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**Megacities – Schreckbild oder  
Chance für die  
Entwicklungsländer?**

**Megacities – nightmare or chance  
for developing countries?**

**Hannover, 17. Juni 2002**

**Klaus Töpfer**

**Zukunftsbeständige Stadt- und Regionalentwicklung: Leitmotiv  
für die Problembewältigung der Megacities**

Prof. Dr. Klaus Töpfer  
Executive Director United  
Nations Environment  
Program (UNEP),  
Nairobi/Kenya



# Megacities: Nightmare or Chance for Developing Countries (Folie 1)

Presentation by Dr. Klaus Töpfer



Photo: Angelo Doto/UNEP

**Executive Director**

**United Nations Environment Programme (UNEP)**



## (Text zu Folie 1)

- Excellencies, Mayors, distinguished delegates, friends and colleagues;
- Many thanks to the organisers of this conference, the Konrad Adenauer Foundation and the German Foundation for World populations, for inviting me to give the closing speech.
- In my presentation I will focus on the impact and role of megacities on the world's environment:
- First I will have a brief look at urbanisation on the environment. Both in terms of the effect on urban citizens themselves, as well as the impact of megacities on the regional and global environment. Finally I will discuss the policy challenges needed, and in particular UNEP's activities in this area.



# The Urban Revolution (Folie 2)

- Half of the world's population is urban; by 2025 this will be more than 70%
- 90 percent of this growth will take place in developing country cities
- Urban populations increase by 200,000 persons daily
- In Africa in 1900 less than 5% were living in cities; in 2025 this will be over 70%
- In 2015 there will more than 300 cities with over 1 million inhabitants worldwide; most of them in developing countries



# The Urban Revolution

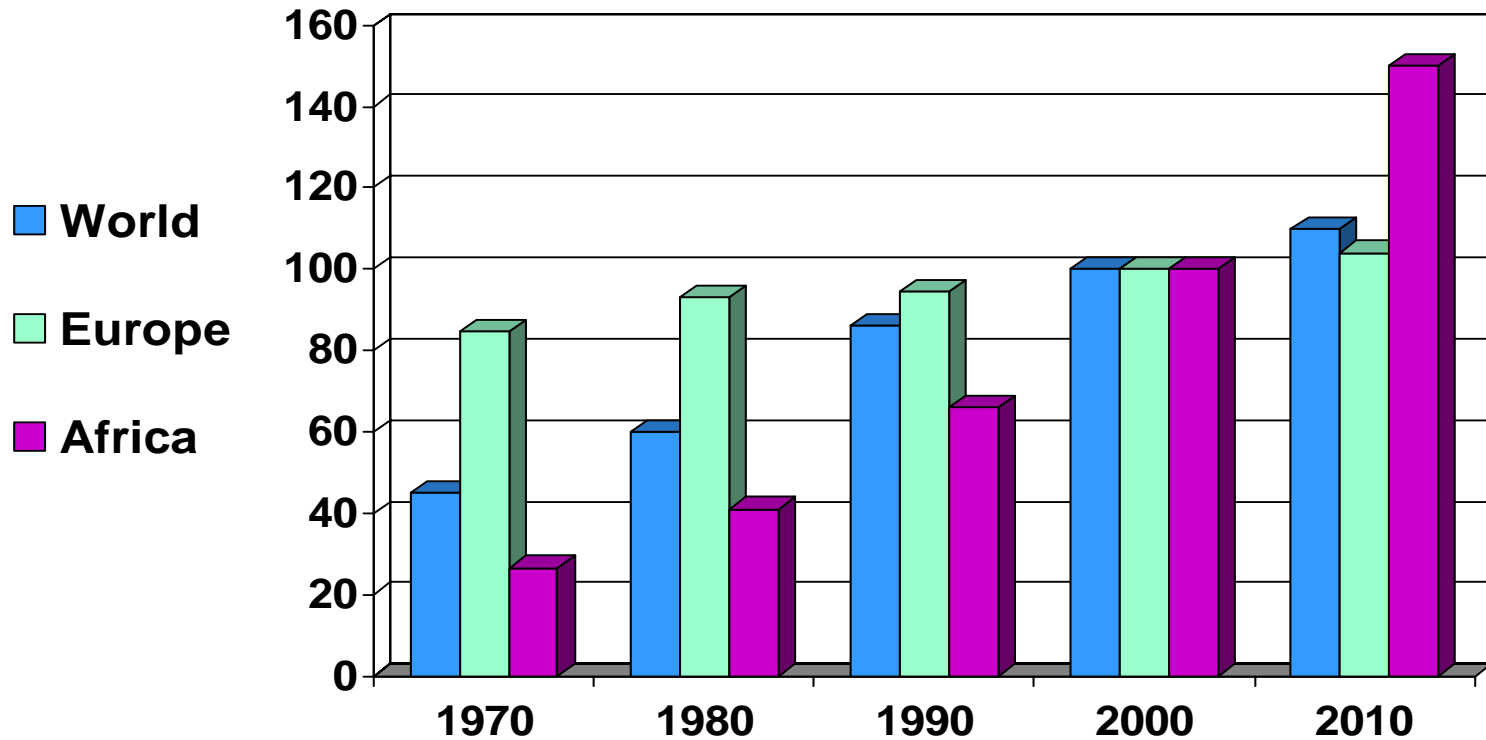
(Text zu Folie 2)

