic principle of secure, environmentally friendly and economically acceptable energy supply is a wide spread of the energy mix. We want to shape the use of fossil energy sources which are as compatible as possible with the climate thus creating preconditions to establish Germany as a world class, environmentally sustainable "power plant." Energy research and new innovative energy technologies are indispensable for sustainable energy supply. We want to promote widespread energy and open research into energy and technology which will contribute to the development of all climate friendly energy sources and the further development of energy producing technologies plus the rational use of resources. Modern, clean coal-mining plants and gasworks are included in this research, as well as nuclear fusion. Significant opportunities exist for company growth and job creation.

To curb energy price increases we aim to work towards sound competitiveness in the power and gas markets. We are committed to the removal of restraints on competition and the accelerated expansion of a free, accessible

infrastructure to create a seamless cross-border power and gas trade in the European market area.

[www.kas.de/wf/doc/kas\\_13533-544-2-30.pdf](http://www.kas.de/wf/doc/kas_13533-544-2-30.pdf)

## NORWAY - NORWEGIAN LABOUR PARTY

The Norwegian Labour Party was founded in 1887. It has received the major share of the vote, staying in power for most of the time since 1927. It had left-wing roots. The success of the party can be partly credited to its implementation of a welfare state, supported by the huge Norwegian oil and gas reserves.



The Norwegian Labour Party's vision is a just world without poverty, at peace and in ecological balance, where people are free and equal and can exercise influence over their lives.

### TEXT #8

#### *Norwegian Labour Party Programmatic Position on the Environment*

Norway is a country of energy. Access to sufficient volumes of reasonably priced energy is important both to people in their everyday lives and for wealth creation and workplaces. At the same time we know that many forms of energy production carry with them problems for the environment and that the combustion of oil and gas results in the emission of the greenhouse gas CO<sub>2</sub>. Climate change is one of the most serious threats to the global environment.

The Norwegian Labour Party's aim is to ensure that Norwegian energy supplies are the most environmentally friendly in the world. We will limit the increase in energy consumption and will be at the front line in the use of new technologies for energy production and supply. Large volumes of natural gas are pumped from the Norwegian shelf. A major portion of the gas must used domestically for industrial, energy and transport. The Norwegian Labour Party therefore wishes the state to participate in the financing of infrastructure for the transport of natural gas. Through economic levers and by concentrating our efforts on new technology the Norwegian Labour Party will do whatever necessary to ensure that the future development of gas power is based on CO<sub>2</sub> treatment.

The Party is in favor of an increase in research and development that can ensure such CO<sub>2</sub> treatment and find good solutions for the depositing and use of CO<sub>2</sub>. The Party believes that Norway must develop and start building gas-powered generating stations based on CO<sub>2</sub> treatment. The development and refining of such technology will reduce our own emissions and provide a base





of accumulated knowledge and experience leading to new technology that other countries can use to their advantage while simultaneously being a Norwegian export product. The Norwegian Labour Party will:

- increase the use of natural gas in Norway and contribute to the development of the infrastructure for gas transport;
- increase backing for new renewable energy sources and introduce a mandatory green certificate market;
- provide the necessary technology to enable electric heating to be replaced by water carried heat and establish strong financing arrangements for increased investment in district heating and bio energy. Introduce the same tax concessions for hydrogen powered vehicles as those for electrically powered vehicles and contribute to the construction of a network of fuel stations for hydrogen powered vehicles in Norway;
- contribute to a CO2 market created to reduce emissions;
- stop emissions of environmentally harmful chemicals from petroleum activities.

<http://www.arbeiderpartiet.no/content/download/17249/191169/file/Election%20Programme%202005-2009.pdf>

### SWEDEN - SWEDISH GREEN PARTY



The Swedish Green Party was founded by people opposing nuclear power in 1981. In 1998, the Swedish Social Democratic Party could only gain a minority, and was supported by the Green Party until the 2006 elections. They don't define themselves in categories as left or right, but focus on sustainability for all people on earth.

#### TEXT #9

*Swedish Green Party programmatic position on environment*

**Green ideology  
– a call for action**

The Green Party is part of a worldwide green political movement. Together, we are fighting for long-term sustainable, democratic societies where people assume responsibility locally, as well as globally. Our vision is for societies that live in peaceful coexistence, participate in equal collaboration and where humans, animals and nature are all respected.

Our ideology rests on a solidarity that can be expressed in three parts:

- solidarity with animals, nature and ecological systems;
- solidarity with future generations, and;
- solidarity with all the people of the world.

## ECOLOGICAL INSIGHT

Humans are a vulnerable part of a sensitive ecological system where everything is linked and connected. A precautionary principle is that we must handle nature with great care and be humble in the face of our own incomplete knowledge of all its connections. We humans must assume responsibility for managing Earth's resources in balance with nature to preserve biological diversity. We believe that all life has an intrinsic value, regardless of its use to humans. We place the ecological balance and the well-being of people and animals before short-term economic gain. Economic development must take place within nature's framework, without people being disadvantaged.

## PEOPLE AND THE ENVIRONMENT BEFORE SHORT-TERM PROFIT

The main objective of the economy should be to satisfy people's needs, while preserving good prerequisites for future generations. The system should guarantee that nature's diversity is preserved and that people have the freedom to develop within their own environment. If this is to be possible, we must realize that economic theories are not value free and can never replace political objectives.

## FAIR AND DEMOCRATIC ECONOMY

A precondition for an economy based on environmental and human requirements is that it is based on solidarity ideals. We do not accept the increasing income gaps, which are growing with the internationalization of the economy. An equitable distribution and functioning welfare system should guarantee a basic level of security for all. People must learn to live in a harmonious now and in the future.

We advocate a tax on currency transactions. We also want greater public control of pension funds to safeguard sound investments that can create jobs and contribute to ecologically, socially and economically sustainable development. Our long-term goal is an interest free economy. We want to gradually democratize the economy and increase personal responsibility by means of this and other methods to stimulate employee ownership and cooperative enterprise. We want to reduce the concentration of economic power by giving consumers genuine insight into, and control over, the production and trade in goods and services. Public sector companies should follow ethical and environmental guidelines. State pension funds should operate according to ethical and environmental guidelines and even be active at shareholders' meetings in the companies in which they own shares.

*"We want to reduce the concentration of economic power by giving consumers genuine insight into, and control over, the production and trade in goods and services."*

*"We want Sweden to be a global environmental model. One means of influence is to be a forerunner and show that a positive change is not only desirable, but also possible."*

### **GLOBAL ENVIRONMENTAL RESPONSIBILITY**

The policy must be coherent. We want Sweden to be a global environmental model. One means of influence is to be a forerunner and show that a positive change is not only desirable, but also possible. If dangerous nuclear power plants in the surrounding world are to be abolished Sweden must abolish its own nuclear power. If polluting industries in neighboring countries are to be cleaned up Sweden must transform its own industrial processes. If the deforestation of the rain forest is to be stopped the last primeval and natural forests in Sweden must be protected. Individual countries and federal states have dared to make radical environmental decisions without waiting for international agreements. Nonetheless, environmental opinion all over the world has become more powerful and other countries have eventually followed.

Our policy puts a heavier responsibility for the transformation on the rich parts of the world. There is nothing strange about this. If the whole world had the same consumption level as Sweden and the other rich countries of the world, the entire ecological system would collapse.

By focusing on increased quality of life instead of high material standards we can influence the surrounding world in a credible manner. Only like this can the poor world be developed in a way that does not include emulating our mistakes and, instead, begin the use of better technology.

### **GLOBAL ENERGY POLICY**

In international EU and UN climate negotiations, Sweden should advocate that rich countries should reduce their emissions of greenhouse gases the most and first. Subsidies for coal power, peat and nuclear power must be removed and replaced by minimum taxes within the EU. The trade in emission rights must be developed. The rights must, for example, to a greater degree be auctioned instead of being distributed for free. Furthermore, the allocations must be made more restrictive. Sweden must also take vigorous initiatives for a global phase out of nuclear power. We must require raised safety levels, extended insurance liability and the establishment of international conventions for the transport of nuclear waste. A first step would be to ensure that the Euratom agreement within the EU, with the objective to increase use of nuclear power, is scrapped.

There are major development opportunities for solar energy and other energy efficient solutions. The percentage of solar energy reaching the Earth's surface every year is many times greater than the energy humanity uses in the form of fossil fuel.

The world's dependence on oil is environmentally destructive. It also contributes to an unstable world economy where the big winners are oil cartels and companies. If we do not carry out a regulated transformation now, the same

change could be forced upon us later, but at considerably higher economic and environmental cost. In global terms, the market for environmentally friendly energy production is one of the fastest growing. Many countries want to end their oil dependency. This presents great opportunities to export competence, energy efficiency know-how, products and environmental technology.

### SUSTAINABLE TRANSPORTS

A key project to halt global warming is converting to sustainable communications. The transport sector is the greatest single source of emissions for nitric oxides, carbon dioxide, hydrocarbons and particles. Traffic contributes, in addition to the greenhouse effect, to eutrophication, acidification, destroyed ecosystems and ground ozone. People are affected indirectly in the form of various diseases and allergies and directly in the form of noise and road accidents. Children are particularly susceptible. The risk to their health is considerable when they are exposed to vehicle exhaust fumes. Vehicle traffic also consumes considerable amount of space.

We want to invest in new technology to produce more environmentally adapted fuels. We believe in technology aimed at developing and using carbon dioxide neutral fuels. Energy, including fuel, should be used as efficiently as possible. Market-based instruments are possibly the most effective tool to achieve this. [http://mp.se/files/108500-108599/file\\_108566.pdf](http://mp.se/files/108500-108599/file_108566.pdf)

*"Energy, including fuel, should be used as efficiently as possible. Market-based instruments are possibly the most effective tool to achieve this."*

### UNITED KINGDOM - LIBERAL DEMOCRATS

Until recently, Great Britain was governed by two parties. Either the Labour Party or the Conservative Party were in power, obtaining enough votes to form a government without agreeing formally on a Coalition government (there were some minority governments, working without a formal Coalition). This changed in 2010 for the first time since World War Two, when the Conservative Party formed a Government with the Liberal Democrats (LibDems). Over the last few years, the LibDems steadily increased their share of the vote, finally enabling them to become a coalition partner to form a government with the Conservative Party.



The LibDems position themselves as liberal, fighting for a fairer Britain. They also emphasize their "greenness". Some of their green policies are integrated with the rest of their programme (on healthcare for example).

**TEXT #10**

*Liberal Democrats Programmatic Position on the Environment*

**A GREEN FUTURE: PROTECTING THE PLANET**

Liberal Democrats believe that protecting the environment is one of the greatest challenges this generation faces. We must hand on to our children a planet worth living on. That requires action across government: it is everybody's responsibilities not just that of climate change ministers. It is because we believe concern for the environment is important in every part of people's lives that we have identified policies in every chapter of this manifesto to protect the planet.

Ensuring pollution is properly taxed by replacing the per-passenger Air Passenger Duty with a per-plane duty (PPD), ensuring that air freight is taxed for the first time. We will also introduce an additional, higher rate of PPD on domestic flights if realistic alternative and less polluting means of travel are available.



**CREATING JOBS THAT LAST**

The new economy must be very different from the old if it is to be sustainable, not just financially, but environmentally.

Our green stimulus plan will create 100,000 jobs. It comprises:

- investing up to £400 million in refurbishing shipyards in the North of England and Scotland so that they can manufacture offshore wind turbines and other marine renewable energy equipment. As part of this scheme we will write off backdated business rate demands from before April 2008 for businesses in ports;
- launching an 'Eco Cash-Back' scheme, for one year which will give consumers £400 if they install double glazing, replace an old boiler, or install micro-generation. If a consumer chooses micro-generation, they will be able to sell the energy back to the national grid at a profit, with a more attractive feed-in tariff than under current government plans;
- setting aside extra money for schools who want to improve the energy efficiency of their buildings. They will pay back the loan over time from energy savings, creating a rolling fund to help insulate every public building;
- bringing 250,000 empty homes back into use. People who own these homes will get a grant, or a cheap loan to renovate them, so that they can be used for social housing or loans for private use.

**SECURING BRITAIN'S FUTURE WITH GLOBAL ACTION**

Liberal Democrats believe that Britain must work together with its partners abroad if we are to have the best hope of meeting challenges of the world. We believe in freedom, justice, prosperity and human rights for all and will do all

we can to work towards a world where these hopes become reality. Never has there been such a need for global action. There are only a few years to take action to stop runaway climate change. The global recession proved the need for better international regulation of the financial markets. Liberal Democrats will work through the European Union to deliver a global deal on climate change. We will transform the armed forces, meeting the nation's obligations under the military covenant, and conducting a full defense review to ensure they are equipped for modern threats. We will push for better global financial regulation. Our response to climate change will give the British people more secure energy supplies, reduce air pollution and related health costs – and create thousands of new jobs.

### PROTECTING THE GLOBAL ENVIRONMENT

Humans are living beyond the ability of the planet to support life. More than 60% of the basic ecosystems that support life on Earth are being degraded or used unsustainably. Coordinated international action and effective global institutions are necessary to help create a sustainable future and improve the quality of life of all the world's citizens. Liberal Democrats will:

- work through the EU to ensure the environment is fully integrated into the objectives of international institutions such as the World Bank, International Monetary Fund and World Trade Organization;
- work to increase the resourcing of the UN Environment Programme and improve the enforcement of international environmental treaties;
- protect the world's forests, not only to reduce carbon emissions but also to preserve this crucial reservoir of biodiversity. We will argue for an international target of zero net deforestation by 2020; support a new system of payments to developing countries to enable them to reduce deforestation and adopt at the EU – or, if necessary, at UK – level a new law making it illegal to import or possess timber produced illegally in foreign countries;
- work with other countries to develop an international labeling system for the environmental impact of products, helping consumers choose those with the least impact on resource use and pollution. Work with other countries to establish new sources of development financing, including bringing forward urgent proposals for a financial transaction tax and a cap-and-trade system for carbon emissions from aviation and shipping. Ensure that the developing world is prepared to deal with the consequences of a changing climate. We will ensure that adaptation and mitigation measures are financed by industrialized nations on top of existing aid commitments. Hold an immediate Strategic Security and Defense Review (SSDR) to ensure that Britain

*"We will argue for an international target of zero net deforestation by 2020"*

deploys its resources to face the most serious threats to its citizens' security and well-being, including non-military challenges, such as climate change.

*"Public transport is an important part of a fair society and the best way to cut carbon emissions from transport without trying to limit people's opportunities to travel."*

### **PUBLIC TRANSPORT YOU CAN RELY ON**

Britain needs a well-run, efficient transport system. Public transport is an important part of a fair society and the best way to cut carbon emissions from transport without trying to limit people's opportunities to travel. We want to improve the experience for the traveler and cut carbon emissions. We will:

- switch traffic from road to rail by investing in local rail improvements, such as opening closed rail lines and adding extra tracks, paid for by cutting the major roads budget;
- cut rail fares, changing the contracts with train operating companies so that regulated fares fall behind inflation by 1% each year, meaning a cut in real-terms;
- make Network Rail refund a third of your ticket price if you have to take a rail replacement bus service;
- overhaul Network Rail to put the interests of passengers first and bring it under the Freedom of Information Act to make it more open to scrutiny;
- set up a UK Infrastructure Bank to invest in public transport like high speed rail;
- give councils greater powers to regulate bus services according to community needs so that local people have a genuine say over routes and fares;
- include the promotion of safer cycling and pedestrian routes in all local transport plans.

### **MANAGE WATER FOR EVERYONE**

Britain has real problems in managing its scarce water resources. Some people face devastating floods, while others endure drought conditions most summers. We will:

- stop large new housing developments in major flood risk areas.
- crack down on waste from the water companies and introduce compulsory smart meters in areas of shortage;
- introduce landscape-scale planning policies with a specific remit to restore water channels, rivers and wetlands and reduce flood risk by properly utilizing the natural capacity of the landscape to retain water.

<http://www.libdems.org.uk/environment.aspx>

# CHAPTER 2

## External Communication of Party Positions

### 1. Introduction

As seen in Chapter 1, the foundation of a party programme lies in its identity and political stances on specific issues to be communicated internally and externally. Therefore, political parties have communication tools to make their messages understood by the majority of their fellow citizens. As parties are a connecting link between society and the state, political communication is crucial to any of them to ensure the ideas, projects and guidelines are clear and understood by everyone.

There are two different modes of communication that one has to distinguish: the internal as well as the external communication of party positions. Being aware of the importance of internal communications within each party, this chapter will nevertheless focus on the different ways a party can share its knowledge with the public.

The external communication can involve everything on offer by modern mass communication and political marketing. Regular press releases and press conferences, and publication of bulletins and positions are the basics for party communication. The Internet is of special relevance for modern party communication. The party website is a main source for communication and should be permanently actualized. The presence of political parties in modern Internet communities like *Facebook* and *Twitter* is also essential in order to deliver their messages and present their leaders to the broader public. Regional party branches should have their own website to communicate issues of local or regional relevance. Visual platforms like *YouTube* should be used to disseminate the messages of the parties and to present their leaders.

As relevant as all these forms of communication might be, it is without any doubt that the small talk of a "simple" party member with his neighbour, his colleague or his friend is a very important instrument for the daily contact and communication of a party with the broader society.



## 2. Tools and Examples for Effective Communication

### 2.1 POLITICAL SPEECHES

Political Speeches are an important tool for parties to engage in a dialogue with the public. If a speech is delivered passionately and focuses with regard to content on a specific topic it is capable of having a huge impact on the listener.

For Phil Collins, an English speechwriter known for working with British Prime Minister Tony Blair great political speeches need three key ingredients: a serious argument which leaves the audience thinking something new or makes them resolved to act; great delivery that stirs the emotions as well as appealing to reason and a sense of occasion. He says: "Martin Luther King could get away with elevated language because his cause was a noble one. You can't really do that when you are talking about the reform of local government. It just isn't as big an affront to justice. So, there is a very good reason we have fewer remarkable speeches which is that we don't need them as much as we did."

Nevertheless, a good political speech can make all the difference. David Cameron owes his leadership of the Conservatives to two speeches. He adds that it is hard to imagine Barack Obama would have become President without his powers of oratory.

The audience is clearly vital for any speech writer. Collins says people's attention spans have declined, as has the breadth of their vocabulary and range of reference. Mass democracy means that references to high culture divide an audience where they would once have united it, he says. There are also more political speeches than there used to be.

"In the process, we have devalued the currency a little," he says. "The effective political speech, though, remains what it has always been – a mixture of reasoned argument and emotional passion."

**SPEECH #1**

*Al Gore delivering his Nobel Lecture in the Oslo City Hall 10. December 2007*

Your Majesties, Your Royal Highnesses, Honorable members of the Norwegian Nobel Committee, Excellencies, Ladies and gentlemen.

I have a purpose here today. It is a purpose I have tried to serve for many years. I have prayed that God would show me a way to accomplish it.

Unexpectedly, that quest has brought me here. Even though I fear my words cannot match this moment, I pray what I am feeling in my heart will be communicated clearly enough that those who hear me will say: "We must act."

The distinguished scientists with whom it is the greatest honor of my life to share this award have laid before us a choice between two different futures – a choice that to my ears echoes the words of an ancient prophet: "Life or death, blessings or curses. Therefore, choose life that both thou and thy seed may live."

In the last few months, it has been harder and harder to misinterpret the signs that our world is spinning out of kilter. Major cities in North and South America, Asia and Australia are nearly out of water due to massive droughts and melting glaciers. Desperate farmers are losing their livelihoods. Peoples in the frozen Arctic and on low-lying Pacific islands are planning evacuations of places they have long called home. Unprecedented wildfires have forced a half million people from their homes in one country and caused a national emergency that almost brought down the government in another. Climate refugees have migrated into areas already inhabited by people with different cultures, religions, and traditions, increasing the potential for conflict. Stronger storms in the Pacific and Atlantic have threatened whole cities. Millions have been displaced by massive flooding in South Asia, Mexico, and 18 countries in Africa. As temperature extremes have increased, tens of thousands have lost their lives. We are recklessly burning and clearing our forests and driving more and more species into extinction. The very web of life on which we depend is being ripped and frayed.

We also find it hard to imagine making the massive changes that are now necessary to solve the crisis. And when large truths are genuinely inconvenient, whole societies can, at least for a time, ignore them. Yet as George Orwell reminds us: "Sooner or later a false belief bumps up against solid reality, usually on a battlefield."

Now comes the threat of climate crisis – a threat that is real, rising, imminent, and universal. Once again, it is the 11<sup>th</sup> hour. The penalties for ignoring this challenge are immense and growing, and at some near point would be unsustainable and unrecoverable. For now we still have the power to choose our



fate, and the remaining question is only this: Have we the will to act vigorously and in time, or will we remain imprisoned by a dangerous illusion?

We must abandon the conceit that individual, isolated, private actions are the answer. They can and do help. But they will not take us far enough without collective action. At the same time, we must ensure that in mobilizing globally, we do not invite the establishment of ideological conformity and a new lock-step "ism."

That means adopting principles, values, laws, and treaties that release creativity and initiative at every level of society in multifold responses originating concurrently and spontaneously.

Fifteen years ago, I made that case at the "Earth Summit" in Rio de Janeiro. Ten years ago, I presented it in Kyoto. This week, I will urge the delegates in Bali to adopt a bold mandate for a treaty that establishes a universal global cap on emissions and uses the market in emissions trading to efficiently allocate resources to the most effective opportunities for speedy reductions.

This treaty should be ratified and brought into effect everywhere in the world by the beginning of 2010 – two years sooner than presently contemplated. The pace of our response must be accelerated to match the accelerating pace of the crisis itself.

We also need a moratorium on the construction of any new generating facility that burns coal without the capacity to safely trap and store carbon dioxide.

And most important of all, we need to put a price on carbon – with a CO<sub>2</sub> tax that is then rebated back to the people, progressively, according to the laws of each nation, in ways that shift the burden of taxation from employment to pollution. This is by far the most effective and simplest way to accelerate solutions to this crisis.

The world needs an alliance – especially of those nations that weigh heaviest in the scales where earth is in the balance. I salute Europe and Japan for the steps they've taken in recent years to meet the challenge, and the new government in Australia, which has made solving the climate crisis its first priority.

But the outcome will be decisively influenced by two nations that are now failing to do enough: the United States and China. While India is also growing fast in importance, it should be absolutely clear that it is the two largest CO<sub>2</sub> emitters – most of all, my own country – that will need to make the boldest moves, or stand accountable before history for their failure to act. Both countries should stop using the other's behavior as an excuse for stalemate and instead develop an agenda for mutual survival in a shared global environment.

The future is knocking at our door right now. Make no mistake, the next generation will ask us one of two questions. Either they will ask: "What were you thinking; why didn't you act?" Or they will ask instead: "How did you find

the moral courage to rise and successfully resolve a crisis that so many said was impossible to solve?"

We have everything we need to get started, save perhaps political will, but political will is a renewable resource. So let us renew it, and say together: "We have a purpose. We are many. For this purpose we will rise, and we will act."

<http://www.nobelprize.org/mediaplayer/index.php?id=796>

## SPEECH #2

*Environmental protection – Abstracts of the Speech by M. Hubert Védrine, Minister of Foreign Affairs, at the Paris International Conference Centre, Paris 30.11.2001*

"Protecting the environment is essential for our planet. So logically it's a priority of our diplomatic action, especially since the 1992 Rio Earth Summit. Ever since then we have stepped up our efforts to address the growing concerns resulting from realization of the effects of predatory development.

However, despite substantial progress, we must clearly recognize that at international level there's still no consensus about how to protect the environment, with differences in approach between industrialized countries and also a deep divide between them and the developing countries.

The developing countries see environmental concerns as an attack on their ability to make the most of their comparative advantages. They are making this clear on all the issues under consideration, including the idea of moving towards the creation of a World Environmental Organization, as France has proposed on several occasions.

To resolve this problem, I suggest that we take further the approach defined at the Rio Summit, which inspired the Kyoto protocol, that of sharing and differentiating responsibility:

- sharing it in the face of global challenges;
- differentiating it by organizing transitional stages for the developing countries;
- the effort to bring developing countries up to the level of the developed world must be encouraged by technology and financial transfers;

But our partners from the developed countries must also be involved in this analysis of the obstacles to regulation.

International environmental protection calls, as does everything to do with the regulation of globalization, for strong conviction and determination in the pursuit of the objectives.

<http://www.ambafrance-uk.org/Environmental-protection-Speech-by>



## 2.2 COMMUNICATION MATERIAL ON ENVIRONMENT

### POSTERS

With the help of posters parties are able to approach a large number of potential voters. Because of the advantage of location parties can get their messages across very easily and stress their mindset on a specific topic. But next to the advantage of public awareness posters are not an effective tool for sharing knowledge and information. The message of a poster must in the best case come across at first sight since the fraction of time looking at the poster is regularly low.



Poster: Green Party (UK)



Poster: Socialist Alliance (Australia)

### LEAFLETS AND BROCHURES

Through leaflets and brochures parties are able to share knowledge and information with the public. Most importantly, this tool is not only about advertisement but particularly about content. A party may outline their political stance on a specific topic and give the voter possible ways to proceed. Thereafter, citizens can decide if they agree with the argument and favor the party in the future. The importance of this tool is obvious.



Leaflet: Green Party (Sweden)

<p><b>GREEN MEANS JOBS</b></p> <p>Green jobs are the jobs of the future. Many new jobs will be related to climate. Investments in railways, trams and cycle paths all create jobs. Wind power, wave power, solar power and energy efficiency investments create jobs. High climate ambitions are the answer to tackling the challenges of climate change, unemployment and a struggling economy.</p> <p>Entrepreneurs have a particularly important role to play in the development of society. Entrepreneurs often spread new ideas, environmental commitment and social responsibility. The Green Party wants to encourage this. We need to make it simpler, more secure and less risky to start up your own company. Then more people will have the courage to turn their visions into reality. Small companies will be able to grow. And Sweden will reap the benefits.</p> <p>It's time to move on from the throw-away society. The Green Party wants to encourage sustainable consumption by lowering VAT on services. It should be cheaper to repair things than</p>	<p><b>PROTECT OUR CLIMATE</b></p> <p>Society needs to be modernised. New policies are needed in order to cope with future demands. Sweden faces major challenges with regard to climate, the economy and jobs. The Green Party believes it has the answer. A Green Shift will help the climate, make society more modern and provide jobs and welfare. It will boost both ecology and the economy.</p> <p>Sweden must take its climate responsibility seriously. Countries that take the initiative in the field will be world leaders. Those who bring up the rear will get seriously left behind in terms of their economy and development. Our country can take the lead on the climate issue. The Green Party wants to carry out major infrastructure, technology and energy investments. Green investments will lead to jobs and sustainable growth, while slowing down the effects of climate change.</p> <p>It should make financial sense to live in a sustainable way. Each individual can make a difference. Every one of us has a role to play, and we need more people making more changes to their</p>
---	---

[http://www.mp.se/files/212300-212399/file\\_212341.pdf](http://www.mp.se/files/212300-212399/file_212341.pdf)

## 2.3 PRESS CONFERENCES

Holding Press Conferences is an important tool to inform the media as well as the public. Not only gives the party member in charge information about a specific topic, the participants also have the right to question the speaker making press conferences less predictable and as a consequence highly interesting. The possible subject-matters of a press conference differ widely and are not restricted to any field e.g. politically sensitive objects, abandoning rumors or personnel issues.



Obama announces Environment and Energy Team

A press conference can be used to announce new office holders.

<http://www.youtube.com/watch?v=ERNWRPaZ22A>

It may also be used to inform the public about a specific topic.

[http://www.youtube.com/watch?v=-aU\\_i3Mrq3s](http://www.youtube.com/watch?v=-aU_i3Mrq3s)



Green Party of Canada

## 2.4 PRESS RELEASES

A Press Release is a written statement to the media that can – just as a press conference – announce a range of new items such as personnel promotions, scheduled events, awards, or reactions to current events. Through the tool of press releases a party can communicate directly with members of the media. The aim is to attract favorable media attention.



PEI Progressive Conservative Party (Canada)



ACT (New Zealand)

## 2.5 TV DEBATES



Presidential Debate 2012

Another important communication tool for parties is the participation in political TV debates. A debate is a method of interactive argumentation. Not only does the party member being involved in a debate need profound knowledge of the topic that is being discussed, but she/he also should emotionally appeal to the audience. Despite these difficulties debates on television are very popular among politicians because a large number of voters can be addressed due to the nationwide broadcast.



Environmental Debate

Political Debates may take place right before the election as recently in the United States.

[http://www.youtube.com/watch?v=dkrwUU\\_YApE](http://www.youtube.com/watch?v=dkrwUU_YApE)

But they may also focus on a specific topic such as environment.

<http://www.youtube.com/watch?v=-nO3dBeh5n0>

## 2.6 PARTY WEBSITES



The Conservative Party (UK)

Party Websites play a decisive role in making programs and contents accessible to the public. In times of modern mass communication websites are available for a huge and still increasing number of citizens – most of them using the Internet as their primary source of information. Therefore, a properly structured web presence should display what a party stands for with respect to the different political fields.



Liberal Democrats (UK)  
link

The website of the Conservative Party (UK) gives the public the opportunity to inform themselves about the political stance of the party with regard to different matters.

[http://www.conservatives.com/Policy/Where\\_we\\_stand/Climate\\_Change\\_and\\_Energy.aspx](http://www.conservatives.com/Policy/Where_we_stand/Climate_Change_and_Energy.aspx)

In terms of environment you may usually find a large quantity of detailed information, as you can see on the website of the Liberal Democrats (UK).

<http://www.libdems.org.uk/environment.aspx>

## 2.7 SOCIAL MEDIA

### FACEBOOK

Facebook is a social networking service with over one billion active users playing an important role in the field of social media. Facebook is not only used as a tool for receiving information; the users also take part in debate clubs organized around specific topics, watch candidates activities and message questions. Thus, it serves as a connection between the politicians and the potential voters and is a powerful and popular new way to interact with the younger generation. Almost every party has its own profile on Facebook.

The web presence is primarily used to share information on recent political topics. Subscribers can participate through “liking”, commenting or sharing the provided information.



*Liberal Party (Australia)*



*Conservative Party (Canada)*

### TWITTER

The social networking service Twitter enables its users so send and read text-based messages. Users may subscribe to other users’ tweets and thereby follow their messages in the future. Next to the meaningless exchange of “social grooming” the service also gives the opportunity to share knowledge and individual opinions on a specific matter.

One very famous politician using Twitter is Barack Obama. He is using the network to stay in touch with his followers and distribute information about his daily work. Primarily, Twitter is about the creation of a close and face to face connection to the public.

<https://twitter.com/BarackObama>



*“Tweets from the President”*

### YOUTUBE

Another way for parties to distribute their program is the video-sharing website YouTube. Parties have the opportunity to upload, view and share videos. In relation to sharing content there are no limits. Particularly, parties will upload videos of speeches or press conferences held by a high-ranking official of the party.

The Christian Democratic Union (Germany) uses the tool of YouTube to share recent incidents and news with the public.

[http://www.youtube.com/user/cdu\\_tv](http://www.youtube.com/user/cdu_tv)



*CDU.TV Aktuell*





# CHAPTER 3

## Introduction on Sustainable Development, Climate Change, Energy Security and Natural Resource Management

### 1. Introduction to the Notion of Sustainable Development

Climate change, energy security and natural resource management are three global challenges related to the concept of Sustainable Development, an economic pattern and a political value in which the resources used today meet the needs of society tomorrow and preserve the environment to enable future generations to do the same. It has become a political notion of global concern. The United Nations took the lead in developing policies at international level.

Four texts define the concept of Sustainable Development as we know it today. It was first implied by the global understanding that economic development and environmental protection should go hand in hand. The Principles 9, 10 and 11 of the United Nations Stockholm Declaration on the "Human Environment" adopted in 1972 mention for the first time that: "environmental policies of all States should enhance and not adversely affect the present or future development potential of developing countries, nor should they hamper the attainment of better living conditions for all." The concept was first linked to developing countries and the conditions of economic progress in the developing world.

In 1980 the United Nations General Assembly adopted the resolution 35/56 stating that "the environment implications of poverty and under-development and the inter-relationships between development, environment, population and resources must be taken into account in the process of development. There is need to ensure an economic development process which is environmentally sustainable over the long run and which protects the ecological balance." This was the first official commitment issued by states, which led to the creation of the United Nations Environment Programme (UNEP) as well as the UN World Charter for Nature in 1982 which gives the first concrete programmes of actions for sustainable development, such as "military activities damaging to nature shall be avoided." (III, 20), "States shall co-operate in the task of conserving nature through common activities and other relevant actions, including information exchange and consultations." (III, 21, A) etc.



Phnom Penh 2012

*"There is need to ensure an economic development process which is environmentally sustainable over the long run and which protects the ecological balance."*



*"Cambodia has an abundance of rich natural resources, particularly extensive forests and associated forest products, fertile soils, dependable water resources, rich inland fishery resources, diverse mineral deposits in addition to its biological diversity."*

The first proper definition was given by the Brundtland Commission in 1987 as "development that meets the need of the present without compromising the ability of future generations to meet their own needs". This was later completed in 1992 through the Rio Declaration stating that: "in order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it." It led sustainable development to being a political leitmotif for environment and development.

However, some argue that this notion is unclear – its goal being "development" which can be different for every actor of change in a country. Its meaning and scope are making it difficult to get a clear regulatory framework. This is also the reason why sustainable development is closely linked to climate change and energy security, which are more concrete challenges to be faced.

In the Cambodian context, the country is predominantly dependent on its natural resource base for its current and future socioeconomic development. It has an abundance of rich natural resources, particularly extensive forests and associated forest products, fertile soils, dependable water resources, rich inland fishery resources, diverse mineral deposits in addition to its biological diversity. However, high population growth and increasing economic demands by this growing population have exerted ever increasing pressure on these resources than before. Increasing consumption of natural resources and environmental pollution including water, soil and the atmosphere are causing high potential risks and hazards to the public health and the environment, and are jeopardizing the long term economic development of the country. Land conflicts and trans-boundary problems also contribute to the pressure on the environment. Cambodia also faces many problems related to social and human development stemming from poverty. Hunger is also an urgent problem that needs to be addressed.

*Sources: Wikipedia/Sustainable Development, Max Planck Encyclopaedia of Public International Law, UN World Charter for Nature, "National Sustainable Development Strategy for Cambodia", UNEP.*

## 2. The Notion of Climate Change

### 2.1 DEFINITION

Climate is not synonymous with weather, which describes only the climate for a certain amount of time in a specific location. According to the United Nations Framework Convention on Climate (UNFCCC) adopted 20-years-ago, climate change is “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere”. Human activity is not the only cause of climate change, which can also result from other physical events such as volcanic eruptions and general natural phenomena.

However, human-induced warming of the climate was proven and is expected to continue throughout the 21st Century and beyond. Therefore, the UNFCCC adopted the Kyoto Protocol in 1997 to fight global warming and reduce greenhouse gas concentrations. It was only in 2010 that the protocol became operational through the Marrakesh Declaration, setting compliance rules, monitoring and reporting obligations at an international level.

Moreover, there is a need to distinguish between the terms of “climate mitigation” and “climate adaptation.” While climate change mitigation on the one hand is human intervention to reduce the sources, or enhance the sinks, of greenhouse gasses in order to reduce the effects of global warming, in contrast, adaptation to global warming involves acting to tolerate the effects of global warming. Even if emissions are stabilized relatively soon, climate change and its effects will last many years, and adaptation will be necessary. For instance, recently there has been an increasing use of artificial snow-making in Europe. Examples of climate mitigation on the other hand include using fossil fuels more effectively, switching to renewable energy or improving the insulation of buildings.

There is no single instrument measuring the effects of climate change and the impact of human activities on the environment. For example, thousands of land and ocean temperature measurements are recorded each day around the globe by climate reference stations, weather stations, ships, buoys and autonomous gliders in the oceans. They are used as indicators of changes such as in greenhouse gas emissions levels, air and sea temperature, snow, glacial and permafrost melt, radiocarbon dating, lake sediments etc. In this context, climate change defines conditions and orientation to achieve sustainable development.



<http://www.guardian.co.uk/environment/climate-change>



*November 2012 Selected Climate Anomalies and Events Map*

Therefore, it is closely related to natural resources and, in turn, conditions the management of energy resources to meet needs of the population.