- The **urban revolution** that has been taking place worldwide presents **unprecedented changes and challenges** for the world's cities, especially those in developing countries;

*{read out the text on the slide}*

# Urban Population Growth (Folie 3)

Relative growth urban population, 2000 = 100%



Source: UNEP/ GEO3





# Urban Population Growth

## (Text zu Folie 3)

- While in developed countries urbanisation has mainly taken place in the first half of last century, **developing countries are in the middle of their urban growth now.**
- If we first look at the urbanisation at the **global level** (in blue), we see that it is still increasing, although its rate of increase is slowing down.
- If we look at **Europe** (the green bars), we see that urbanisation has almost come to a stand still, 75% live in cities already.
- However if we look at **Africa** (in purple), we can see that urbanisation is increasing rapidly, and will continue to do so. A similar increase, though less spectacular, is found in other developing country regions.
- For example **Dar es Salam**, in Tanzania, is growing at a rate of 6% per year, which means a doubling of population every 13 years! And most of this growth is taking place in the poor areas. One can imagine the challenges to manage cities in a sustainable manner when their population doubles every 13 years.



# The Urban Revolution: Environmental Consequences (Folie 4)

## **Environmental consequences from rapid urbanisation in developing countries:**

- 1- Environmental problems within the cities, especially for the residents; but also the urban - rural link**
- 2- Contribution of cities to national, regional and global environmental issues and policies**





# The Urban Revolution: Environmental Consequences

## (Text zu Folie 4)

- The **environmental consequences** of the urbanisation process are tremendous and increasing, especially in developing countries.
- The urbanisation has an enormous impact on the **environmental and health quality** in the cities. This stretches to the surrounding areas. Many cities depend for their natural resources, water, fuel wood, food, etc. on the rural areas around the city.
- **Cities** also play an important role in addressing environmental issues that go beyond the cities borders, namely the effects that cities have on **national, regional and global environmental issues**.

Let us have a closer look at the two impacts.



## The Urban Revolution: Increasing Environmental Problems Within Megacities(Folie 5)

- **Of 1,5 billion poor, most are now concentrated in slums and squatter settlements**
- **Most have no access to sewerage systems and garbage removal**
- **The availability of clean water is already a major issue, and will become a 'water crises' if we do not act urgently**
- **Air pollution has serious health effects and is one of the main health threats in developing country megacities**