Sources: UNFCC, National Climatic Data Centre (U.S. Department of Commerce), IFM-SEI (International Falcon Movement – Socialist Educational International), Wolfgang Behringer, *Kulturgeschichte des Klimas*, translated: Wolfgang Behringer, *A Cultural History of Climate*, Cambridge 2010, Wikipedia/Climate Change Mitigation.

## 2.2 IMPLICATIONS AT GLOBAL, REGIONAL AND LOCAL LEVELS

### The Global Level



#### TEXT #1

*International climate change negotiations: Key lessons and next steps, Smith School of Enterprise and the Environment, July 2011 (pages 7-9)*



The problem of climate change first emerged at an international level by the first IPCC Assessment Report in 1990 which highlighted the issue as a subject in need of a political platform. The IPCC was created in 1988 by the World Meteorological Organisation and the United Nations Environment Program to provide a review of the scientific consensus view on the subject.

The findings of the IPCC spurred the beginning of climate change negotiations in 1991 which have since developed in, essentially, three stages.

Initially, climate negotiations acted to establish a framework for governance. This took the form of the UNFCCC, which was adopted in 1992 and entered into force two years later.

Following this, negotiations proceeded to set up the Kyoto Protocol. These began in 1995. In 1997 the Kyoto Protocol was adopted and in 2001 the process was completed when detailed rules for the Protocol's implementation were finalised in Marrakesh, Morocco at the seventh Conference of the Parties (COP).

The Kyoto Protocol established emissions reduction targets for 37 developed countries and the European community; this group referred to under the Kyoto Protocol as Annex B countries. The individual emissions targets were intended to reduce emissions by developed countries by 5% against the 1990 levels over the 5-year period of 2008-2012. No targets were set for developing countries.

In addition, the Kyoto Protocol established market-based mechanisms to help countries reach their targets in a cost-effective way. The major instruments are the Emissions Trading Schemes (ETS), inspired by the success of the SO<sub>2</sub> trading schemes in the US at reducing acid rain; the Clean Development Mechanism (CDM); and Joint Implementation (JI).

Currently negotiations are at the third stage: the formation of policy for the post-2012 period when the Kyoto Protocol's first commitment period ends.

These negotiations have proceeded along two tracks. The first track, known as the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP), is intended to negotiate improvements in the Kyoto Protocol and a second set of emissions targets. This track covers only the developed countries signed up to the first commitment period of the Kyoto Protocol (not the U.S.).

The second track was launched by the Bali Action Plan to work on an 'agreed outcome' under the UNFCCC and is known as the Ad Hoc Working Group on Long-Term Co-operative Action (AWG-LCA). This includes negotiations on mitigation action for developed countries; Nationally Appropriate Mitigation Action (NAMAs) by developing countries, financial arrangements, adaptation, technology transfer and a system for monitoring, reporting and verification.

There has been much debate about the form of the agreement for the post-2012 period, principally, whether or not it should take the form of a single instrument that would replace the Kyoto Protocol or two instruments, one to extend the Kyoto protocol and the other under the UNFCCC.

There are divisions among countries, with developed countries generally preferring a single instrument and developing countries favouring two instruments.

So far the current phase of the negotiations has been unsuccessful in its aim to produce a new legal instrument for the period beyond 2012. Despite some advances made in other areas the global legal deal remains elusive.

In a very important sense, the Kyoto process can be deemed a failure. The original objective, for the developed (Annex 1) nations to reduce emissions by 5% below 1990 levels by 2012—although far too modest to halt global warming—will not be met without the use of the compliance system.

Over the period since the adoption of the UNFCCC thousands of negotiators, meeting at least twice a year, have formed themselves into a negotiating community which is unable to move with the times. Since 1992 the science of climate change has become considerably more sophisticated and the need to defossilize the global economy by the middle of the 21st Century has emerged.

Since that time, also, a group of nations representing a very large proportion of the world's population has formed a new category of emerging powers. China, India, Brazil, Mexico, South Africa and Indonesia can no longer be placed in a



category of 'non-Annex 1' countries together with Ethiopia, Haiti etc. And CO<sub>2</sub> emissions from China now match the U.S. at the head of the world emissions table.

Arguably, however, more progress has been made since 2000 outside the of UNFCCC process.

The British Government took a leading role in 2003, unilaterally declaring its intention to reduce CO<sub>2</sub> emissions by 60% by 2050, and introducing its internal Emissions Trading Scheme (ETS) in 2004. This was followed by the European Union's adoption of an ETS in 2005.

In 2005 the U.K. Government decided to place climate change at the top of its international agenda, initiated by an international conference on the impacts of climate change. This announcement was followed by successive meetings of G20 science, energy and environment ministers, all leading to the G8 meeting at Gleneagles, Scotland with the U.K. Government in the Presidency.

Recognising the rising importance of the rapidly emerging powers, the heads of states of China, India, Brazil, Mexico and South Africa were invited to participate in the top agenda item, climate change, thus creating the G8+5 grouping.

Over subsequent years each heads of state in the presidency of the G8 retained the G8+5 format and maintained climate change as the lead agenda item.

With the European ETS inaugurated in 2005, a new factor emerged. As this new trading market in CO<sub>2</sub> was established in London, the financial community and the business community became engaged in the issue of global warming with important consequences. The CEOs of many major international companies became champions of the need for action on climate change. This was a very important message for the politicians. A major section of the business community was urging action.

In addition, the number of pieces of legislation on climate change at a national level have increased considerably in the past few years. Whilst negotiations at a global level appear to have stalled, action at national level is progressing. The amount of action at this national level should be ramped up over the next few years.

[http://www.smithschool.ox.ac.uk/wp-content/uploads/2011/03/Climate-Negotiations-report\\_Final.pdf](http://www.smithschool.ox.ac.uk/wp-content/uploads/2011/03/Climate-Negotiations-report_Final.pdf)

**TEXT#2**

*Facing the consequences – Global action is not going to stop climate change. The world needs to look harder at how to live with it – November 25, 2010 from The Economist print edition*



The world warmed by about 0.7°C in the 20th Century. Every year this century has been warmer than all but one in the last (1998, since you ask). If carbon-dioxide levels were magically to stabilise where they are now (almost 390 parts per million, 40% more than before the industrial revolution) the world would probably warm by a further half a degree or so as the ocean, which is slow to change its temperature, caught up. But CO<sub>2</sub> levels continue to rise. Despite 20 years of climate negotiation, the world is still on an emissions trajectory that fits pretty easily into the “business as usual” scenarios drawn up by the Intergovernmental Panel on Climate Change (IPCC).



The fight to limit global warming to easily tolerated levels is, therefore, over. Analysts who have long worked on adaptation to climate change are finding ways to live with scarcer water, higher peak temperatures, higher sea levels and weather patterns at odds with those under which today’s settled patterns of farming developed are starting to see their day in the uncomfortably hot sun. That such measures cannot protect everyone from all harm that climate change may bring does not mean that they should be ignored. On the contrary, they are sorely needed.

**PUBLIC HARM**

Many of these adaptations are the sorts of thing like moving house, improving water supply and sowing different seeds that people will do for themselves, given a chance. This is one reason why adaptation has not been the subject of public debate in the same way as reductions in greenhouse-gas emissions from industry and deforestation have. But even if a lot of adaptation is done privately, it is also a suitable issue for public policy.

For example, some forms of adaptation flood barriers are clearly for the public good, best supplied through collective action. Adaptation will also require redistribution. Some people and communities are too poor to adapt on their own. If emissions caused by the consumption of the rich imposes adaptation costs on the poor justice demands recompense.

Furthermore, policymakers’ neat division of the topic of climate change into mitigation, impact and adaptation is too simplistic. Some means of adaptation can also act as mitigation; a farming technique which helps soil store moisture better may well help it store carbon too. Some forms of adaptation will be hard to distinguish from the sort of impact you would rather avoid. Mass migration is



a good way of adapting if the alternative is sitting still and starving but to people who live where the migrants settle it may look awfully like an unwelcome impact.

It's frequently private, and slightly blurry, nature is not the only reason why adaptation has been marginalised. The green pressure groups and politicians who have driven the debate on climate change have often been loath to see attention paid to adaptation on the grounds that the more people thought about it the less motivated they would be to push ahead with emissions reduction. Talking about adaptation was, for many years, like emitting flatulence at the dinner table says an academic who has worked on adaptation over the past decade. Now that the world's appetite for emissions reduction has been revealed to be chronically weak putting people off dinner is less of a problem.

Another reason for taking adaptation seriously is that it is necessary now. Events such as this year's devastating floods in Pakistan make it obvious that the world has not adapted to the climate it already has, be it man-made or natural. Even if the climate were not changing, there would be two reasons to worry about its capacity to do more harm than before. One is that it varies a lot naturally and the period over which there are good global climate records is short compared with the timescale on which some of that variability plays out. People thus may be ignoring the worst that today's climate can do, let alone tomorrow. The other is that more lives, livelihoods and property are at risk, even if hazards do not change, as a result of economic development, population growth and migration to coasts and floodplains.

### WATCHING THE WEATHER



People will also have to contend with unpredictable shifts in weather patterns. Many models say the factors that give rise to the Indian monsoon are likely to weaken. The strength of the rainfall within it, though, is likely to rise, because the air will be warmer and warmer air can hold more water. No one can say how these two trends will play out. Similar uncertainties dog predictions about the great movement of warmth back and forth across the Pacific Ocean known as El Nino and other climatic oscillations. In general, the closer you want to get to firm statements about what is likely to happen, the less adequate current climate science is revealed to be.

The best starting point for adaptation is to be rich. It is not foolproof: not even the rich can buy off all hazards. Rich countries and individuals will make poor decisions. The need to restrict farming with subsidised water in a drier south-western United States does not mean that the political means of doing so will be found before damage is done. But wealth buys information (a lot of people are studying what to do in the south-west) and it opens up options.

Resources help people adapt both before the fact, by reducing risks, and after it, by aiding recovery from harm.

Wealth can create hedges against the effects of climate change, even if they are not conceived of as such. Economic development should see improvements in health care that will, in aggregate, swamp the specific infectious-disease threats associated with climate change.

### LONDON VERSUS THE OCEAN

New York might, in principle, protect itself against a hurricane-driven storm surge on top of a higher sea level with a more massive set of barriers that could seal the Verrazano Narrows and the smaller spans of Throgs Neck, at the base of Long Island Sound, and the Arthur Kill, west of Staten Island. However, as Matthew Kahn, an economist at the University of California, Los Angeles, points out in his book, *Climatopolis*, the politics of such huge and enormously costly engineering might prove difficult. New Amsterdam does not have the attitudes of Old Amsterdam.

*Poor countries will often lack the financial means, technical expertise or political institutions necessary for such endeavours.*

Poor countries will often lack the financial means, technical expertise or political institutions necessary for such endeavours. Yet they are often at increased risk, principally because they are usually more dependent on farming than rich countries and no other human activity is so intimately bound up with the weather. Crops are sensitive to changes in patterns of rainfall and peak temperature as well as to average temperature and precipitation and so are the pests and diseases that attack them.

In its 2007 assessment, the IPCC's picture of agriculture in a warmer world was one of two halves. In low latitudes higher temperatures are likely to shorten growing seasons and stress plants in other ways. In high latitudes, if warming is moderate, growing seasons are expected to lengthen and yield to the rise in temperature, in part because raised CO<sub>2</sub> levels aid photosynthesis. Despite many warnings of doom, yields of arable crops have grown remarkably in the past half-century. Among other things, this intensification of farming has saved a great deal of wilderness from the plough. To feed today's population with 1960's yields would require an area of extra farmland roughly as big as Russia. In that it avoids deforestation, intensification is one of a number of adaptation strategies which also help mitigation.

### KEEPING THE POOR ALWAYS WITH US

Even if the world contrives to keep feeding itself without too much ecosystem damage, many of those dependent on agriculture or in poverty could still suffer a great deal. Regional droughts could wreak havoc, with bad ones causing global surges in food prices.

Farmers may be cheered by the thought that food prices are likely to rise. For poor farmers, who spend much of their income on food, this is a mixed blessing, especially if higher frequencies of drought make prices more volatile too. For poor people more generally, it is even worse news.

Even if prices are higher, crops more resilient and insurance more readily available, abandoning the farm may be the way many farmers choose to adapt. It may be prudent even before the fact. Paul Collier, Gordon Conway and Tony Venables, three British development specialists, have suggested that attempts to provide anticipatory help to poor African farmers could be badly overdone. Better to encourage them into cities and to reform labour markets, restrict the opening and closing of firms, and so forth, in ways that will help them earn money.

More than half the world's people live in cities already. Three-quarters or more may do so by mid-century. Encouraging this trend further, at least in some places, may be a useful way of reducing the economy's exposure to climate change. Statistical analyses by Salvador Barrios of the European Union's Joint Research Centre and his colleagues suggest that climate change is already a factor in African urbanisation. A related study shows strong climate effects on sub-Saharan agriculture in Africa not seen elsewhere, which is not, perhaps, surprising given the huge effect of the 1980s droughts across the Sahel.

A downside to urbanisation is that cities are hotter than the surrounding countryside, creating what meteorologists call "urban heat islands". But there are ways of dealing with this. More greenery in a city, spread through streets and over roofs, means more cooling as water evaporates from leaves. It's not that green can be painted white, to reflect sunlight.

And cities have intrinsic advantages. City dwellers' emissions per person tend to be lower, and the more planners can do to increase population density the better. Protecting a single port city from floods is easier than protecting a similar population spread out along a coastline of fishing villages (though when things go wrong disasters can be correspondingly larger and harder to address). Cities have higher rates of innovation and of developing new businesses, business models and social strategies, formal or informal.

#### **POWERS OF EXAMPLE**

The cost of all this adaptation is hard to judge and is another area where adaptation and impact become confused. Melissa Dell of the Massachusetts Institute of Technology and her colleagues argue that in developing countries GDP growth has been lower in hotter years than in cooler ones. This may carry over into longer-term increases in temperature. The mechanism is obscure: it may simply be that overheated people work less hard. That can be seen either

*"Money and know-how are essential, but so is example."*

as adaptation or as a worrying impact, slowing down the economic growth, which is the surest foundation for other, more positive adaptations.

If climate change does slow poor countries' growth rates the onus on rich ones to help will be even larger. This was recognised to some extent in the Copenhagen accord, which proposed that \$100 billion a year should flow from north to south by 2020, to be split between investments in mitigation and adaptation. But whereas investments in mitigation are fairly easy to understand—build windmills not coal-fired power stations—and so on, investments in adaptation are harder to grasp. Action on climate bleeds into more general development measures.

The poorest countries all have wish-lists for adaptation funding, drawn up in the UN climate-convention process, of which the Copenhagen and Cancun meetings are part. Money and know-how are essential, but so is example. Rich countries can show, through their own programmes for flood defence, zoning laws, sewerage and so on that adaptation must be part of the mainstream of political and economic life, not an eccentric and marginal idea. Adaptation by and for the poor alone is likely to be poor adaptation.

<http://www.economist.com/node/17572735>

## The Regional Level

### TEXT #3

*ASEAN [Association of Southeast Asian Nations] urged to stand together on climate change, Veronica Uy, 19 July, 2012*



Environmental activists attending a regional forum on climate change said the Association of Southeast Asian Nations can still redeem itself from its failure to issue, for the first time in its 45-year history, a joint communiqué after the recent foreign ministers' meeting in Cambodia by setting aside their differences to "show solidarity" on an issue that will affect the lives of 600 million residents of the region.

"This is not about politics, not about sovereignty, not about territorial disputes, but about the survival of the 600 million population in the 10 countries of ASEAN," said former senator and former Philippine ambassador to ASEAN Orlando Mercado, who is now secretary general of the Eastern Regional Organization for Public Administration and ASEAN for A Fair, Ambitious, and Binding Global Climate Deal.



Mercado noted that the climate change crisis has reached a point that cooperation that involves and engages citizens is needed.

Philippine Climate Change Commissioner Naderev Sano said a united stand is paramount in making the world know that Southeast Asia is the region that faces the highest risks to climate change effects.

"Individual ASEAN countries exerting mitigation and adaptation efforts in reaction to the worsening effects of severe climate change won't be taken seriously," Sano said, challenging ASEAN member-states to come up with a common stand.

Lawyer Zelda Soriano, Greenpeace regional political adviser and Oxfam policy and research adviser for East Asia, said she and fellow environmental advocates are calling on everyone in the region to take up and champion the cause of reducing carbon emissions by stopping deforestation and pushing for renewable energy use, among others.

"Countries and people of the region share common physical characteristics, ecological features, and climatic similarities. They are bound by the same natural features and would be affected by either protection or non-protection of the effects of climate change," she said.

*"Floods, drought and other climate extremes are becoming more frequent, intense and devastating in Southeast Asia due to global warming. This should compel the 10-nation Association of the Southeast Asian Nations to set aside conflict and act together to address this massive problem,"*

The forum, "Advancing our Regional Interests in the Climate Change Negotiations," was attended by diplomats, government officials, civil society representatives, and UN climate change negotiators from Indonesia, Malaysia, Philippines, Thailand, Vietnam, and Brunei.

It was organized by Greenpeace and Oxfam, EROPA, and Young Progressives Southeast Asia (YPSEA).

The forum aims to provide a venue for government representatives and civil society to see each other's perspectives on a regional solution to addressing climate change.

These will be presented back to the participants' respective countries, with the goal of being fed into the respective country positions in the UNFCCC, Soriano said.

"Floods, drought and other climate extremes are becoming more frequent, intense and devastating in Southeast Asia due to global warming. This should compel the 10-nation Association of the Southeast Asian Nations to set aside conflict and act together to address this massive problem," said Soriano.

"The UN convention is still the best and perhaps the only multilateral negotiations space to agree on a global deal necessary to address climate change. But by the state of negotiations, ASEAN which aims for an economic community in 2015, cannot just wait or completely rely on the outcome of the UN talks for immediate and strategic climate solutions," she added. "Agreeing on a low carbon development framework in its regional economic integration is the opportunity

for ASEAN governments to address the particular vulnerability of the region to climate impact without compromising economic development.”

Soriano emphasized that an agreement to harmonize incentive policies for no-carbon renewable energy among willing and able countries of ASEAN and possibly with its bilateral country partners, China and India, in the context of economic community building will send an encouraging signal to investors.