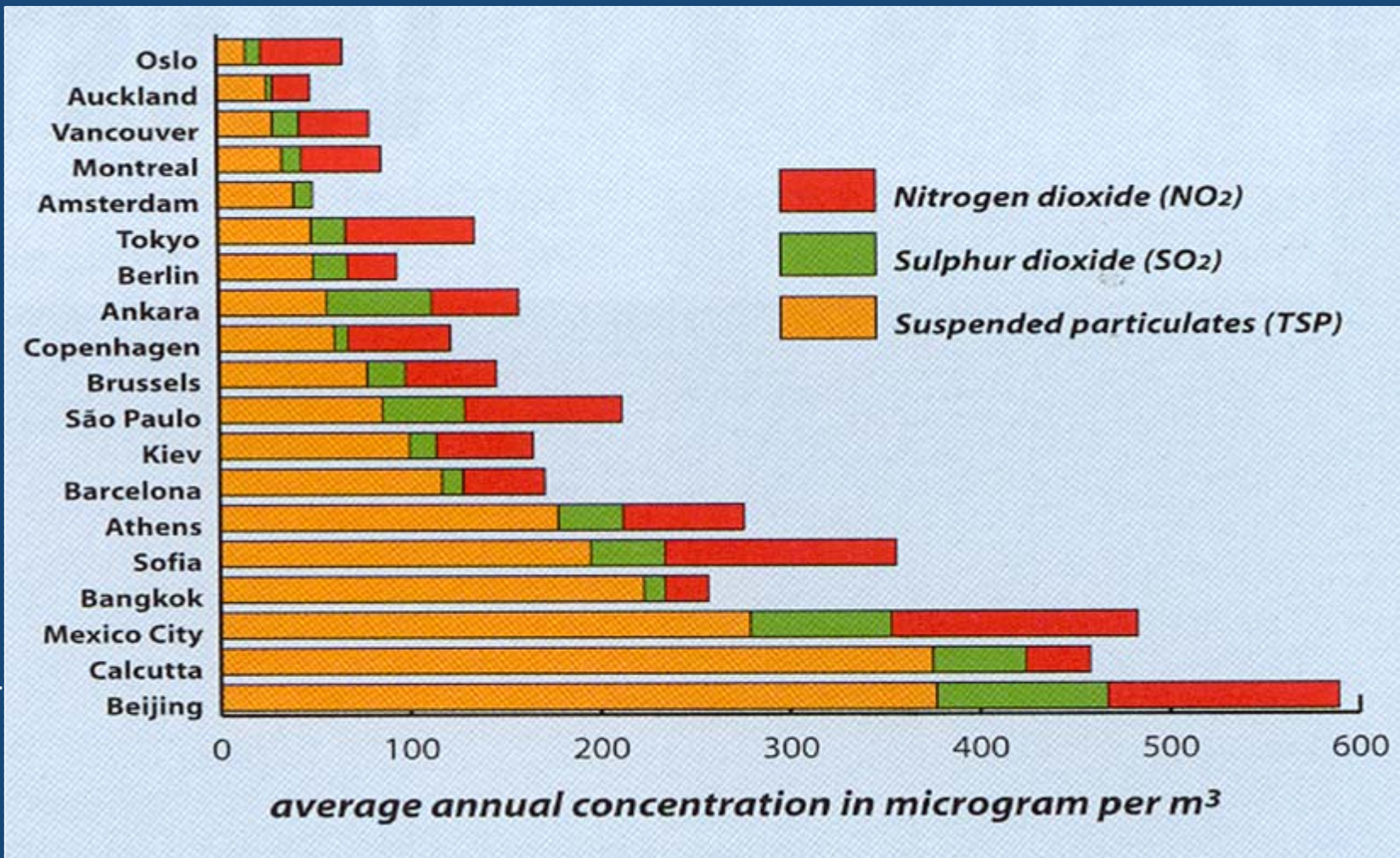


# The Urban Revolution: Increasing Environmental Problems Within Megacities

(Text zu Folie 5)

- First the **impact within the cities**.
- The urban revolution has resulted in **serious environmental problems** in all areas; water availability, waste collection and dumping, energy demands, emissions to the air, sanitation, etc.
- *{ list the four points mentioned on the slide }*
- **Rural areas** provide cities with the energy, food and building materials they urgently need. In Africa almost 1% of forest is lost each year, much wood and food grown on the newly acquired land serves the demands of the cities.