Riza Bernabe, policy and research adviser of Oxfam in Southeast Asia, lamented that the UNFCCC Durban meeting last December 2011, which extended the Kyoto Protocol and provided the mandate for negotiation of a legally binding agreement requiring major emitters to reduce harmful greenhouse gas emissions, failed to deliver on the crucial issue of ensuring concrete sources of funds to fill the Green Climate Fund.

The Green Climate Fund is a mechanism within the UNFCCC by which developed countries shall provide finance for climate change mitigation and adaptation for developing countries.

“Within the UNFCCC talks, clarity on the sources of climate finance and the Green Climate Fund is important to the ASEAN. Without this clarity on sources of finance, developing countries will not have the necessary funds to cope with the negative effects of climate change and help the people, especially the poorest and most vulnerable,” said Bernabe.

<http://www.interaksyon.com/article/37972/asean-urged-to-stand-together-on-climate-change>

*“...an agreement to harmonize incentive policies for no-carbon renewable energy among willing and able countries of ASEAN and possibly with its bilateral country partners, China and India, in the context of economic community building will send an encouraging signal to investors.”*

#### TEXT #4

*Climate Change Impacts: Southeast Asia – International Fund for Agricultural Development (IFAD), April 2009.*



The IPCC Assessment Report states that South East Asia is expected to be seriously affected by the adverse impacts of climate change since most economies rely on agriculture and natural resources. Southeast Asia is affected by annual climate extremes, particularly floods, droughts and tropical cyclones, while large areas of the region are highly prone to flooding and influenced by monsoons. Such climatic impact will severely threaten the livelihood of poor people living in rural areas with limited adaptive capacity. Some of the projected impacts of climate change on main sectors that specifically apply to the Southeast Asia are listed below.



### AGRICULTURE

Climate change is expected to affect agriculture in Southeast Asia in several ways. For example, irrigation systems will be affected by changes in rainfall and runoff, and subsequently, water quality and supply. Yet the region already faces water stresses and future climate change effects on regional rainfall will therefore have both direct and indirect effects on agriculture.

Faced with 2-4 °C, studies suggest the potential for gains and losses. For example, for less than 2 °C change, agricultural losses are experienced in the Philippines, while rice yields in Indonesia and Malaysia are projected to increase. In fact, although climate change impacts could result in significant changes in crop yields, production, storage, and distribution, the net effect of the changes around the region is uncertain because of local differences in growing season, crop management, etc. However, climate studies generally indicate increasing rainfall throughout much of the region. But even with rainfall increases, temperature increase may threaten agricultural productivity, stressing crops and reducing yields. In particular, scientific studies document a high sensitivity of major cereal and tree crops to changes in temperature, moisture, and carbon dioxide concentration of the magnitudes projected for the region. For example, projected impacts on rice and wheat yields suggest that any increases in production associated with CO<sub>2</sub> fertilization will be more than offset by reductions in yield resulting from temperature and/or moisture changes.

Such agricultural impacts particularly affect low-income rural populations that depend on traditional agricultural systems or on marginal lands.

### COASTAL SYSTEMS

The coastlines of Southeast Asia are highly vulnerable to the effects of climate change due to the geology and geography of some of the region's coastal areas, the growing density population and infrastructure in the coastal zone. Moreover, large tidal variations, tropical cyclones, coupled with the potential increase in regional rainfall, suggest the potential for increased coastal hazard.

Sea-level rise and increases in sea-surface temperature are the most probable major climate change-related stresses on coastal ecosystems. In particular, sea-level rise is the most obvious climate-related impact in coastal areas. Densely settled and intensively used low-lying coastal plains, islands, and deltas are especially vulnerable to coastal erosion and land loss, inundation and sea flooding, upstream movement of the saline/freshwater front, and seawater intrusion into freshwater lenses. Especially at risk are the large deltaic regions of Bangladesh, Myanmar, Vietnam and Thailand; the low-lying areas of Indonesia, the Philippines and Malaysia. International studies have projected the displacement of several million people from the region's coastal zone in the

*"But even with rainfall increases, temperature increase may threaten agricultural productivity, stressing crops and reducing yields."*

event of a 1 meter rise in sea level. The cost of response measures to reduce the impact of sea level rise (30-50 cm) in the region could amount to millions of dollars per year.

## ECOSYSTEMS

Ecosystems in the Southeast Asia region represent a key asset contributing to the regional economy by providing food and water that sustain human life as well as natural resources such as timber and fisheries that support commercial enterprises. Degradation and loss of ecosystems pose a serious threat to the economic, social and cultural stability of the region since poor communities are dependent upon such ecosystems.

*"Degradation and loss of ecosystems pose a serious threat to the economic, social and cultural stability of the region since poor communities are dependent upon such ecosystems."*

Land-use change and degradation, over-exploitation of water resources and biodiversity and contamination of inland and coastal waters already threaten many species. Scientific assessment documents that coral reef communities, mangrove wetlands, tropical and temperate forest are particularly affected. Coral reefs may be able to keep up with the rate of sea-level rise but may suffer bleaching from higher temperatures. For example, the 1997/1998 El Nino event caused widespread bleaching of coral reefs in the region including Indonesia, Thailand, Cambodia and Malaysia. Landward migration of mangroves and tidal wetlands is expected to be constrained by human infrastructure and human activities. In particular, mangrove communities are affected by sea level rise, rainfall patterns and runoff that change the flow of freshwater to the coastal zones and, consequently, the distribution of proper saline habitat for mangroves. In particular, projected increases in evapotranspiration and rainfall variability are likely to have a negative impact on the viability of freshwater wetlands, resulting in shrinkage and desiccation.

Climate studies also suggest that some Southeast Asia forests and vegetation may experience some positive effects from climate change. They also indicate significant dieback of tropical vegetation in some areas of the region. In addition, climate change is expected to change disturbance regimes within forest communities, affecting the frequency and intensity of pest outbreaks and wildfire. Therefore changes in the distribution and health of rainforest and drier monsoon forest will be complex. For example, in Thailand the area of tropical forest could increase from 45% to 80% of total forest cover.

## WATER

Maintaining the security of water resources is a key priority for the Southeast Asian poor rural populations. The region already faces water stresses with many areas often dependent on limited groundwater and rainfall collection. Climate change will further aggravate water shortage by extreme events such as droughts



which undermine food security, or extreme rainfall events which increase the risk of flooding. Challenges to water resource management will therefore be exacerbated by a rise in the sea level which contribute to salt-water intrusion into available freshwater resources.

*"...a reduction in the flow of snow-fed rivers, coupled with increases in peak flows and sediment yields, may have serious impacts on hydropower generation, urban water supply and agriculture."*

Scientific assessments project changing patterns of runoff and river flows in the region in the next decades, as well as increase in water management costs and increases of poor rural people affected by water stress. In particular, a reduction in the flow of snow-fed rivers, coupled with increases in peak flows and sediment yields, may have serious impacts on hydropower generation, urban water supply and agriculture. Availability of water from snow-fed rivers could increase in the short term but decrease in the long term. Runoff from rain-fed rivers may change in the future, although a reduction in snowmelt water would result in a decrease in dry-season flow of these rivers. Larger populations and increasing demands in the agricultural, industrial, and hydropower sectors will put additional stress on water resources. Pressure will be most evident on drier river basins and those subject to low seasonal flows.

Hydrological changes in island and coastal drainage basins are expected to be small, apart from those associated with sea-level rise. However, national studies suggest for both gains and losses due to projections of increased runoff in some river basins in response to increasing rainfall. For example, water stress in the Mekong Delta rises, and water shortages in the Philippines may rise or fall. [http://www.ifad.org/events/apr09/impact/se\\_asia.pdf](http://www.ifad.org/events/apr09/impact/se_asia.pdf)

## The National Level



### TEXT #5

*Cambodia Environmental and Climate Change Policy, University of Gothenburg, 2009 (pages 3-5)*



The key environmental problems (further described below) in Cambodia include habitat loss and declining biodiversity (in particular destruction of mangrove swamps and declining fish stocks), deforestation, land degradation, natural hazards and disasters e.g. floods and droughts and water pollution. Climate change is expected to increase the frequency and intensity of extreme weather events such as floods, droughts and windstorms, as well as the problems associated with sea level rise.

Loss of Ecosystem Services and Biodiversity. Cambodia is endowed with a rich biodiversity. Its natural resources, complex hydrological regimes, and diverse ecosystems provide a wealth on which a majority of the population depends. The Tonle Sap River and Lake are examples of important ecosystems that, for instance, regulate the floodwater from the Mekong River and provide enormous fishing potential. The livelihoods of a majority of the people living in the rural areas around the Tonle Sap Lake depend on the annual flood pulse and the resources it enables. The regular flooding provide important breeding and feeding grounds for fish and other species and is crucial for the continuous provisioning of fundamental ecosystem services for human welfare. The Tonle Sap floodplain has been given the status of international biosphere reserve. There is evidence of declining productivity of Cambodia's fisheries due to overfishing and destruction of critical habitats including flooded forests and the drainage of wetlands. Besides leading to overexploitation of its resources, mismanagement and corruption is undermining food security, human rights, basic social needs and is failing to deliver fiscal income from the fishery sector. Other biodiversity threats include increasing population, deforestation, low levels of public participation in decision making, natural disasters, climate change, loss of habitat through overexploitation of biological resources, wildlife trade, water pollution, unsustainable agricultural practices and weakly implemented policies.

*"Besides leading to overexploitation of its resources, mismanagement and corruption is undermining food security, human rights, basic social needs and is failing to deliver fiscal income from the fishery sector."*

## DEFORESTATION

The forests in Cambodia provide important livelihood opportunities and ecosystem services, including climate regulation and water purification, and help to regulate water flow in one of the world's largest river basins, the Mekong. Although the deforestation rate in Cambodia has decreased during the past few years due to efforts to pursue forestry reform, it remains high. Between 1990 and 2005 the annual average deforestation rate was 1.4% - almost three times the global average. In total, the forest cover has decreased by 15% since the 1970s. Approximately 59% of Cambodia's total land area is covered by forests (some 10.6 million hectares). Deforestation and associated loss of biodiversity undermine the resilience of the forest ecosystem to threats such as disease and climate change. The main causes of deforestation are illegal logging (up to 94% of the total deforestation is estimated to be illegal), increased demand for fuel wood and charcoal, a lack of transparency in the concession system and unsustainable harvesting by concessionaires, poor management, demographic pressure including expansion of agricultural land due to an increasing population, new human settlements and land grabs. Since road access is a strong driving force for deforestation and new roads have been built into the north eastern parts of Cambodia there is a clear risk of accelerating deforestation. One of

*"Between 1990 and 2005 the annual average deforestation rate was 1.4% - almost three times the global average. In total, the forest cover has decreased by 15% since the 1970s."*

the major challenges in combating deforestation in the country is corruption, which has greatly hindered the efforts to conserve the protected forests and natural parks.

#### **LAND DEGRADATION**

Cambodian soils tend to be of low fertility and the agricultural productivity is largely dependent on deposition of silt from annual floods, the use of animal manures, and by rotational systems in the uplands. Soil infertility has been recognised as one of the most serious constraints to crop yield improvement in Cambodia. Land degradation is a growing concern and soil erosion is a major problem. The main causes of erosion are deforestation and unsustainable agricultural practices, which pose a risk to food security. Furthermore, overuse of pesticides is a growing and serious threat to food security, human health and pollution to land and water. Agricultural expansion is limited by the presence of an around 4-6 million landmines, which are estimated to restrict access to 40% of the arable land.

#### **WATER POLLUTION AND SCARCITY**

Fresh water resources are abundant in Cambodia but, ironically, water shortages are common all year around. Although national water-related activities are not well developed, Cambodia is vulnerable to upstream water activities. Construction of dams in the Mekong River will have large effects on the flood pulse, fisheries and agricultural productivity. Poorly planned water infrastructure projects have large impact on downstream communities. Industrial point-source pollution to water is a minor problem in Cambodia, due to the low level of industrialisation and the chemical quality of most urban and rural drinking water sources is generally good. However, naturally occurring arsenic in (about 9% of the) groundwater sources has been detected at levels above the World Health Organisation [WHO] guideline value in five of 13 provinces. Furthermore, increased use of agrochemicals poses an escalating threat to both surface and groundwater quality. Marine and coastal ecosystems (including mangroves) are threatened by charcoal mining, shrimp aquaculture offshore oil and gas development, shipping, the hospitality business and future sea-level rise.

#### **NATURAL HAZARDS AND DISASTERS**

Floods (and occasional droughts and windstorms) are quite frequent in Cambodia and appear to be increasing since 1989 when statistics first became available. For example, the flooding in 2000-2002 was the worst in recent history, resulting in a high number of internally displaced people, hundreds of deaths and economic losses. Deforestation and soil erosion exacerbates problems

*"Poorly planned water infrastructure projects have large impact on downstream communities."*

from flooding. As deforestation continues the supply of water will become less regular and increased flooding could put the Phnom Penh population in danger. In many cases it is the unpredictability of the floods (e.g. floods coming at unexpected times of the year) that causes problems, rather than the flood itself, as communities are in many cases well adjusted to responding to, and benefitting from, seasonal flooding.

### CLIMATE CHANGE

Cambodia contributes little to climate change but will be affected by its impact. Although Cambodia is not highly exposed to climate hazards (except the Mekong Delta on the border to Vietnam) almost all the provinces in Cambodia are vulnerable to climate change due to their low adaptive capacity and dependence on climate-sensitive livelihoods. As much as climate change mitigation is about energy, climate change adaptation in Cambodia is largely about water and health concerns and the strengthening of institutional capacity. The climate change impacts in Cambodia will largely be felt in Tonle Sap through changed water flows in the Mekong altering the unique flood pulse system and in coastal zones through sea-level rise, increased erosion and salinisation. It is likely to be wetter, with higher water levels and more extensive flooded area as well as longer flood duration. However the effects of climate change on the monsoon system are not yet fully understood. Responding to climate change should start by linking efforts to reduce vulnerability to present climate-related disasters with those aimed at building longer-term resilience to climate change. It is important to note that climate change is not the only factor affecting the Mekong flows: planned large-scale hydropower dams are estimated to have a remarkable impact on the quantity and quality of the flow. The combined impact is a serious concern for the Tonle Sap.

[http://www.sida.se/Global/Countries and regions/Asia incl. Middle East/Cambodia/Environmental Policy Brief Cambodia.pdf](http://www.sida.se/Global/Countries%20and%20regions/Asia%20incl.%20Middle%20East/Cambodia/Environmental%20Policy%20Brief%20Cambodia.pdf)

*"The climate change impacts in Cambodia will largely be felt in Tonle Sap through changed water flows in the Mekong altering the unique flood pulse system and in coastal zones through sea-level rise, increased erosion and salinisation."*

### TEXT #6

*Understanding public perceptions of climate change in Cambodia – Oxfam, Danida and UNDP, January 2011 (pages 34-38).*



### WHAT ARE CAMBODIANS ALREADY DOING TO RESPOND?

Respondents were asked whether they had observed anyone responding to the changing weather; whether they themselves and members of their family had responded and whether members of the community had taken any action. Almost three quarters (73%) of people said they, or members of their family,



had done something to respond already. Just over half (55%) of people said that their communities had already begun to respond.

In urban areas, a higher proportion of people (76%) than in rural areas (71%) said they, or a family member, had already done something to respond to the changing weather. In rural areas, by contrast, more people (57%) said that they had seen responses within their communities than in urban areas, where 52% had seen responses within their communities. In Mountain areas, more people than in other regions said that they had seen family members (78%) and their community (66%) taking action. More people in the Plain and Coastal regions said they had seen action in their communities. In Tonle Sap, however, a smaller proportion of people than in other regions said that they had seen their family or their community take action (68% and 44% respectively, compared to 73% and 55% for the total sample). A lower proportion of people from Phnom Penh region said they had seen people in their community respond to the changing weather (43%). Among those with lower levels of education (37% with no schooling) and the lower PPI groups (31% from the 'poorest' PPI group), more people said that they have not seen anyone in their family take action to respond to the changing weather. However, there were no significant differences associated with education level or PPI group in responses at the community level.

### **COMMUNITY RESPONSES TO THE CHANGING WEATHER**

Those who had seen responses to the changing weather within their families and their communities mentioned similar responses within both groups. Ways of keeping cool, such as using air conditioning or fans and wearing long-sleeved clothing, were mentioned most frequently in relation to family and community responses.

Certain responses to the changing weather appeared more frequently in relation to action taken within the community, however. Work on water control structures, irrigation canals, dyke construction and the rehabilitation of water storage structures was observed more frequently at the community level. Planting more vegetation and changing or diversifying crops also appeared more frequently at the community level, as did arranging religious ceremonies.

### **LEVELS OF SELF-EFFICACY AND COLLECTIVE EFFICACY IN RESPONDING TO CLIMATE CHANGE**

Respondents were asked whether they agreed or disagreed to a series of statements designed to assess levels of collective and self-efficacy in responding to climate change. From their responses, we saw that most people doubt their individual abilities, and the abilities of their communities, to respond to the

changing weather. When prompted, almost 9 in 10 people (89%) did not think that the changing weather brought any benefit to them or their family and more than half thought they were unable to respond to the changing weather (59%) and they could not find the information they needed to respond (52%). More women, rural Cambodians, poorer people and those with the least education said they lacked the information they needed to respond. People's perceptions of their communities' abilities to respond were somewhat less negative but still presented a worrying picture. Less than a third (31%) of people thought that their communities could respond to the changing weather, with only 28% saying that their communities had the resources to do so. Just a quarter of people (25%) thought that their communities were able to respond to drought and floods, while most said that their communities were unable to do so.

### **POSITIVE PERCEPTIONS OF CAPACITY TO RESPOND TO CLIMATE CHANGE**

The youngest people (15-24) are significantly more positive than other age groups on every measure of individual and community capacity to respond to the changing weather, with the exception of their communities' abilities to respond to floods. Similarly, more working youth (35%) and more non-university students (45%) think that their community is able to respond, and more non-university students say they can find the information they need.

More urban respondents say they can find the information they need and think their communities have the resources they need to respond. The same is true of respondents from the Tonle Sap and Mountain regions. More respondents from the Mountain region think that their communities can respond to droughts and floods, and that their community is able to respond to changes in the weather more generally. More of those from higher PPI groups and with higher education levels think they can find the information they need to respond. The same is true of government officials.

*"More urban respondents say they can find the information they need and think their communities have the resources they need to respond."*

### **RESOURCES NEEDED TO HELP PEOPLE COPE**

People say they need money (25%), tools (18%), and government support (12%) to respond to the changing weather. 5% say they need information and 5% say they need knowledge in order to respond.

### **WHO IS RESPONDING TO CLIMATE CHANGE? KNOWLEDGE OF INDIVIDUAL AND ORGANIZATIONAL RESPONSES**

Almost no-one knows of any organized response to the changing weather (93% of all respondents). The near total lack of awareness of any individual or organization working to respond to the problem suggests people are unaware

of existing national and local programmes to respond to climate change and are currently making decisions about responses without receiving support from any source outside of their immediate communities.

*"Three-quarters (75%) say that the government can take action to respond to the changing weather."*

### RESPONSIBILITY

Responsibility for the climate change response is ascribed to government (35% of all respondents), the Prime Minister (29% of all respondents), and NGOs (25% of all respondents). Less frequently mentioned, but still receiving more than 10% of mentions, are village chiefs and other local leaders (16% of all respondents), and the Cambodian people (14% of all respondents).

The role of the village chief or local leader is mentioned by more rural residents (18%) and people from Mountain areas (29%), and by more of those with the lowest levels of education (26% of those with no schooling) and from the lowest PPI groups (27% of those with a PPI of 0-24). The responsibility of the Cambodian people is referred to by more urban respondents (18%), more residents of Tonle Sap (20%) and Mountain areas (18%), more of the youngest respondents (20% of those aged 15-24) and more of those with higher levels of education (34% of those with a university education).

### ROLE OF THE ROYAL GOVERNMENT OF CAMBODIA

Three-quarters (75%) say that the government can take action to respond to the changing weather. When asked to specify ways in which the government can help, respondents say the government can stop deforestation (48%), give them money (43%), work on irrigation (30%) and plant more trees (30%).

[http://www.un.org.kh/undp/knowledge/publications?task=callelement&form=raw&item\\_id=2200&element=ba8c43a8-6b12-4fe6-996d-99022b26caaf&method=download&i=0](http://www.un.org.kh/undp/knowledge/publications?task=callelement&form=raw&item_id=2200&element=ba8c43a8-6b12-4fe6-996d-99022b26caaf&method=download&i=0)



## Government Policy on Climate Change

Seeing the impacts of climate change the Ministry of Environment of the Royal Government of Cambodia has developed a National Adaptation Programme of Action to Climate Change in 2006 (NAPA).

In a foreword to the programme, Samdech Hun Sen is sending the message that "Climate change has become a real challenge for all countries throughout the world. The Royal Government of Cambodia (RGC) clearly recognises this issue and is fully committed to the global efforts to address climate change, both at the national and international levels. Therefore, Cambodia ratified the

United Nations Framework Convention on Climate Change (UNFCCC) in 1995 and acceded to its Kyoto Protocol in 2002.

As a least developed agrarian country, Cambodia is highly vulnerable to climate change, the more so as it has low adaptive capacity to changing climate conditions. In recent years, we have witnessed more frequent and severe floods and droughts, which have resulted in a significant number of fatalities and considerable economic losses. For this reason, we have recently taken our first steps in developing a Cambodian National Adaptation Programme of Action to Climate Change (NAPA).

The main goal of the Cambodian NAPA is to provide a framework to guide the coordination and implementation of adaptation initiatives through a participatory approach, and to build synergies with other relevant environment and development programmes. Cambodia's NAPA presents priority projects to address the urgent and immediate needs and concerns of people at the grassroots level for adaptation to the adverse effects of climate change in key sectors such as agriculture, water resources, coastal zone and human health."

<http://unfccc.int/resource/docs/napa/khm01.pdf>



## 3. The Notion of Energy Security

### 3.1 DEFINITION

There is no consensus on an Energy Security definition. It ranges from uninterrupted oil supplies to the physical security of energy facilities to support for bio-fuels and renewable energy resources. But the concept comes from the idea that without energy supply economy would stop. Therefore, security of supply is an important issue for all countries and economies.

While a broad definition of energy security would be the access to requisite volumes of energy at affordable prices, it still depends on where in society one sits. Different countries have different concerns; importing countries are focused on availability and costs of future supplies, exporting countries are focused on security of future demand to pay for new projects and infrastructures. Therefore, energy policy is directly linked to energy security. For example, if governments say they will not use certain fuels in the future, availability of the fuel is not independent of importing countries' energy policies.

Energy security has risen on the policy agendas of many countries as a result of:

- reaction to the oil price surge of 2000;

*"But the concept comes from the idea that without energy supply economy would stop. Therefore, security of supply is an important issue for all countries and economies."*



- commitments to restrict greenhouse gas emissions following the Marrakesh Agreement;
- uncertainty about stability of supplies to final consumers following the California shortages and European fuel price protests of 2000.

*"Energy security is, in this sense, about guaranteeing access."*

Historically, experts and politicians referred to "security of oil supplies" as "energy security". Only recently policy makers started worrying about the security of natural gas supplies. The breakthrough of shale gas changed the world of energy. For example it could help countries prevent Russia and Persian Gulf countries from dictating higher prices for the gas it exports to European countries.

From the viewpoint of private citizens, such as farmers, businesses, and local industry, the definition of energy security is to have access to readily available resources in sufficient volume at affordable prices. A government will be concerned with its macro-economy and the management of its strategic interests. Energy security implies energy policies and measures that can be implemented in the event of a supply disruption – and at a cost that its citizens consider reasonable.

Energy security in urban areas has yet another meaning. Rapid urbanization and rising middle-class incomes around the world have led to explosive growth in electricity demand. For many developing countries, brownouts (which can have implications on sensitive computer systems) and blackouts have become commonplace, sometimes fomenting political – at times violent – demonstrations.

For the poorest populations, energy security has profound implications on daily lives. In particular, a basic supply of commercial energy sources and electricity can ensure better education for children and improve health and healthcare services. Energy security is, in this sense, about guaranteeing access.

*Sources: Wikipedia / Energy Security, Brookings Institute, Oil, Gas and Energy Law (ogel.org), Speech of Ola Borten Moe, Norwegian minister of Petroleum and Energy, at the Northrim Bank Oil and Gas Speaker series (November 2011), UK Royal Institute of International Affairs.*

## 3.2 IMPLICATIONS AT GLOBAL, REGIONAL AND LOCAL LEVELS

### The Global Level

#### TEXT #7

*From Energy Security to Global Governance – The Journals of Energy Security, Andreas Goldthau & Jan Martin Witte, 23 March, 2010*



The world has changed since the “Global Struggle” for oil. Energy markets are increasingly international in nature and, in the case of oil, they are truly global. All actors interact through market-based transactions and thus determine outcomes in global energy. These market-based transactions, of course, do not occur in a political vacuum. International and national energy markets – much like any market – are embedded in institutions that define the rules of the game. Politics and power play a big role with regard to how markets are organized. And, given the important role energy plays for modern societies, both in producer and consumer nations, energy will always be politicized.



#### MARKETS AND INSTITUTIONS:

##### A GOVERNANCE PERSPECTIVE ON GLOBAL ENERGY

What kinds of institutions exist in energy markets, and what do they look like? First, there are institutions to correct market failures. A standard example of this is the International Energy Agency’s (IEA) emergency response mechanisms to a price shock. In addition, the regionalized nature of the market primarily calls for regional remedies, not for global ones. Still, certain mechanisms can give trans-national systems more resilience in case of a shock, such as European efforts to establish gas storage and interconnectors.

Next, institutions have been designed to lower transaction costs of involved market players. The global oil market, for instance, is notoriously non-transparent and characterized by a general lack of encompassing and reliable data. As a consequence, market participants act under incomplete information, which, as the 2008 price hike has neatly demonstrated, fosters speculation. Another example would be the lately established Joint Oil Data Initiative (JODI), which has great potential in making oil markets more transparent and data more reliable. All of these mechanisms and initiatives have the same central goals: reducing information asymmetries and lowering transaction costs.

Finally, institutions exist to set rules and standards for energy market exchanges. These include the World Trade Organization (WTO), various regional

trade bodies such as the North American Free Trade Agreement (NAFTA) or the Energy Charter Treaty (ECT), as well as myriad bilateral trade and investment agreements that have an impact on energy. All of these – to a greater or lesser extent – stipulate rules for trade and investment in energy and services, both for the fossil fuels market and for the emerging biofuels market.

Yet, public action frames and complements these markets. In fact, the existing system of global energy governance rather resembles a patchwork of governance mechanisms, featuring significant overlaps but also sizeable gaps. Yet, global energy governance mechanisms exist and structure interaction among actors involved in financing, extracting, processing, trading and exchanging energy goods on an international scale.

Adopting a governance based perspective on global energy has far-reaching analytical implications. From this angle, the rise of China, for instance, no longer necessarily challenges the U.S. hegemony in global energy, but rather calls for an adaptation of complex international oil markets to accommodate the new consumer heavyweights. And finally, such a governance perspective points to different units of analysis, i.e. the real players in global oil and gas, who are not necessarily states but state-owned or private oil companies and financial market actors – intermediaries, traders and regulators – just to name a few.

### **POLICY IMPLICATIONS: STRENGTHENING MARKETS AND INSTITUTIONS**

A focus on governance of global energy markets also radically shifts the policy debate on energy security. Instead of focusing on geopolitics and state power, it emphasizes the role of markets and institutions and how they can be strengthened to foster win-win games in global energy. The recent discussion on China's upstream strategy in oil illustrates the point.

China's aggressive purchasing of significant up-mid-and downstream energy assets around the world has been reason for much concern in recent years. [...] Yet, from a governance angle, bilateral deals struck by PetroChina in Africa, Central Asia or elsewhere are not the primary problem. The oil brought on-stream either ends up being sold on the global market or is shipped back home to China, thus taking pressure off global demand. The real problem is that this crude is no longer made 'visible.' As a consequence, available information on actual supply (and demand) is restricted and market transparency suffers, which opens the floor for enhanced speculation and, thus, price volatility. Policies tackling this problem should therefore focus on mechanisms enhancing market information. Finally, the rise of new Asian consumers is often portrayed as a threat to existing Western importers, reducing the latter's share of the global energy pie. From a governance perspective, however, the problem rather lies

*"The real problem is that this crude is no longer made 'visible.' The real problem is that this crude is no longer made 'visible.'"*

in increased risks of market failure. Since the newcomers are not integrated into the IEA's emergency response mechanisms, and have just started to build up their SPRs, the existing instruments to buffer price risks become ineffective in case of supply shock. Such a shock will not only affect Western motorists at the pump, but particularly developing countries, as their economies tend to have a comparably higher energy intensity, i.e. they use more oil to produce a single unit of GDP. Policies aimed at mitigating market-failure-related risks would, for instance, seek to integrate newly emerging consumers into the existing emergency mitigation frameworks, and align their policies of SPR releases. [http://www.ensec.org/index.php?option=com\\_content&view=article&id=234:from-energy-security-to-global-energy-governance&catid=103:energysecurityissuecontent&Itemid=358](http://www.ensec.org/index.php?option=com_content&view=article&id=234:from-energy-security-to-global-energy-governance&catid=103:energysecurityissuecontent&Itemid=358)

## The Regional Level

### TEXT #8

*ASEAN energy cooperation: facts and challenges, Hanan Nugroho, Jakarta Post, 19 May, 2011*



President Susilo Bambang Yudhoyono at the 18th Association of Southeast Asian Nations (ASEAN) Summit 2011 (May 7-8, 2011) stressed the importance of ASEAN addressing energy security issues, including strengthening energy cooperation.

ASEAN has the factors that provide opportunities for developing energy cooperation: its members are geographically close, there is uneven distribution of energy resources and demand, members are at different stages of economic and energy development, etc.

A secure, highly efficient energy interconnected system will surely prove to be key to the realization of the ASEAN Economic Community which begins in 2015.

The region is relatively rich in energy resources, even though only a few countries are genuinely self-sufficient. The stages of resource development and infrastructure have been built to facilitate energy processing and distributions vary widely across the countries. Access to modern energy is limited in Myanmar and Cambodia, but is at 100% in Singapore.

Oil, gas, coal, hydro, geothermal and biomass are available in Indonesia. There are oil, gas and coal reserves in Malaysia and Thailand. Brunei has quite large reserves for oil and gas. There are potential reserves of oil, gas and hydro in Myanmar, while oil and hydro are found in Cambodia. Laos has quite large hydro potential.



Vietnam has oil, gas, coal, hydro and biomass whereas the Philippines has oil, gas, coal, hydro and geothermal. Singapore has no indigenous energy resources, but the country is very important as a major processing center for oil and petrochemical and oil bunkers.

The use of primary energy for generating electricity is largely different across ASEAN. Brunei uses natural gas exclusively. The use of gas for electricity is notably large in Thailand and Malaysia, whereas Singapore has shifted its dependency from oil-fired to natural gas.

Indonesia's electricity is still mainly fuelled by fossil fuels (coal, oil and gas), Laos generates its electricity based dominantly on hydro, while in the Philippines geothermal makes a significant contribution. Vietnam and Myanmar fuel their electricity using a better balance of fossil fuels and hydro.

Nuclear power plants have so far not been used in ASEAN. Indonesia, Vietnam, Thailand and Malaysia are, however, planning to build nuclear power plants; whereas the Philippines is considering resuming its Batan power plant project which was postponed in 1998.

ASEAN energy consumption is characterized by its still-low consumption per capita (compared to Northeast Asia), low efficiency, high growth (among the fastest in the world) but is lagging far behind in developing renewable energy.

Although the individual countries' energy make up vary considerably, ASEAN is an oil dependent region (accounting for 40-60 percent of the region's energy mix). Indonesia, a former OPEC member, has since 2004 been a net oil importer while Malaysia and Vietnam (the other oil exporting countries) will be joining that status soon. The Philippines and Singapore have for a long time depended on oil imports for more than half of their energy consumption.

*Although the individual countries' energy make up vary considerably, ASEAN is an oil dependent region (accounting for 40-60 percent of the region's energy mix).*

The region's high economic growth which led to the increase in oil consumption will surely increase the region's dependency on oil from other sources. As oil prices are highly volatile, scarcer and getting more expensive (influenced by geo-political tensions, etc.), one may expect that the future of ASEAN's energy will be vulnerable to oil imports and prices.

Energy cooperation is actually not a new issue for ASEAN; energy trades and cooperation projects have been implemented.

These are examples: Indonesia delivers natural gas through a pipeline to Singapore and Malaysia. Laos sends electricity to Thailand, Vietnam and Cambodia, while Cambodia also imports electricity from Thailand and Vietnam. A joint development area for energy resources development was established between Malaysia and Thailand. ASEAN crude oil is sent to Singapore for refining and parts of the products are sent back to the producing countries. Coal is traded among ASEAN countries, with volumes much smaller than exports to other regions.

There are agreements on energy cooperation that have been settled under the framework of ASEAN co-operation.

ASCOPE (ASEAN Council on Petroleum) was established in 1976. It agreed on APSA (ASEAN Petroleum Security Agreement) obligating members to work mutually in the event of an oil supply shortfall.

The TAGP (Trans ASEAN Gas Pipeline) concept – aiming to integrate ASEAN's gas fields and consumption centres – was discussed in the early 1990s and a task force to develop TAGP master plan was established in 1999.

Inter-connection of ASEAN's electricity grid had been discussed earlier and HAPUA (Heads of ASEAN Power Utilities/Authorities) forum was formed in 1981 to create the ASEAN Power Grid, taking into account a TAGP plan and other resources (hydro in particular) within the region.

Efforts are also being made to promote energy conservation and develop renewable energy cooperation.

The road to developing APSA, TAGP, ASEAN Power Grid, and other energy cooperation projects, however, has been quite slow, due to financial constraints, technical difficulties, differences in the industry regulatory frameworks among ASEAN countries, and some other factors.

Energy co-operation within ASEAN is challenged by its individual member's energy priorities, bilateral trade partners and development dynamics beyond the borders.

Indonesia is a case in point. The largest ASEAN country was a net oil-exporter and previously the world's largest exporter of liquefied natural gas [LNG], and is currently the world's largest exporter of coal. However, the world's fourth-largest country by population now needs energy to fuel the domestic economy. Pressure is increasing to reduce the country's fossil fuel exports which traditionally go to North Asia.

Singapore is another case. To reduce dependency on importing gas from Indonesia and Malaysia, the country has sought to diversify its imports of natural gas/LNG from other sources outside of the region and develop itself as a hub for natural gas trade for ASEAN and beyond—as it has been doing for oil and petrochemicals.

The fast development of other regions (including neighbours North Asian and India), cross border disputes, and internal rivalry are factors influencing whether ASEAN members will be faithful in maintaining and realizing their energy co-operation agreements.

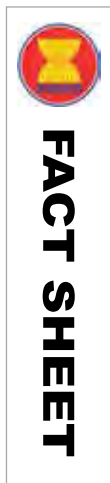
<http://www.thejakartapost.com/news/2011/05/19/asean-energy-cooperation-facts-and-challenges.html>

*"Efforts are also being made to promote energy conservation and develop renewable energy cooperation."*



**TEXT #9**

*Ensuring Energy Security in ASEAN, Issued by the Public Affairs Office of the ASEAN, 1 February, 2008*



Energy plays a vital part in ASEAN economic integration. With vast reserves of 22 billion barrels of oil, 227 trillion cubic feet of natural gas, 46 billion tonnes of coal, 234 gigawatts (GW) of hydropower, and 20 GW of geothermal capacity, ASEAN countries are intensifying co-operation for the full utilisation of the region's energy potentials.

High energy prices, particularly soaring oil prices, and numerous geopolitical events, in particular the vulnerability of the global energy system to possible supply disruptions, pose a challenge for ASEAN in sustaining its economic growth.

**ASEAN COOPERATION ON ENERGY**

ASEAN's over-reliance on external sources for oil can have serious implications on the security of its energy supply. To mitigate the region's heavy dependence on oil, ASEAN countries are making continuous efforts to reduce oil dependency and increase energy efficiency. ASEAN remains an active partner in promoting mutual understanding and co-operation towards achieving a sustainable energy policy agenda.