# Example: high levels of air pollution in developing country megacities (Folie 6)



Source: UN-HABITAT/ World Resources Institute, 1995



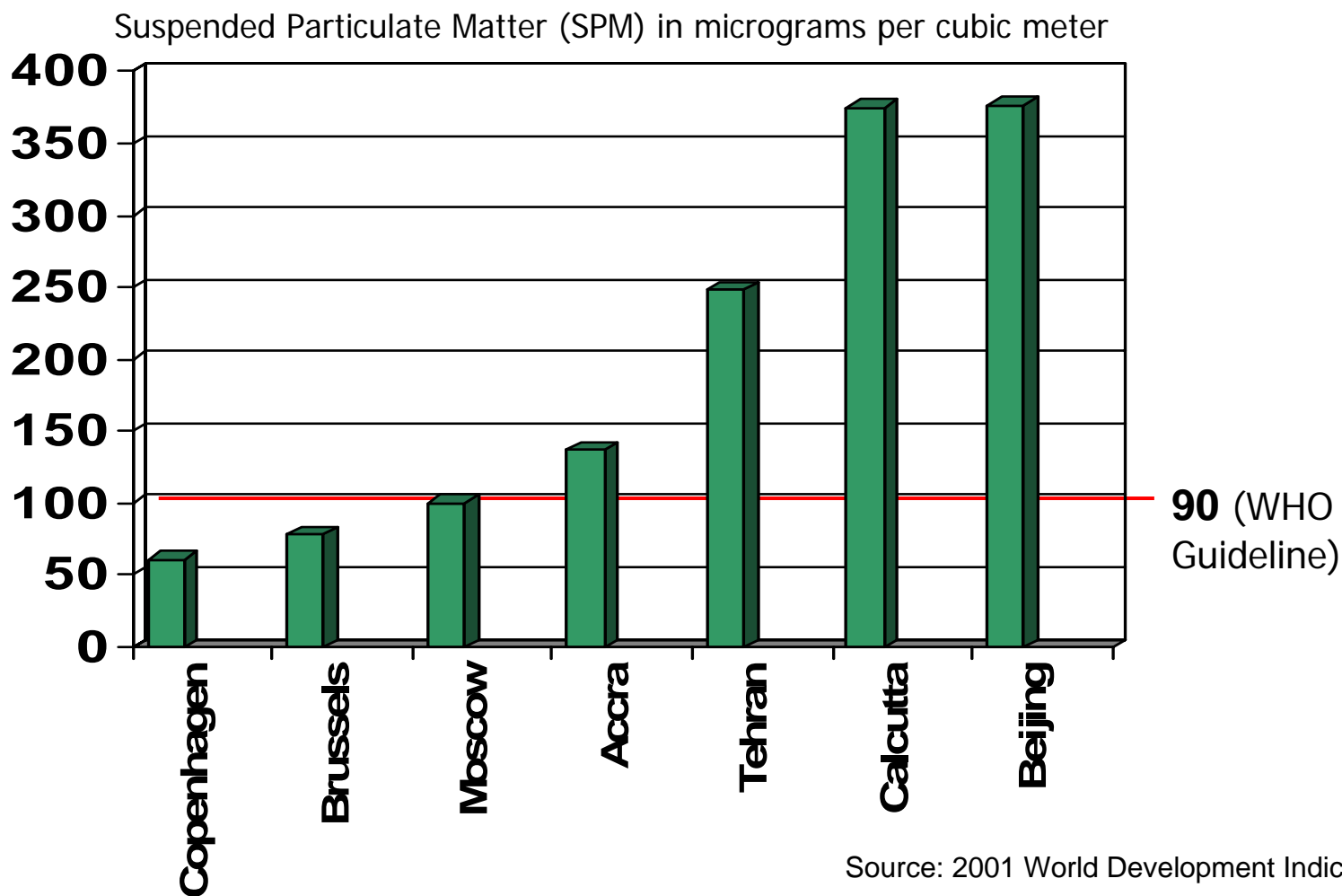
# Example: high levels of air pollution in developing country megacities