ASEAN countries are pursuing both short- to medium- and long-term policy responses to address the broader challenges facing the region's energy supply security and sustainability and the preservation of the environment. Towards this end, ASEAN is intensifying cooperation activities in the following areas, among others:

- development and exploration of new energy sources and supplies;
- diversification of the energy mix and promotion of alternative fuel sources;
- facilitating energy efficiency and conservation with renewed emphasis on demand side measures, energy savings programmes and energy-efficient technologies;
- promotion of renewable energy e.g. hydro power, solar, wind and bio-fuels from palm oil, sugar cane and coconut; and
- strengthening emergency response co-ordination and preparedness in the event of energy supply disruptions.

Given that ASEAN is increasingly dependent on petroleum resources from outside of the region it is important that energy emergency coordinating measures be established. With this in mind, ASEAN is finalising the new ASEAN Petroleum Security Agreement (APSA) and Annex on Coordinated Emergency Response

Measures (CERM). The new APSA and its CERM Annex will contribute to enhancing supply of petroleum to ASEAN Member States.

To raise the quality of energy supply and greater competition into the region, ASEAN Vision 2020 calls for the establishment of interconnecting arrangements for electricity and natural gas through the ASEAN Power Grid (APG) and the Trans-ASEAN Gas Pipeline (TAGP) Projects.

The interconnection of national gas pipelines, through the TAGP Project, will enhance and ensure the availability and accessibility of energy in the region. Gas interconnections will bring about affordable and accessible gas to industries, businesses and households across the whole of ASEAN. Availability and access to natural gas will contribute to improving productivity and lead to changes in the quality of life, social behaviour and lifestyles.

ASEAN is currently pursuing 11 bilateral power interconnection projects under the ASEAN APG Project with the objective of optimising the exploitation of regional energy resources. The APG will result in cheaper electricity for all ASEAN countries, ensure sustainability of energy resources and contribute to energy efficiency.

[http://www.spp.nus.edu.sg/ips/docs/LeeYY\\_2008-AEC-011.pdf](http://www.spp.nus.edu.sg/ips/docs/LeeYY_2008-AEC-011.pdf)

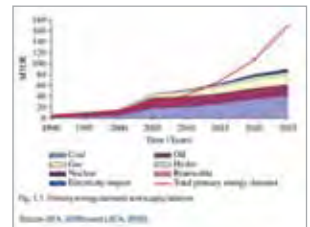
### TEXT #10 Vietnam and Energy Security

*Vietnam and energy security policies - abstract from « Vietnam's energy sector: A review of current energy policies and strategies », by Tien Minh Do and Deepak Sharma, August 2011*



With a poor energy infrastructure and limited energy resources, Vietnam is expected to move from being a net energy exporter to a net energy importer within this decade. In order to redress this issue, the Government of Vietnam has taken a suite of policy measures including:

- Energy resource development: apply preferential policies for financing and widen international co-operation in order to strengthen exploration and development of indigenous resources thereby firming-up reserves and increasing exploitability of oil, gas, coal and new and renewable energy. [...]
- Domestic energy supply security: strengthen domestic energy supply capacity, through legislative reforms, and expand the energy infrastructure with the aim of achieving total primary energy supply of 47.5 to 49.5 mn TOE by 2010, 100 to 110 mn TOE by 2020, and 110 to 120 mn TOE by 2025.
- Capital resources for energy development: to meet the increasing energy demand for socio-economic development, a huge capital investment (of \$5 billion to \$6 billion annually) is needed for energy system expansion. The





strategies identified for raising investment capital are: (i) ensuring self financing, (ii) issuing domestic bonds, (iii) introducing ODA, (iv) implementing equalisation of state-owned enterprises, and (v) attracting FDI.

- Development of renewable energy resources: the renewable energy will be developed through promotion policies (for example, off-grid and grid connected renewable-based electricity prices), integration with other plans (such as, rural electrification and poverty reduction) and survey and evaluation of potential sources. This program aims to increase the share of renewable energy in power generation to 3% by 2010, 5% by 2025 and 10% by 2050.
- International cooperation and energy trade: the international cooperation and energy trade is promoted due to its important role in ensuring security of energy supply through diversifying energy supply sources and improving energy efficiency. Some directions for the development of international cooperation and energy trade, identified by this national energy policy, are: (i) giving priority to coal supply for domestic use, (ii) connecting regional (500 kV) power grid in 2010–2015 and gas pipeline network in 2015–2020, (iii) developing refineries of 25 to 30 mn tons crude oil capacity by 2020, (iv) ensuring reasonable supply for export, and (v) encouraging investment in exploring and extracting oil and gas overseas.

These policies are supported by an institutional framework that includes an elaborate set of laws and institutions. In addition, Vietnam is a participant in international and regional cooperation ventures, such as the Great Mekong Sub-region and oil and gas exploration in Mongolia, Indonesia, Malaysia, Iraq, Algeria, Russia, Peru, Venezuela and Cuba. Such participation is intended to ensure flexibility in sourcing the energy needs of the nation. Notwithstanding these initiatives, the objective of ensuring energy supply security set by the government is unlikely to be easily achieved. This is due to the weaknesses of the existing policies and poor coordination of energy plans with other programs. <http://www.sciencedirect.com/science/article/pii/S0301421511006070>



**TEXT #11 The Philippines and Energy Security**

*"Aquino's challenge: Energy security in the Philippines", by Kevin Punzalan, S. Rajaratnam School of International Studies (RSIS), 24 May, 2010*

According to Punzalan, "the country still depends on oil and coal for 50% of its electricity. A substantial amount has been generated by renewable energy sources. This is partly due to a far-sighted energy plan drafted in the 1970's

that provided for a diversification of energy sources away from fossil fuels towards hydroelectric, geothermal and nuclear sources. While attempts to pursue a nuclear programme were ultimately unsuccessful, renewable energy resources generate over 33% of the country's energy today." In order to address the growing energy demand, the Department of Energy released its Philippine Energy Plan for 2009-2030.



AIPA published the plan as follows:

- to accelerate the exploration and development of oil, gas and coal resources;
- to intensify development and utilization of renewable and environment friendly alternative energy sources;
- to enhance energy efficiency and conservation;
- to attain nationwide electrification;
- to put in place long term reliable power supply;
- to improve transmission and distribution systems;
- to secure vital energy infrastructure facilities;
- to maintain a competitive energy investment climate.

But such goals would not be achieved without reorganizing the market. Says Punzalan: "While the Philippines remain a developing country it has some of the highest electricity tariffs in the region, behind Japan and Singapore. These have had the effect of deterring both local and foreign investors from investing in heavy industries and impose a considerable burden on the Philippines lower and middle class who spend a considerable amount of their disposable income in electricity." To him, the market will need to be reorganized and contracts with independent power producers (IPP) should be reviewed, he said: "As many of these IPPs generated electricity from small fossil fuel plants or power barges, their high operational cost was incorporated into fixed power purchase contracts. The end result was high electricity prices. By providing competitive electricity rates the government can prevent the formation of an energy cartel."

In its report, AIPA states that "The Philippines is targeting the use of energy in a more environment friendly way. Recognizing its role in helping to mitigate the impact of climate change, the energy sector hopes to adapt the following strategies: the conduct of impact and vulnerability assessments of energy systems such as power generation, transmission and distribution; fuel production and transport in the immediate term; integration of structural adaptations into the design of energy infrastructures to include modification of engineering design practices and integration of climate change adaptation to energy policies, plans and programs including laws and regulations."

<http://www.rsis.edu.sg/publications/Perspective/RSIS0522010.pdf>

## The National Level



### TEXT #12

*Energy Profile Cambodia, Reegle, 2010*



The total produced electricity of Cambodia in 2008 was 1,461 GW. By source, oil contributed the largest portion (1,410 GW) followed by hydro (46 GW). The country imported 374 GW of electricity, totalling 1,835 GW of domestic supply. The final consumption of electricity was 1,639 GW. By the residential sector (742 GW), commercial and public services (553 GW) and industry (344 GW). Electricity generation in Cambodia is expected to face a significant increase in demand in the years to come. Electricity demand in Cambodia is forecast to grow from 244MW and 946GW in 2003 to 991MW and 3,478GW in 2020. The supply requirements for Cambodia are projected to increase in average by 12.1% per year, and the peak load is expected to reach 991 MW in 2020.

Electricity in Cambodia is one of the most expensive in the world. The total production cost for Phnom Penh can reach USD0.18 per kilowatt hour (kWh). Of this, USD0.12 represents the production costs while the remaining represents service costs. Even with government subsidy electricity tariffs remain very high. Because of the lower costs of imported power and oil, electricity rates in 2009 were at least cheaper compared with rates in 2008.

Accurate, up-to-date analysis of the use of biomass is scarce but its dominance in the energy balance is visible. In 2008, the renewable and waste source was from solid biomass with the energy produced from solid biomass mostly consumed by the residential sector. According to the Food and Agriculture Organisation [FAO] wood fuel production fell just 11% between 1995 and 2002.

The country possesses large hydropower reserves and some coal reserves. Offshore oil and gas reserves, which initially looked promising, were later found to be lying in complicated geological structures. Though expectations have been lowered considerably, production was scheduled to begin after 2010.

### RELIANCE

Cambodia is a net importer of fossil fuels such as gasoline, diesel, heavy oil, fuel oil, and kerosene. Petroleum products, which produced 29.9% of the TPES in 2008, were all imported. Fossil fuel is used for transport and electricity generation. More than 90% of the electricity supply comes from generators. Even the batteries that rural households use for lighting are charged at diesel-powered charging stations.

To bridge the supply-demand gap, some electricity needs to be purchased from the neighbouring countries of Vietnam and Thailand. In 2009, Cambodia spent US\$59 million on electricity imports from Thailand and Vietnam. The Kingdom purchased 226.76 billion kWh in 2009 from Thailand for US\$19 million, and 500.74 billion kWh from Vietnam for US\$40 million.

### EXTEND NETWORK

Presently only 26% households in Cambodia have access to electricity which is generated using imported fossil fuels. Outside the provincial towns, electricity is rare, with only about 6% of rural households having access to power supply and another 3% owning some type of power generating unit. Of the remaining 91% of the rural population, 55% use automobile batteries for occasional and limited use, or do without electricity completely (36%).

*"Outside the provincial towns, electricity is rare, with only about 6% of rural households having access to power supply and another 3% owning some type of power generating unit."*

The majority of the transmission network operates at 230 kV, with 115 kV feeders serving major towns. The majority of the grid infrastructure is concentrated around the capital, Phnom Penh, with a limited network around the Battambang hydropower plant in the north-west of the country. The country does not have a national grid but three inter-connected power systems: the Phnom Penh, North-western Grid and the Southern Grid systems. As well there are two other systems one connected to the system in Thailand and another connected to the system in Vietnam through MV connections.

An estimated 600 privately-owned Rural Electricity Enterprises (REEs) supply some 5% of the country's electricity consumption to 115,000 customers in rural areas and small towns. The REEs provide a wide range of services, from recharging batteries, to distribution to houses and officially operate under one year approvals granted by the Ministry of Industry, Mines and Energy (MIME). However, in practice, the majority of REEs operate unapproved. Small diesel-based generators (owned on a municipal basis, non-commercially) under the responsibility of MIME account for the remaining 5% of total electricity consumption through small, isolated grids. These enterprises provide a possible private sector-led framework for developing local systems.

### RENEWABLE ENERGY

#### SOLAR ENERGY

The current utilisation of solar power in the country is low. Total installed capacity between 1997 and 2002 reached 205 kW and increased to over 300 kW by the beginning of 2004. The New Energy and Industrial Technology Development Organisation used a 10-year annual average solar irradiation of 5.0 kWh/m<sup>2</sup>/day, based on readings of 4.7kWh/m<sup>2</sup>/day average in the lowest area and 5.3

kWh/m<sup>2</sup>/day in the highest area. It is estimated that the theoretical maximum potential surface solar irradiation could reach as much as 21 GWh/day (13 times the power generated by the national power utility in 2002). Solar photovoltaic systems in Cambodia currently produce 200–250 kWh. Projects with NEDO Japan, SIDA and other international and national institutions including the Prime Minister Project, solar photovoltaic with the capacity of around 1.5 MW, have been installed in the country.

*"Cambodia has significant biomass energy resources, either as standing biomass or as agricultural residues."*

### **BIOMASS ENERGY**

Natural forests are the main source of fuel-wood in Cambodia. This resource has been severely degraded over the past 20 years due to widespread logging and conversion of forest land for various purposes. Biomass energy resources also include residues from plantation forests (rubber wood), agricultural crops (rice husk), livestock (cattle manure), municipal waste, and sewage.

Cambodia has significant biomass energy resources, either as standing biomass, including plantation forests such as rubber and fast growing tropical trees like Gliricidia and Acacia species, or as agricultural residues like rice husk, rice straw, corn cobs, palm oil extraction waste, cashew nut shells etc. According to a study carried out by MIME with Japan's Institute for Global Environmental Strategies (IGES) and the Cambodian Research Centre for Development (CRCD) in 2004, waste biomass (agricultural residues, domestic and animal waste) – excluding that biomass available from natural forests and waste timber from wood processing sector as well as rubber tree harvested at the end of their productive life – has an estimated energy generation potential of nearly 19,000 GW per year. It can be used both for electrical energy generation, converted into other fuels such as producer gas, biogas, or a range of liquid fuels (the actual amount available for these options could be lower, since some of the waste is probably already being used for other purposes).

Biomass-based energy generation in Cambodia has gained momentum during the last 2-3 years, principally by applying biomass gasification technology both for captive consumption as well as electricity generation and supply companies. Though biomass-based gasification system is quiet flexible in terms of its capacity requirements, hours of operation and dual fuel generators to ensure uninterrupted supply, gasifier electricity generation efficiency is low and smaller capacity application is limited. In addition, the fuel used at present in major successful gasifiers fabricated locally is wood which may not be sustainable as demand increases. Few people use other technologies, such as Indian techniques which make use of rice husk. Based on the conventional steam route, there are currently two operating units using biomass as fuel in this capacity range

in Cambodia and only power is generated, making system efficiency very low. Also little is known about their long term operation, maintenance and efficiency.

### BIOGAS

The effectiveness of small scale biogas has been demonstrated in Cambodia by a number of different projects. The use of animal wastes to generate high quality gas for cooking has significant economic, health, social and environment benefits for poor rural households. Projects with Canada in Battambang (7 kW + 20 kW) and with DEDE Thailand in Kompong Cham (30 kW) are completed. There are also ongoing projects in Sambour District, Kompong Thom Province with the capacity of 30 kW by FONDEM France by 2009 and a number of biomass gasifiers done by local investors.

*"The use of animal wastes to generate high quality gas for cooking has significant economic, health, social and environment benefits for poor rural households."*

### HYDROPOWER

The technical potential of hydropower resources in Cambodia in terms of installed capacity is estimated at 10,000 MW. Around 50% of these resources are located in the Mekong River Basin, 40% on tributaries of the Mekong River and the remaining 10% in the south-western coastal areas. Current use of hydropower resources is, however, relatively limited, and the current contribution to electricity production is less than 20 MW. At present, only two projects are operating, with an installed capacity of 13 MW, while four projects are being developed. Previous studies have identified 42 potential hydropower projects, with a total installed capacity of 1,825 MW, being capable of generating around 9,000 GW/year of electricity.

### WIND ENERGY

The Wind Energy Resources Atlas Report in Southeast Asia that covers Cambodia, Lao PDR, Thailand and Vietnam shows that the theoretical wind energy resource potential in the country amounts to 1,380 MW. The report indicates good sites for the future development of wind energy but the potential values must be viewed cautiously since the simulations to determine them were based on global winds and were not supported by ground measurements. The southern part of the great lake Tonle Sap, the mountainous districts in the southwest and the coastal regions, such as Sihanoukville, Kampot, Kep and Koh Kong have an annual average wind speed of 5 m/s or greater with the total area around 5%. Pilot projects, in part financed by the government of Belgium and the European Commission, are currently in place in the country.

*"...the production cost of the biofuel is not likely to follow the rising trend of the international oil price."*

### BIOFUELS

The *Jatropha Curcas* and Cassava species appear to be a particularly suitable source of biofuel as they already grow commonly in Cambodia and have no other commercial value. One study suggests that biofuel could be produced in Cambodia from *Jatropha* on a commercial basis for around US\$0.53 per litre. This compares favourably with the current price of fossil fuel diesel at US\$0.64 per litre. Also, the production cost of the biofuel is not likely to follow the rising trend of the international oil price. More than 10 companies are using *Jatropha*, planting around 1,000 ha, but there is no large scale production. One company from Korea has production capacity of ethanol 36,000 t/year from 100,000 tons of cassava.

### ENERGY EFFICIENCY

Cambodia's total potential savings from energy efficiency measures are estimated at about 467 GW/year, or a 29% energy saving.

Cambodia's power sector was severely damaged by years of war and neglect. The country's annual power consumption of about 125 million kilowatt-hours is the lowest in Southeast Asia and among the lowest in the world. The electricity generation mix consists of 96% from oil, 4% from hydropower and less than 1% from solar power. Demand for electricity, 75% of which is supplied by outdated diesel-fuelled power plants, is growing by about 20% a year. The potential for efficiency improvements in the power generations sector is evident, due to the high dependence on fossil fuels.

The residential sector contributes most to total consumption due to the total consumption of the nation's biomass supply in the sector.

In 2008, total final consumption was 4,637 ktoe, of which combustible renewable and waste contributed the largest portion of 3,486 ktoe, followed by oil of 1,009 ktoe and electricity of 141 ktoe. By sectors, the residential sector used the largest portion (4,002 ktoe), followed by the transport sector (385), agriculture/forestry (118), industry (83) and commercial and public services (48). [Note: a ktoe is a standard measurement of power plants].

<http://www.reegle.info/countries/cambodia-energy-profile/KH>

## Government Policy on Energy Security

### TEXT #13

*Energy Profile Cambodia, Reegle, 2010*



The energy strategy in Cambodia covers four main categories: electricity strategy, renewable energy, a power sector strategy and a wood energy strategy.

### RURAL ELECTRIFICATION BY RENEWABLE ENERGY POLICY

The government, in 2006, approved the Rural Electrification by Renewable Energy Policy. Its main objective is to create an enabling framework for renewable energy technologies to increase access to electricity in rural areas. The policy acknowledges the Master Plan Study on Rural Electrification by Renewable Energy in the Kingdom of Cambodia as the guiding document for the implementation of projects and programmes. The Master Plan envisions:



- achieving a 100% level of village electrification, including battery lightning, by 2020;
- achieving a 70% level of household electrification with grid quality electricity by 2030.
- In addition, Cambodia aims at 15% of rural electricity supply from solar and small hydro by 2015.
- The Rural Electrification Fund (REF) has been continuing its programme of providing grant assistance to licensees for new connections to households in rural areas. For this programme REF received funds from Government of Cambodia through a loan from the World Bank.

Renewable Electricity Action Plan 2002–2012 (REAP)

The REAP aims to provide cost-effective and reliable electrification of rural Cambodia through renewable energy technologies. The Plan is being implemented by the MIME, and consists of three phases: market preparation, early growth and market scale-up. The first six years of the REAP, will be characterised by the following four components:

- technical Assistance for Policy and Regulation;
- public and private Sector Human Resource and Institutional Capacity Building;
- national Awareness and Market Structure Development;
- priority Renewable Electricity Projects.

The REAP is expected to provide electricity to over 145,000 households and commercial entities through installation and operation of 10–17 MW of renewable generation.





## NATIONAL STRATEGIC DEVELOPMENT PLAN (NSDP) OF CAMBODIA 2009-2013

The NSDP emphasizes the importance of energy for development of the country and gives priority to ensure efficiency and sustainability of production, supply and proper maintenance of the power infrastructure across the whole country. The strategy also points out the importance of making electricity available to the poor at an affordable price as well as attracting private sector investment and their active participation in expanding the power infrastructure in order to meet the growing demand for electricity.

Energy is central to sustainable growth and poverty reduction efforts. It affects all aspects of development – social, economic, and environmental – including livelihoods, access to water, agricultural productivity, health, population levels, education and gender-related issues. None of the Millennium Development Goals (MDGs) can be met without a major improvement in the quality and quantity of energy services in developing countries. Therefore, there is an unmistakable link between energy and sustainable human development. Thus, the lack of energy and unaffordable costs correlates closely with many challenges of sustainable development.

<http://www.reegle.info/countries/cambodia-energy-profile/KH>

## 4. The Notion of Natural Resources Management

### 4.1 DEFINITION

*"Poor people are often critically dependent on natural resources, and suffer most when they are degraded."*

According to the World Bank, the Management of Natural Resources (NRM) is "the sustainable utilization of major natural resources such as land, water, air, minerals, forests, fisheries, and wild flora and fauna. Together, these resources provide the ecosystem services that underpin human existence and welfare." The international institution also went further, acknowledging the importance of natural resources for poor people: "Poor people are often critically dependent on natural resources, and suffer most when they are degraded. While poverty alleviation and sustainable NRM are generally compatible, some situations may require difficult tradeoffs. Nevertheless, the fact remains that without poverty alleviation, the environment in developing countries will continue to degrade, and

without better NRM, poverty alleviation will be undermined". NRM is therefore directly linked to a population's habitat.

*Sources: World Bank, CIA World Fact book, FAO, World Bank, CDRI, European Union, Introduction to the Land Law of Cambodia, Hel Chamroeun, in: Introduction to Cambodian Law, Hor Peng, Kong Phallack, Jörg Menzel, Rights of Indigenous Peoples in Cambodia, Soth Sang-Bonn, in: Introduction to Cambodian Law, Hor Peng, Kong Phallack, Jörg Menzel*

## 4.2 IMPLICATIONS AT REGIONAL AND LOCAL LEVELS

As the global implications of Natural Resource Management do not relate closely to Cambodia, this headline will only focus on the regional, as well as local, levels.

### The Regional Level

#### TEXT #14

"ASEAN Strategic Plan of Action on Water Resources Management", October 2005 (pages 6-11)



#### VISION

The vision for water resources in ASEAN was initially defined in the ASEAN Long Term Strategic Plan for Water Resources Management endorsed by ASEAN environment ministers in 2002. The vision for water in Southeast Asia by 2025 is:

"the attainment of sustainability of water resources to ensure sufficient water quantity of acceptable quality to meet the needs of the people of Southeast Asia in terms of health, food security, economy, and environment."



The vision stipulates concern for four major aspects of water management:

- access to safe, adequate and affordable water supply, hygiene and sanitation;
- provision of sufficient water that will ensure food security for the region;
- provision of sufficient water to spur and sustain the economies of the region;
- protection of the water environment to preserve flow regimes, biodiversity and cultural heritage as well as the mitigation of water-related hazards.

Context of the Plan

This ASEAN Strategic Plan of Action on Water Resources Management was initiated by the ASEAN Working Group on Water Resources Management (AWGWRM).

The need for ASEAN to develop a regional water conservation programme was originally recognised in the Hanoi Plan of Action (1999-2004).

Based on a proposal from the AWGWRM, the 14th Meeting of ASEAN Senior Officials on the Environment (ASOEN) adopted the ASEAN Long Term Strategic Plan for Water Resources Management in July 2003. The Long Term Plan was then endorsed by the ASEAN environment ministers in December 2003. The Long Term Plan defined a number of challenges in the water area. The Forum recalled the commitments of the Millennium Declaration and the Johannesburg Plan of Implementation, including the goal to develop plans for Integrated Water Resources Management (IWRM) by 2005, and recommended the following practical actions:

*"...ensure development decisions reflect the concerns of all, with consideration to poverty and gender issues."*

- 1.** To ensure participation of all stakeholders to:
  - link the management of ecosystems at all scales, from the river to coastal ecosystems and from the local to the basin level;
  - establish and apply the ecosystem approach to WRM;
  - set-up and strengthen stakeholder forums and River Basin Organisations for dialogue, conflict resolution and collaborative management;
  - establish flow regimes that ensure the maintenance of biodiversity and ecological and economic productivity of the basin in a sustainable and equitable manner;
  - ensure development decisions reflect the concerns of all, with consideration to poverty and gender issues.
  
- 2.** Develop legal and policy frameworks and heighten awareness of existing frameworks to promote regional collaboration, through:
  - forging appropriate links between national and regional river basin organisations, and community organisations to improve coordination and collaborative development of knowledge and know how;
  - forging appropriate links between water issues such as water supply and sanitation;
  - setting up the legal system for water-related disaster management.
  
- 3.** Apply economic, social and cultural valuation and implement appropriate financial incentives to:
  - foster proper economic, social and cultural valuation of natural and environmental resources to restore degraded and depleted resources and to establish an environmental fund;

- ensure equitable delivery of water supply and sanitation services, especially to the poor and to maintain ecosystem services and the functionality of water infrastructure.
4. Build and strengthen capacity:
- by promoting formal and informal education, raising awareness, and resource mobilisation and resource sharing about IWRM for decision-makers, professionals, communities and NGOs in the necessary social and natural sciences;
  - institutionalising mechanisms at all levels to exchange lessons learnt, local experiences, successful approaches, appropriate technologies and use of media in disseminating success stories in integrated river basin management.
  - The Vientiane Action Programme (2004-2010) that was adopted by the ASEAN leaders in 2004, promotes the following measures related to fresh-water resources:
    - halve by 2010 the proportion of people without sustainable access to safe drinking water (WSSD target by 2015);
    - manage water resources efficiently and effectively;
    - promote integrated river basin management;
    - promote awareness to enhance integrated water resources management.

## OBJECTIVES

The key issue with respect to the development of the current ASEAN water resources strategic plan of action is to develop a strategy that recognises most, if not all, the aforementioned “drivers” and, at the same time, delivers some real outcomes in terms of building capacity within ASEAN member countries. This has meant that the plan concentrates on short term action that focus on key challenges and issues, whilst recognising that some issues will be dealt with after capacity has been improved.

Given that each ASEAN member country has government agencies responsible for Water Resources Management, this plan does not intend to make any recommendations specific to the governance role of these agencies. However, there are a number of principles and issues regarding integrated Water Resources Management that are common to many, if not all, ASEAN member countries. Thus, the overarching objective of this plan is to establish goals and strategies that will lead to useful outcomes to as many member countries as possible relating to these principles and issues.

The ASEAN Strategic Plan of Action on Water Resources Management is predicated upon the fact that population and economic growth in the region will require sustainable management of available water resources. There will be an increasing demand for water from industry and domestic users, whilst

*“However, there are a number of principles and issues regarding integrated Water Resources Management that are common to many, if not all, ASEAN member countries.”*

at the same time food production will also need to increase. Other important factors that need to be taken into account include the potential threats imposed on water resources from climate change, current and future land and water contamination issues and the impacts of land use changes on the quantity and quality of water resources. On the socio-economic front, the above demands may both cause greater economic competition for water resources and also potential conflicts at community, national and potentially international levels. To manage potential changing environmental and social demands effectively, comprehensive strategies and action plans are needed to develop sustainable water management systems. This plan details the guiding principles for integrated water resources management and a set of strategies to deal with major issues. It proposes some future project work to improve knowledge and governance procedures as well as capacity building in the region.

Specifically, given the context in which the plan has been developed, its objectives are:

- to define the governing principles that ASEAN member countries want recognised with respect to sustainable development of their water resources;
- to define the key challenges and issues confronting ASEAN with respect to sustainable water resources management;
- to define the key actions that will facilitate the rapid attainment of improved integrated water resources management across ASEAN;
- to define a set of project activities that will build knowledge and capacity with respect to integrated water resources management across the ASEAN region.

### GOVERNING PRINCIPLES

The first is the Principle of Sustainable Development – water is a finite resource, essential to sustain life, development and the environment. This principle provides context for discussing issues such as:

- protection of water resources/ aquatic ecosystems;
- optimal water use – water conservation and efficient use;
- equity between generations;
- current equitable access – fair and proper allocation for every concerned sector;
- environmental integration (social and ecological; water and land; chemical, physical and biological);
- water is both an economic good (it has economic value) and a public good (every citizen has the right of access to water).

*"The first is the Principle of Sustainable Development – water is a finite resource, essential to sustain life, development and the environment."*

Given that different individuals have different views of what defines sustainable development, the nature of the balance struck or the emphasis put on the

different sub-principles can lead to a greater, or lesser, focus on environmental versus social/economic issues of sustainability. However, if, for example, any one or more of the sub-principles are ignored then we are at risk of unsustainable development.

The second key principle is the Principle of Effective Governance of Water Resources. To be effective and operable the Principle of Sustainable Development needs to be enshrined in an appropriate governance framework. This framework needs attention focused on appropriate institutional structures, capacity building, means of community education and adoption and legislation and enforcement to ensure successful outcomes in water resources management. Key components for consideration under the Principle of Effective Governance include:

- critical levels of institutional capability, including people with appropriate skills and knowledge (capacity for informed action), infrastructure and financial resources;
- institutional reform at national, provincial and basin levels;
- participatory decision-making – Water Resource Management or governance of river basins should be based on a participatory approach involving users, planners, policy makers, NGOs and academia at all levels;
- decentralised responsibility, harmonised institutional roles and responsibilities across national, provincial and river basin levels;
- legislation – principles of IWRM must be enshrined in law;
- effective communication and awareness raising;
- integrated land use planning;
- a commitment by the state to unify and harmonise water management across institutions and agencies;
- political will is essential.

### STATE OF WATER RESOURCES MANAGEMENT IN ASEAN

The “State of Water Resources Management in ASEAN” report was produced in conjunction with this plan. The report highlights a number of fundamental issues that have arisen during the compilation of data and information.

Issues associated with water management will undoubtedly become of increasing importance across Southeast Asia over the next 20-50 years in the face of increasing populations and consequent competition for water resources. To some extent many Southeast Asian countries are in the fortunate position that water resources availability should not be a major limiting factor in terms of economic growth. However, they do face a number of significant challenges and issues in the years ahead. These include:

- overall demand for water is expected to increase by about one-third over the next 20 years;

*“Issues associated with water management will undoubtedly become of increasing importance across Southeast Asia over the next 20-50 years...”*

*"...protection of the quality of water supplies is, and will be, a significant activity for all nations over the next 20 years;"*

- whilst most Southeast Asian countries do not have a physical scarcity of water, seasonal scarcity does occur. This needs to be examined in more detail and the results be used as a basis for the planning of water supply strategies for the future;
- although there is no physical water scarcity across ASEAN (excepting Singapore), potentially rapid rates of economic development may put considerable pressure on countries in terms of financing the sustainable development of water supply and sanitation schemes;
- the need to ensure that data of the highest quality is obtained to facilitate integrated water resources management;
- as a response to seasonal water scarcity and growing urban centres, demand for groundwater will increase. Management plans need to be developed to ensure the sustainable exploitation of this critical resource and to maintain its quality;
- given good overall water availability, most nations are in a strong position to plan how water will be managed for environmental purposes including the maintenance of key inland fisheries;
- protection of the quality of water supplies is, and will be, a significant activity for all nations over the next 20 years;
- several countries are unlikely to meet the Millennium Goals relating to drinking water and sanitation based on current rates of progress;
- in many countries it is considered that the impacts of extreme events and climate change and variability will be of as much concern to governments as many of the above issues. Subsistence farmers and the poor are generally more severely impacted by such factors and consequently they may increase poverty levels and risks of starvation unless adequately planned for.
- with respect to governance of water resources, whilst many countries are aware of the need for change to improve water resources management, there needs to be continued support at all levels to ensure that this happens;
- fragmentation of the management of water between several agencies within countries needs to be examined to determine if improved institutional arrangements can be developed. It is particularly important that surface water and groundwater are managed by the same agency given their usual interconnectivity;
- the fragmentation referred to above also impacts negatively on the need to harmonise monitoring programmes for water quantity and quality. Capacity building at a range of levels is also a universal requirement, with the probable exception of Singapore.

- Summarising some of the above issues, it would appear that the major challenges include collection of high quality data, mitigating the impact of extreme events on water resources, sustaining and improving water quality, improving governance systems and acquiring financing for the development of new water infrastructure.

All of the above issues, excepting that of financing development, have been encompassed within the project portfolio that makes up part of this plan. It is a matter for the ASEAN Secretariat and the ASEAN Working Group on Water Resources Management to determine whether financing issues could be appropriately tackled by the group, or are a matter for individual jurisdictions. Finance is raised here so that it is not overlooked, given the crucial role financing will have in planning future development in ASEAN.

<http://environment.asean.org/files/ASEAN%20Strategic%20Plan%20of%20Action%20on%20Water%20Resources%20Management.pdf>

## The Local Level

### TEXT #15

*"National Sustainable Development Strategy for Cambodia", United Nation's Environmental Programme*



A long term and sufficient income for the Cambodian people has to be ensured through economic growth activities which are socially and environmentally sustainable. This growth is based on good education, good health, gender equality and equity as well conservation of the rich biodiversity which are natural resource based, thus sustaining an environment that can produce food, energy, raw materials and environmental services in the long term.



### ANALYSIS OF THE LAND USE AND THE AGRICULTURE SITUATION

Land reform is a crucial tool to increase agricultural production by providing titles and security of land tenure to poor people, especially rural farmers who are legally occupying land. Many poor people have no land, little land or poor land, to earn a living from due to rapid population growth and economic development, demobilization of soldiers and family breakdowns. These conditions cause a high demand for land ownership.



The historical legacy of past land policy has left contemporary Cambodian society confronted with a number of problematic issues regarding land use. Most private land owners do not have titles and the title issuance by systematic land registration is complicated and slow.

Furthermore, the systematic land registration is not altogether transparent. The application of relevant laws and procedures is not sufficient for effective land use management. A land assay system is not in place, primarily due to inadequate human resources, budget and relevant equipment.

Delineation and demarcation of state land and administrative boundaries are not clearly or properly managed after the process of transition, which has lead to accelerated land grabbing and destruction of primary forest.

Conflicts regarding land property have occurred in different areas between the poor themselves, between poor and the rich and with local authorities. Most of such cases are solved by decisions of the Government or local authorities.

Another important issue, beside titles and ownership of land, is the unsustainable use of land. Inappropriate land use includes such practices as shifting cultivation along with recent economical forest plantation which exacerbates land degradation along with other pressures on the environment and biodiversity.

The usual pattern is that when the land resources are degraded, farmers and local communities find additional or new careers or occupy other land areas illegally.

A third issue of importance centres around the fact that large tracts of arable land are still covered with dangerous land mines and unexploded ordnance [UXOs] dropped during the Vietnam American war and the civil war that followed. These explosives routinely claim the lives and limbs of both humans and animals.

Lack of land use planning is one of the major obstacles for sustainable development nationwide. As information and education on land matters, land rights and land use is still limited, public works, infrastructure investments and urbanization are mostly carried out without any sort of master plan being developed before construction or development activities are started.

### **ANALYSIS OF THE FORESTRY SITUATION**

Forests provide many significant resources, functions and services including providing many primary and secondary economic products, recreational opportunities, wildlife habitat, water and soil conservation and a filter for pollutants, in addition to absorbing CO<sub>2</sub> and producing oxygen. Forests also support employment and traditional uses by the people in addition to supporting biodiversity. There is a general concern over the human impact on forest health and the natural processes of forest growth and regeneration. A major threat to forest resources

*"Another important issue, beside titles and ownership of land, is the unsustainable use of land."*

has been increased through illegal logging activities and inappropriate forest sub-product collection, including land clearing for agriculture and ownership.

The volume of logging in the forests increased dramatically in the early 1990s because it was one of the major sources of income for many rural people as well as revenue for different factions. However, illegal logging and other human pressures that deplete the forest areas have noticeably decreased or stopped in many areas as people are now more often complying with regulations and policy. Also, some serious cases were tried in the courts.

As a matter of fact, rural people are often directly dependent on the forest and its products for their living, including the wildlife resources. Due to limited enforcement of legal instruments, some communities try to encroach into the National Parks and Protected Areas for their own purposes. Collaboration and coordination among ministries, NGOs and local authorities is still required and needs to be improved.

Some communities and ethnic minorities have shown little interest in participating in forest and biodiversity management activities. There is also a limited motivation and participation from the private sector and governmental institutions to carry out forest planting and reforestation, especially indigenous species.

This limited interest leads to a lack of forest demarcation and forest classification, coupled with a lack of a transparent monitoring process in order to follow up the sustainability of forest exploitation. One constraint to sustainable forest management is the limited awareness on forestry issues such as efficient use of forest products, value adding, extension and forest seedling (nurseries), supply of services to communities and infrastructure for the local forestry administration.