## (Text zu Folie 6)

- An **example** of impact of cities is the high **air pollution** in developing country cities, especially in Asia. With the ongoing urbanization, air pollution is now also becoming very critical in many African cities.
- The table shows that big cities in developing countries have very high levels of air pollution. Urban air pollution is a major threat to the residents health: it causes all sorts of diseases and premature deaths. As you can see, even some developed country cities are also struggling with their air quality.
- Traffic congestion is estimated to cost in between USD 272 million to USD 1 billion per year in Bangkok, nearly USD 300 million in Hong Kong and over USD 300 million in Singapore. The major costs are wasted fuel and time delays. In addition we should add the millions of working days lost because of health effects of the air pollution and the damage to crops and property. Estimates indicate that annually between 0.5 to 2.5% of the world's GNP is lost because of air pollution. That is between 150-750 billion US Dollars.



# Example: air pollution in selected cities: particulate matter (fine dust/ smoke) (Folie 7)





# Example: air pollution in selected cities: particulate matter (fine dust/ smoke)

## (Text zu Folie 7)


- Another example of air pollution. The major air pollution in developing country cities are very high and exceed the existing norms and standards.
- Looking at this graph there apparently are ways of successfully addressing the issues. Many cities in developed countries have managed to improve their air quality.
- This shows the urgent need for the **support** we need to give to developing country cities both in **technology transfer and policy development**.



# The Urban Revolution: Increasing Importance of Cities Regionally and Globally (Folie 8)

- **Climate change emissions**
- **Coastal areas seas pollution**
- **Natural resources use (from rural -urban link)**
- **Biodiversity/ natural areas (e.g. wetlands)**
- **Ozone depleting substances**
- **Cities often end up implementing national, regional and global policies and agreements**





# The Urban Revolution: Increasing Importance of Cities Regionally and Globally

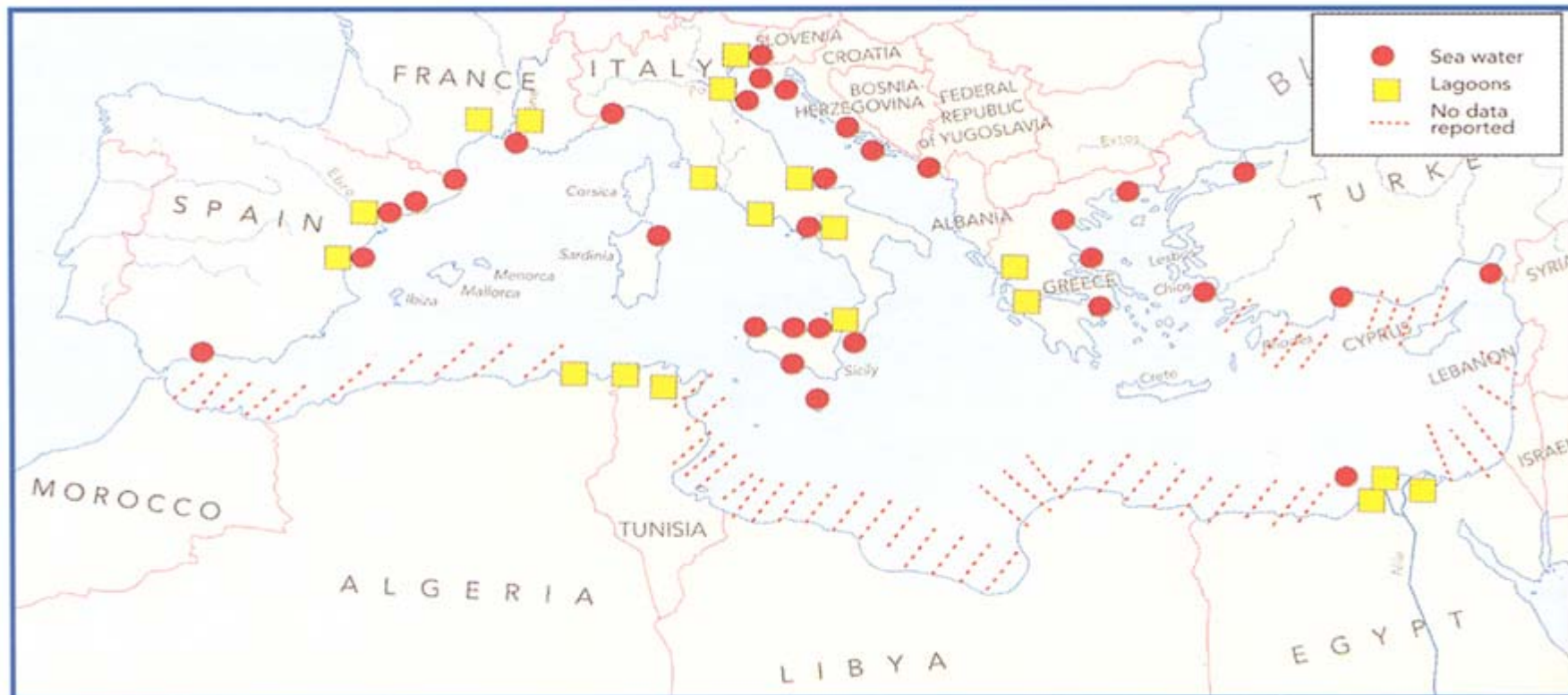
## (Text zu Folie 8)

- As mentioned, apart from the direct effects of urban pollution on the urban citizens, the important **contributions of cities to national, regional and global environmental issues** is increasingly recognised.
- **Cities are a major contributor to:**
  - Emission of CO<sub>2</sub> causing climate change. The emissions are caused by industry, transport and heating.
  - Cities are major users of natural resources, and therefore linked to deforestation, erosion, water depletion.
  - Many important natural areas, such as wetlands, are within or next to city boundaries.
  - Ozone depleting substances, CFCs, are emitted from the cities.
  - But cities are not only causing environmental problems; they are also **key to the solution**.
- In the end it is often **cities that have to implement environmental policies**. For example, they are playing a crucial role in reducing the emission of ozone depleting substances through their programmes of collection old refrigerators to avoid CFC emissions affecting the ozone layer.
- It is clear that we need to **involve cities more deeply**, and especially megacities, and their representing organisations, in environmental policy development world wide.

# Example: urban impact at regional level (Folie 9)

## Managing Regional Seas:

Eutrophication from rivers/ direct discharges of untreated urban and industrial wastewaters



Source: UNEP/FAO/WHO, 1996 (Modified)



# Example: urban impact at regional level

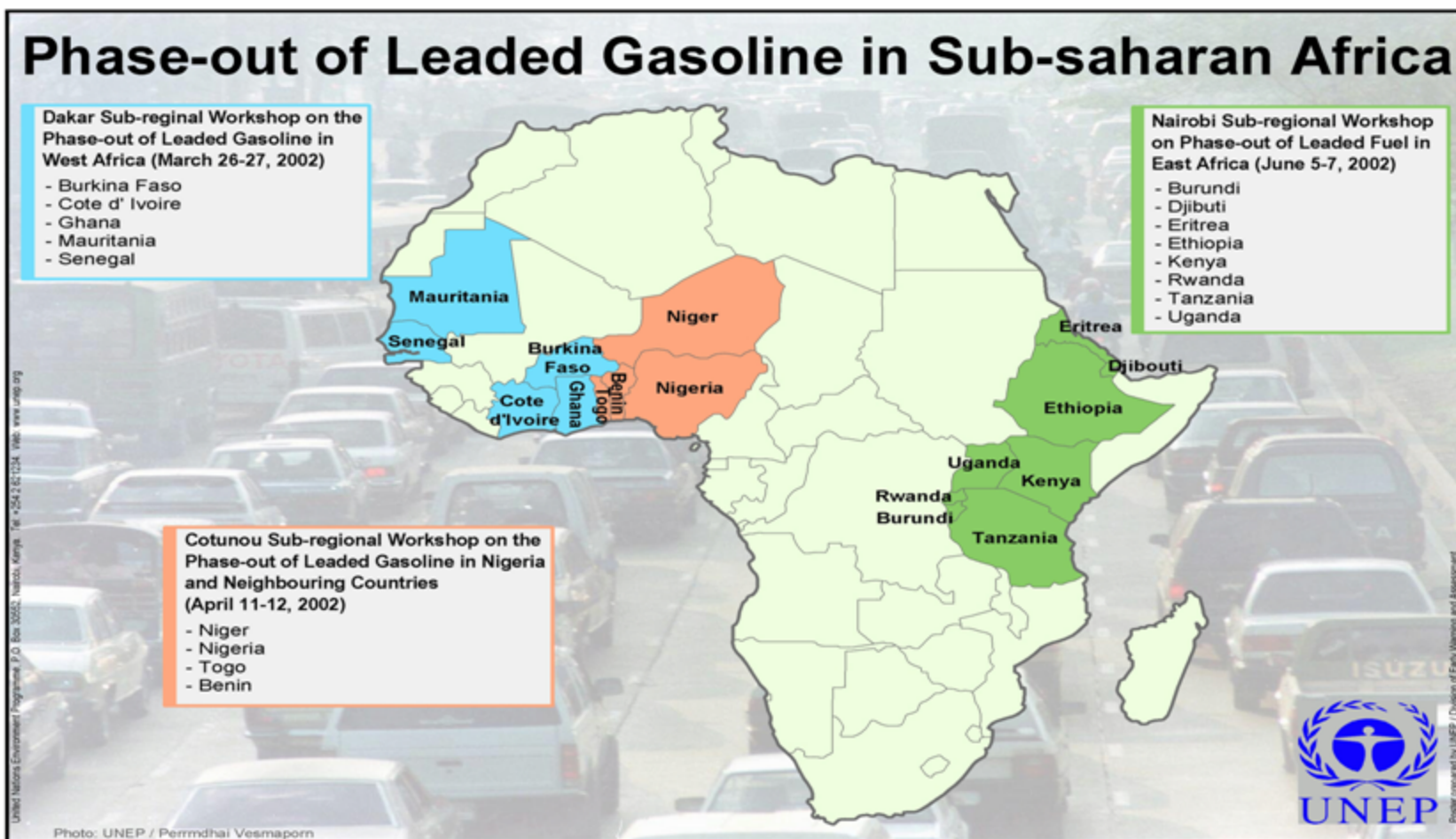
## (Text zu Folie 9)

- Let me give you **two examples** where cities play a crucial role at environmental issues at the **regional level**.
- This is an illustration of the impact of cities on regional seas, in this case the **Mediterranean Sea**. The map shows that the Mediterranean Sea is polluted by sewage discharges that are originating from urban centers-(the red dots). Rivers also contribute to the pollution of the sea - (the yellow blocks). It is often cities located along these rivers, together with agricultural activities, that are causing the river pollution.
- Through its Global Plan of Action for the protection of marine sources from land based pollution, UNEP is promoting the sustainable management of regional seas, and the need for cities to sewage treatment.



# Example: phasing out leaded gasoline in Africa (Folie 10)

UNEP is supporting the phase out of leaded gasoline in East Africa






# Example: phasing out leaded gasoline in Africa

## (Text zu Folie 10)

- This is **another example** of a regional approach in addressing urban issues. UNEP is active - together with partners - to bring governments, the private sector and civil society organisations together to address urban air pollution.
- One of the biggest health problems in Africa's cities today is the emissions of lead through the use of leaded gasoline. While leaded gasoline has been phased out in the rest of the world, or is being phased out at the moment, it is still widely used on the African continent. UNEP has taken the initiative to develop action plans to **phase out leaded gasoline from Africa**. Only a few weeks ago UNEP facilitated the development of an action plan for the phase out of leaded gasoline in East Africa.