In order to restore and further develop the forestry sector, the RGC has issued a number of programs, policies, orders and proclamations aimed at eliminating the anarchy in the sector and to move towards sustainable forest management. One approach for achieving a sustainable forestry sector (decided by the government in 2003) is community forest management. This is where the local community takes responsibility for sustainable forest management itself, with support from the Forest Administration, to ensure the supply and income from forest products can help reduce the people's poverty.

*"One approach for achieving a sustainable forestry sector is community forest management."*

### **ANALYSIS OF THE WATER MANAGEMENT SITUATION**

Water resources are a crucial component of the nation's environment and natural resource base. As a part of the GMS, Cambodia possesses a vast array of water resources, in particular the Mekong River and the Tonle Sap lake system, both which provide the basis for the country's fisheries, irrigated agricultural production,

domestic and industrial water supply, hydro electric potential and navigation.

But even with abundant fresh water resources such as rivers, streams, lakes, and aquifers, some parts of Cambodia still suffer from seasonal drought which adversely affects agricultural production. Construction and improvement of irrigation facilities are an important priority along with flood protection dykes to combat periods of flooding and sea protection dykes to protect against storm surges and the rising sea level.

However, there is limited institutional and manpower capacity or funds at the national and sub-national levels for implementing the National Policy on Water Resources Management and to get the participation of farmers in the operation and maintenance of irrigation facilities. Other obstacles to effective water resource management include the gaps in the government's capacity to control inappropriate settlements and the use of flood management embankments. The limited community awareness of flood management results in excavating of channels through embankments and other destructive activities on the flood management infrastructure.

Another problem is the limited information for weather forecasting as well as information on flood hydrology, river geomorphology, bank erosion locations and floodplain sediments, rainfall forecasts, drought and flood warnings.

The main causes behind this lack of information are insufficient monitoring and observation stations and no reliable real time data transmission system for flood forecasting, drought monitoring and public weather information.

The environmental concerns related to water resources apply primarily to water pollution in urban areas by untreated waste water from domestic, and some industrial sources containing high concentration of bacteria and toxic substances. Increased use of pesticides and chemical fertilizers in the agricultural sector presents a major threat to water quality and aquatic life. Another water related environmental issue of concern is future dam construction for hydropower dams along the Mekong River system and its tributaries. The construction of these dams could cause serious impacts on the hydrological regime of the country's water resources resulting in serious effects on human settlements and natural resources such as in the Tonle Sap ecosystem and hydrologic system.

*"Another water related environmental issue of concern is future dam construction for hydropower dams along the Mekong River system and its tributaries."*

### **ANALYSIS OF THE FISHERY SITUATION**

Fishery plays a crucial role in supporting the national economy as well as supplying food for the Cambodian people in their daily livelihood.

The sector contributes around 510% of GDP and fish makes up 40 % of the animal protein intake for rural people.

The fish catch from the Tonle Sap Lake represents about 60% of the total commercial fish catch of the country. His Excellency Dr. MokMareth, Senior

Minister, Minister for the Environment, has described the Tonle Sap Lake (or Great Lake) as the “heart and soul of the people of Cambodia”.

However, the fish stock is under threat by direct and indirect factors, including over fishing, destructive fishing practices, destruction of fish habitats, increased sedimentation, water pollution and the impact of up-stream dam development.

Some obstacles for a sound fishery industry include:

- insufficient information on fishing lot boundaries in relation to protected areas.
- limited enforcement of the fishery policy and regulations.
- limited community experience in fishery management.
- unclear size of fishing lots, and illegal use of prohibited fishing gear and fishing activities during the fish spawning period. Furthermore, due to low acceptance of limited fish yields to support their livelihood, local fishermen do other jobs, including extraction from inundated forests, production of fuel wood and charcoal or hunting of waterfowl and wildlife.

### ANALYSIS OF THE MINING SITUATION

A study of the Ministry of Industry, Mine and Energy (MIME) indicates that there are approximately 133 economic mineral deposits distributed across Cambodia, including metals, precious metals, gemstones, coal, construction materials and industrial minerals.

So far there is limited regulation, norms or standards to fully implement the existing Law on Management and Exploitation of Mineral Resources. Therefore, mining exploration and exploitation have been carried out with few restrictions at the designated concession sites.

However, some mining activities have been required to conduct an environmental impact assessment (EIA) before extraction could proceed. Unfortunately, without the strong and comprehensive mining regulations and standards, some mining operations have caused severe impact to downstream water courses and the surrounding communities from severe water pollution and a resulting decline of the overall aquatic biodiversity. This in turn has a big effect on economic livelihoods and social harmony. The problems stem from short-term thinking regarding profits rather than long-term environmental concerns.

Currently, there are several challenges and constraints for improving mining activities in Cambodia. For example, there is still a very limited capacity within the responsible institutions stemming from a lack of relevant instruments and facilities to monitor and control mining operations. The means of transportation to operational sites is also limited. An additional problem is that the awareness on health and safety issues is quite low among workers and other affected people.

Therefore, the people within the communities around, or downstream of, mining operations are facing serious health risks.

*“Unfortunately, without the strong and comprehensive mining regulations and standards, some mining operations have caused severe impact to downstream water courses...”*

A new priority development initiative to greatly enhance the national economy, and strongly supported by the RGC, is the exploration and exploitation of petroleum reserves. However, because of the recentness of the petroleum finds, Cambodia does not currently have any specific regulations for managing petroleum exploitation and the surrounding environment. Moreover, the expertise within government institutions is limited.

<http://www.rrcap.unep.org/nsds/uploadedfiles/file/Publication%20-NSDS%20Cambodia.pdf>



## Government Policy on Natural Resource Management



### TEXT #16

*"Cambodia National Environmental Performance Assessment (EPA)", Department of Environmental Quality Promotion, Ministry of Natural Resources and Environment, Thailand and Project Secretariat UNEP Regional Resource Center for Asia and the Pacific*

### INTRODUCTION

**1.** The present Environmental Performance Assessment (EPA) Report is the first of its kind to be written for Cambodia. It examines the developments under selected environment concerns over a period of time and the degree of success the national authorities have had in influencing environmental outcomes. *[Excluded, the names of sponsors].*

**2.** The report is a first step by Cambodia toward gaining a better understanding of its progress at achieving the goals of national sustainable development. The preparation of the national environmental performance assessment report is intended to support (i) informed decision making through a better understanding of environmental conditions, trends, and impacts; (ii) effective national environmental program management and improved public accountability for the results, and (iii) reporting of principal environmental trends and assessment of performance relating to environmental issues of national and global importance. The report's findings will also facilitate the analysis of development assistance in the environmental domain and enhance local capacity for carrying out performance assessments.



3. The Ministry of Environment (MoE) was the lead agency in preparing this report in consultation with other environment-concerned institutions.

*[Excluded, names of the team].*

## CONCLUSIONS AND RECOMMENDATIONS

**211.** The natural resources of Cambodia are under pressure from different segments of the society in an expanding economy and in conditions of rapidly growing population. In a still mainly rural based country the brunt of economic growth is likely to be borne by the natural and biological resources unless suitable safeguards are built into existing policies and institutional arrangements.

**212.** Supported by international donors, the RGC has been taking steps to address the environmental and sustainability issues and draw a balance between economic growth and environmental protection. However, more work is still required. Management of natural resources (especially fish and forests) is undergoing a difficult transition from a revenue-driven to sustainability-oriented approach. The share of national budget devoted to environmental management is low relative to the values at stake. Cambodia continues to rely on the donor community for most of its environmental funding.

**213.** Civil society and NGOs are emerging as an important voice in the implementation of the environmental and sustainable development agenda in the country. However, their contribution to environmental protection is still limited at the central level and constrained by insufficient decentralization of natural resource utilization decisions.

**214.** With Cambodia more clearly moving in the direction of a market economy, the need for environmental safeguards has become increasingly apparent. The road to improved environmental performance in Cambodia passes through a more complete integration of environmental concerns into sectoral and economic decision-making, improved institutional capacity, policy development and involvement of civil society in environment management, together with greater budget support for environmental management.

### 1. FORESTRY RESOURCES

The country's authorities want to maintain a forest cover of at least 60% between 2005 and 2025.

#### A. The EPA Process and Data

- 1) Future assessments should contain information about the quality of the standing forest, not merely about the area defined to be "under forest". The quality parameters of greatest relevance include the percentage of

*"...the status quo seems less defensible with each year that passes."*

- canopy cover and suitably organized information about the composition of the standing stock.
- 2) Cambodia may want to take the lead in (finally!) working towards GMS-wide comparability in the one area (i.e. Forest cover) that is of the greatest public interest in each of the countries and also globally. This is not an easy task technically and bureaucratically but the status quo (no or little comparability) seems less defensible with each year that passes.
  - 3) Cambodia seems to have somewhat better data on the habitat composition of different protected areas than most other GMS countries. Despite that, recent expansion of the protected realm would justify efforts to update estimates of the standing forest – appropriately defined – contained in each of the protected areas.
  - 4) The monitoring of the conditions applied to cancelled forest concessions should be the acid test for the effectiveness of Government's enforcement. A performance indicator specifically targeting these areas should be created.

#### **B. Other Recommendations**

- 5) The policy on selection of reforestation and forest rehabilitation projects undertaken by the Government and choice of community-based projects has not been formulated. The case for reforestation in a country with a high forest cover can and should be made but has not been to date. The Government should ensure that the Community Forestry Sub-decree is in line with such a policy.
- 6) Once the case for community forestry has been strengthened, integrate forest management into RGC's "Seila" Program and ensure that local government, especially the Commune Councils, play a role in resource management at local level.
- 7) Eliminate dysfunctional arrangements and amend conflicting legislation following the examples given in the report and other analysis. In particular improve: (a) institutional coordination and reconcile the policies of the Forestry Administration and the Ministry of Environment with the management of forest in protected areas; and (b) compatibility between forestry policies and the Law on Commune Administration.
- 8) Propose the best way of monitoring compliance with the forest concessionaires' development and management plans that would make room for local populations (that can either gain or lose depending on how the concession holders operate). Ensure that such monitoring does not detract from attention to non-concession violations of the Forest Law.

## 2. THREAT TO BIODIVERSITY

**216.** Substantial areas of different habitats and areas (are) placed under protection in Cambodia (and) efforts to situate biodiversity conservation (are made) within a broader “multi- convention” space alongside UNCCD and UNFCCC. Here, too, more needs to be done.

### A. The EPA Process and Data

- 1) Information is needed for the next EPA that would allow authorities and the public to judge how effective the protected status has been in conserving the biodiversity potential of the designated areas. As a minimum, this requires data, at well-chosen intervals of the changes in the areas of key and subsidiary habitats within each protected area as well as subsidiary parameters, such as protection expenditure.

### B. Other Recommendations

- 1) Study the best ways of reconciling the targets of the National Biodiversity Strategy and Action Plan with RGC’s budget and the Public Investment Program. Use the insights to begin to modify the approach to preparation of new national action plans under international environmental conventions or their updates. The plans need to change from being “shopping lists” for donors to being components of documents (such as poverty reduction strategies that command a consensus of the Government and the donor community) that drive the budget process.
- 2) Monitor the achievement of RGC’s Cambodia Development Millennium Goal stated target of increasing the number of park rangers from 600 to 1,200 between 2001 and 2015.
- 3) Approve and pass the latest draft of the Law on Wildlife with its intention to discourage trade in endangered wildlife and hunting of endangered species. Following the adoption of the Law on Wildlife, prepare appropriate sub-decrees or “Prakas”, including those dealing with community based biodiversity protection and management. Accompany such regulations by a supply of equipment to forest and park rangers.

## 3. FISHERIES RESOURCES

**217.** Fishery resources are under pressure by a growing population, and an apparently non-diminishing use of destructive fishing practices. The inland fish catch has actually been increasing but the sources of this increase are not well defined. The marine catch and its importance are poorly documented. This suggests the following agenda ahead of the next EPA:



**A. The EPA Process and Data**

- 1) Gather better data on the output of small-scale and rice-field fisheries and explain if it is they or other factors that have been supporting the apparent increase in per capita fish consumption in Cambodia.
- 2) Produce a complete time series of the estimates of fish production in Tonle Sap by different categories of operators. The seeming inability to derive such a series is hard to justify.
- 3) Assemble information about the output and exports of marine fisheries.
- 4) Consider the scope for using direct and indirect indicators of the pressure exerted by illegal fishing practices and it change over time.

**B. Other Recommendations**

- 5) Assemble available evidence that demonstrates that the community model of fisheries results in a more sustainable management of the resource. Once satisfied, support the Fisheries Law that sanctions the ongoing fishery sector reform with its sub-decree on community fisheries.
- 6) Promote decentralized fisheries management to Commune Councils and local communities consistent with the RGC program of decentralization.
- 7) Improve coordination and cooperation between DoF MoE and the Ministry of Water Resources and Meteorology to avoid the overlapping roles and responsibilities following the examples given in this EPA.
- 8) Explain to the public why it is difficult to reduce destructive fishing practices.
- 9) Place greater emphasis on the protection of the wetlands now overshadowed by the attention to Tonle Sap.

**4. WATER RESOURCES**

**218.** There were moderate improvements in access to safe potable water in Cambodia in the last few years from extremely low levels. Rural water supply can be improved (in a diversity of the ways) that makes the quantification of this improvement difficult. Shortages of irrigation capacity, especially water storage capacity, have been a constraint on further growth of agricultural productivity. The environmental importance of increasing irrigation in Cambodia lies in the potential for increased agricultural productivity that may well hold the key to defusing a potential conflict between a growing demand for farmland and the policy of increasing the area of protected habitats. At the same time, judging water resource adequacy only by reference to irrigation performance or agricultural productivity may be too narrow an approach. The following recommendations are:

*"The environmental importance of increasing irrigation in Cambodia lies in the potential for increased agricultural productivity that may well hold the key to defusing a potential conflict between a growing demand for farmland and the policy of increasing the area of protected habitats."*

**A. The EPA Process and Data**

- 1) Review the application of the existing methodology to estimate the percentage of access to safe potable water supply in rural areas and provide an indication of the margin of error inherent in that methodology. Make the case for improving the accuracy of the existing estimates. Make an attempt to separate the improvements in water supply due to government and donor efforts and those made by the rural households without outside assistance.
- 2) Begin to assemble data about the quality of rural water supply, in particular information about possible deterioration or contamination of rural water supply attributable to economic and other anthropogenic activities.
- 3) In future EPAs, consider modifying the indicator of response from expenditure on irrigation management to expenditure on integrated water resource development, having first agreed on its definition.
- 4) Given the importance of Tonle Sap, include into future EPAs an assessment of performance with respect to the pollution of the Tonle Sap by non-point sources, with particular attention to fertilizer and agrochemical use.

**B. Other Recommendations**

- 5) The Ministry of Water Resources & Meteorology (MOWRAM) has recently been established with the task of developing and implementing a long-term development strategy for water resources in Cambodia. Also, facilitate regular consultations between MOWRAM and MoE on the most meaningful ways of measuring the quality of overall water resource management.

<http://ekh.unep.org/files/SEF%20II%20Report%20-%20Cambodia.pdf>

## Abbreviations

AIPA	ASEAN Inter-Parliamentary Assembly
APG	ASEAN Power Grid
APSA	ASEAN Petroleum Security Agreement
ASCOPE	ASEAN Council on Petroleum
ASEAN	Association of Southeast Asian Nations
ASOEN	ASEAN Senior Officials on the Environment
AWG-KP	Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol
AWG-LCA	Ad Hoc Working Group on Long-Term Co-operative Action
AWGWRM	ASEAN Working Group on Water Resources Management
CDM	Clean Development Mechanism
CERM	Coordinated Emergency Response Measures
CO <sub>2</sub>	Carbon dioxide
COP	Conference of the Parties
CRCD	Cambodian Research Centre for Development
DEDE	Department of Alternative Energy Development and Efficiency
DoF	Department of Fisheries
EECC	Environment, Energy, and Climate Change
ECT	Energy Charter Treaty
EIA	Environment Impact Assessment
EPA	Environmental Performance Assessment
EROPA	Eastern Regional Organization for Public Administration
ETS	Emissions Trading Scheme
ETS	Emissions Trading Scheme
FAO	Food and Agriculture Organisation
FDI	Foreign direct investment
FONDEM	Fondation Energies pour le Monde
GDP	Gross Domestic Product
GMS	Great Mekong Subregion
GNP	Gross National Product
HAPUA	Heads of ASEAN Power Utilities/Authorities
IEA	International Energy Agency's
IFM-SEI	International Falcon Movement – Socialist Educational International
IGES	Global Environmental Strategies
IPCC	Intergovernmental Panel on Climate Change
IPP	Independent Power Producers
IPPC	Intergovernmental Panel on Climate Change's
IWRM	Integrated Water Resources Management
JI	Joint Implementation

JODI	Joint Oil Data Initiative
LNG	Liquified Natural Gas
MDGs	Millennium Development Goals
MIME	Ministry of Industry, Mine and Energy
MoE	Ministry of Environment
NAFTA	North American Free Trade Agreement
NAMA	Nationally Appropriate Mitigation Action
NAPA	National Adaptation Programme of Action to Climate Change
NEDO	New Energy and Industrial Technology Development Organization
NRM	Management of Natural Resources
NSDP	National Strategic Development Plan
ODA	Official development assistance
OPEC	Organization of the Petroleum Exporting Countries
PPI	Progress out of Poverty Index
REAP	Renewable Electricity Action Plan
REEs	Rural Electricity Enterprises
REF	Rural Electrification Fund
RGC	Royal Government of Cambodia
SIDA	Swedish International Development Cooperation Agency
SPR	Strategic Petroleum Reserve
SSDR	Strategic Security and Defense Review
TAGP	Trans ASEAN Gas Pipeline
TPES	Total Primary Energy Supply
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Program
UNEP	United Nations Environment Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UXO	Unexploded Ordnance
WHO	World Health Organisation
WRM	Water Resources Management
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization
YPSEA	Young Progressives Southeast Asia





To improve political parties' knowledge on energy, environment and climate change, KAS has developed this first Thematic Sourcebook to serve as a knowledge source and tool to improve their political understanding of environmental and energy challenges in Cambodia, the region and the world. It aims to help parties better understand the relevance of developing a programme and to provide examples of effective communication relating to political party positions and programmes through political speeches and campaigns.

ISBN: 978-99950-982-2-3



9 789995 098223

[www.kas.de/kambodscha](http://www.kas.de/kambodscha)