## Megacities key to addressing environmental issues (Folie 11)

**Cities need to be more involved in addressing environmental issues and promote sustainable urban development:**


- **Economies of scale**
- **Centers of know how, communication, information, technology**
- **Local actions influence national and regional level**



# Megacities key to addressing environmental issues

## (Text zu Folie 11)

- However, the message is not only negative. Apart from all the environmental problems I just discussed, **cities also offer good opportunities** to address the urgent issues.
- **Economies of scale**  
Cities generate a lot of income. They are the economic engines of countries. Cities offer investment opportunities.
- Cities are **centers of know how**, university and research centers provide expertise. Qualified people are available to develop and implement solutions. In cities modern **information and communication technology** is available.
- Local economies are of **strategic importance to their surroundings**. Actions in cities have a direct effect on the rural areas surrounding the cities, at the national, and sometimes event at the regional level.



# Megacities key to addressing environmental issues (Folie 12)

- **Role of cities key in WSSD**
- **Cooperation between cities in developed and developing countries in area of environment/sustainable development**
- **Support from the international community and organisations to developing country - mega- cities**





# Megacities key to addressing environmental issues

## (Text zu Folie 12)

- Cities have already been very successful in addressing the urgent issues and developing sustainable development strategies, for example the many **local agenda 21 strategies** that have been developed after the Rio conference in 1992.
- **The World Summit on Sustainable Development** will focus on the implementation of sustainable development. Cities play a crucial role in this. UNEP, together with its partner agency HABITAT, the human settlements organisation also headquartered in Nairobi, are jointly promoting the role of cities in the WSSD meeting. UNEP and HABITAT are both directly involved in the official Local Governments Session during the WSSD.
- The **international organisations** must provide assistance to enable cities to contribute their share in implementing sustainable development. **National governments and cities in developed countries** can help to promote the environmental cause in developing country cities by assisting in the transfer of knowledge and technology.

# Policy Challenges (Folie 13)

- **Policy integration**
- **Governance**
- **Decentralization**
- **Innovative Finance**
- **Involvement private sector and civil society**



# Policy Challenges

## (Text zu Folie 13)

- To **integrate environmental considerations in the urban agenda** we need to focus on the following areas:
- **Policy integration:** to integrate the environmental considerations of the - mega - cities in national, regional and global plans and agendas. And to use cities for the implementation of the strategies that will be discussed and agreed upon in Johannesburg.
- **Governance:** for cities to be able to provide good environmental management to reduce the health effects to their citizens it is important to highlight of transparency, and accountability at all levels of government, and promote the relationship between city governments and the private sector and civil society.
- **Decentralization:** for cities to be able to address the urgent issues they need to be given authority to develop and implement action plans. This includes decentralization of revenue raising and generating powers.
- **Finance:** cities are centers of economic growth and investment. We need to integrate environmental considerations in local investment decisions.
- **Involvement private sector/civil society:** strategy development should be issue specific and involve the representative of the private sector and civil society.

## UNEP's role (Folie 14)

- **Including the urban dimension in UNEP's work**
- **Direct support in cooperation with other partners**
- **Support and contribute to global and regional networks on urban environment issues**
- **Include urban perspective/megacities in regional and global environmental issues and policy development**
- **UNEP's new urban environment policy**



# UNEP's role

## (Text zu Folie 14)

- **UNEP is promoting the role of cities**, and especially megacities in developing countries in addressing environmental issues at all levels.
- We are increasingly **integrating the urban component in our work**. Like the example I gave about the Mediterranean Sea, where we need to address the role of cities in regional seas management.
- We are **supporting capacity building** activities for developing country cities, like the Environmental Management Toolkit that our International Environmental Technology Centre in Japan has developed.
- We are closely **cooperating with HABITAT, UNEP, The World Bank and others** to support urban issues, such as the example I gave on the phasing out of leaded gasoline in Africa.
- And we support the involvement of developing country cities in **major regional and global initiatives**, such as the upcoming WSSD.
- However we recognize that **more needs to be done**, and we are therefore in the process of developing an **new urban environment strategy** in UNEP which will further increase our urban environment work, focusing on the position of developing country megacities.