Protecting health in Europe from climate change

Protecting HEALTH in Europe from climate change
Protecter la SANTÉ en Europe face au changement climatique
Schutz der GESUNDHEIT vor den Folgen des Klimawandels in der Europäischen Region
Защита здоровья населения Европы от последствий изменения климата
In this presentation

1. Global action to protect health from climate change
2. Adaptation
3. Strengthen health systems
1. Global action
The UN system coordinated action on climate change

THE CEB CLIMATE CHANGE ACTION FRAMEWORK

Under the leadership of the Secretary-General of the United Nations, the United Nations System Chief Executives Board for Coordination (CEB) has initiated a process of aligning its strengths to achieve a coordinated action-oriented approach to the global and multifaceted challenge of climate change. The objective is to intensify the implementation of existing intergovernmental mandates and build on the experience gained in doing so to support the process for a global agreement for the post-2012 period within the United Nations Framework Convention on Climate Change (UNFCCC). The UN system is determined to provide coordinated support to the efforts of Member States at national, regional and global levels in tackling climate change now, up to, and beyond 2012. To achieve this, the United Nations system is bringing to bear, in a way perhaps never achieved before, the collective strengths of all its entities as an integral part of the international community’s response to this challenge.

The first stage of this wide-ranging initiative was presented at the 2007 United Nations Climate Change Conference in Bali, Indonesia — 13th Conference of the Parties to the UNFCCC (COP 13) and 3rd Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol (CMP 3) — in December 2007, which adopted the Bali Road Map. The further development of the CEB initiative aims at consolidating the delivery of results by the UN system entities. This publication provides an overview of progress made by the time of the 2008 United Nations Climate Change Conference — COP 14 and CMP 4 — in Poznan, Poland in December 2008. The UN system’s efforts will be intensified on the way to the 2009 United Nations Climate Change Conference — COP 15 and CMP 5 — at the end of 2009 in Copenhagen, Denmark.

The United Nations system, with its established structures, coordination arrangements and collective expertise, remains at the disposal of the Parties in implementing existing, as well as future agreements.
Climate change negotiations
Nairobi Work Programme (NWP)

- Assist all Parties, in particular developing countries, including LDCs & SIDS;
  - to improve their understanding and assessment of impacts, vulnerability and adaptation
  - to make informed decisions on practical adaptation actions

- Nine areas of work
  - Climate-related risks & extreme events
  - Adaptation planning & practices
  - Socio-economic information
  - Methods & tools
  - Data & observations
  - Economic diversification
  - Research
  - Climate modeling, scenarios and downscaling
  - Technology for adaptation

Courtesy of Miwa Kato (UNFCCC)
Bali Action Plan:

I. Shared Vision on long-term co-operative action ... To achieve the ultimate goal of the Convention....CBDR

II. Enhanced action on Mitigation
   • MRV
   • Developed country targets
   • Developing country mitigation actions MRV?
   • Deforestation
   • Sectors and markets

III. Enhanced action on Adaptation
   • National planning for adaptation
   • Streamlining and scaling up financial and technological support
   • Enhancing knowledge sharing – Nairobi Work Programme
   • Institutional frameworks for adaptation – where WHO comes in

IV. Enhanced action on Technology Transfer

V. Enhanced action on Financial resources and investment – supporting elements II to IV
Background: Health a top priority

- Number of countries (globally), that have identified health as a priority in their national communications to the UNFCCC (2008) (courtesy, UNFCCC)
Current Representation of Health in Climate Change Mechanisms & Funding

Health:

- Is identified as a priority in 32 out of 38 (84%) UNFCCC National Adaptation Plans of Action (NAPAs) from the least developed countries
- Is the focus of 31 of 430 (7%) projects submitted for NAPA funding
- Has received ~ $2.5 million of $1.3 billion (0.2%) of support granted under the UNFCCC
- Is represented by ~20 of the 10,000 participants (0.2%) in the UNFCCC Conference of the Parties
## Annual costs of health adaptation to climate change, Worldwide (US$ Million, 2030)

<table>
<thead>
<tr>
<th>Cost/Scenario</th>
<th>Unmitigated</th>
<th>Stabilization at 750ppm</th>
<th>Stabilization at 550ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaria</td>
<td>3,100 to 8,800</td>
<td>1,900 to 5,600</td>
<td>1,600 to 4,500</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>2,731 to 9,010</td>
<td>1,983 to 6,814</td>
<td>1,706 to 6,024</td>
</tr>
<tr>
<td>Malnutrition</td>
<td>62 to 166</td>
<td>81 to 216</td>
<td>54 to 150</td>
</tr>
<tr>
<td>All Costs</td>
<td>5,900 to 18,000</td>
<td>4,000 to 12,600</td>
<td>3,300 to 10,700</td>
</tr>
</tbody>
</table>

*Ebi et al, 2007*
Climate change and health

The Executive Board,

Having considered the report on climate change and health,¹

RECOMMENDS to the Sixty-first World Health Assembly the adoption of the following resolution:

The Sixty-first World Health Assembly,

Recalling resolution WHA51.29 on the protection of human health from risks related to climate change and stratospheric ozone depletion and acknowledging and welcoming the work carried out so far by WHO in pursuit of it;

Recognizing that, in the interim, the scientific evidence of the effect of the increase in atmospheric greenhouse gases, and of the potential consequences for human health, has considerably strengthened;

Noting with concern the recent findings of the Intergovernmental Panel on Climate Change that the effects of temperature increases are already being observed on some aspects of human health; that the net global effect of projected climate change on human health is expected to be negative, especially in developing countries, small island developing States and vulnerable local communities which have the least capacity to prepare for and adapt to such change, and that exposure to projected climate change could affect the health status of millions of people, through increases in malnutrition, in death, disease and injury due to extreme weather events, in the burden of diarrhoeal disease, in the frequency of cardiorespiratory diseases, and through altered distribution of some infectious disease vectors;

Noting further that climate change could jeopardize achievement of the Millennium Development Goals, including the health-related Goals, and undermine the efforts of the Secretariat and Member States to improve public health and reduce health inequalities globally;
Raising the profile of health in climate change negotiations

Climate change negotiations:

- Are carried out by countries, not UN agencies – so first priority is to ensure that national negotiators understand and represent health dimension
- Depend on public support – so need for advocacy and awareness raising for the health position
- Should be based on the best available evidence, so the health community needs to organize to present relevant, simple, evidence-based positions
2. Health adaptation
Adaptation vs Prevention

- Adaptation is the term used by the climate change community to describe the process of designing, implementing, monitoring, and evaluating measures intended to reduce climate change-related impacts.

- Adaptation is analogous to public health prevention:
  - Primary prevention aims to prevent the onset of disease (such as by providing access to safe drinking water).
  - Secondary prevention entails preventive action in response to early evidence of health effects (including strengthening disease surveillance programs).
  - Tertiary prevention consists of measures (often treatment) to reduce suffering caused by existing disease.
Examples of Public Health Responses to the Risks of Climate Change

- **Reduce exposures**
  - Legislative policies
  - Alterations in built environment
  - Alterations in natural environment

- **Prevent onset of adverse outcomes**
  - Early warning systems
  - Surveillance and monitoring
  - Vector control programs
  - Public education and outreach

- **Response / treatment**
  - Medical training and awareness
  - Treatment
  - Emergency response

Residual climate change-related health impacts
Questions for designing adaptation policies and measures

- Adaptation to what?
  - Which populations and regions are most vulnerable?

- What is currently being done to reduce the health burden?
  - Who is responsible for these policies and measures?
  - How effective are these policies and measures?

- What could be done now to reduce vulnerability?
  - What are the main constraints to implementation?

- What modifications to current programs, or what additional interventions, are needed?
  - When and where should these interventions be implemented?
  - How will their effectiveness be monitored and evaluated?
Process is as Important as Outcome

- Need to include stakeholders and policy makers
  - This is an expression of values, not a purely analytic exercise

- Constraints and barriers need to be explicitly addressed

- Adaptation will affect and be affected by development pathways
  - Within the context of other pressing health needs

- Taking a risk management approach likely to be most effective
  - Monitoring and evaluation important components
Adaptation and Mitigation as Risk Management

1. Identify problem and objectives
2. Establish decision-making criteria, receptors, exposure units and risk assessment endpoints
3. Assess risk
4. Identify options
5. Appraise options
6. Make decision
7. Implement decision
8. Monitor

Yes
Problem defined correctly?

Yes
Criteria met?

No
Yes

3. Health system
What can health systems do?

- Preparing for health impacts
- Advocate health with other sectors and for global action
- Share good practice in intersectoral action
- Build capacity in the health workforce
- Provide intelligence
- Set the example by “reducing emissions”

Health systems’ capacity to protect health from climate change varies greatly across Europe.
The NHS is the biggest business in England, spending in excess of £90 billion per year.

1 in 20 journeys in the UK is associated with the NHS, with a 1/3 of hospital space allocated to car parking.

Physical inactivity costs us over £10 billion pa.

The NHS can and must make a significant contribution to the health and sustainability of the communities it serves.
The example of Heat

Factors affecting exposure
Factors affecting sensitivity to a given heat exposure
Factors affecting access to treatment

Core elements of heat action plans

- Collaborative mechanisms between institutions and a lead body to coordinate emergency responses;
- Accurate and timely meteorological forecasts;
- Reduction of exposure to heat;
- Particular care for vulnerable populations;
- Provision of health care, social services and infrastructure;
- Risk communication mechanisms;
- Urban planning, energy and transport policies;
- Monitoring and evaluation.
Seasonal forecasting

http://www.euroheat-project.org/dwd/index.php
Fig. 26. Theoretical urban temperature cross-section

CBD (central business district) \( \Delta T_{u-r} \) (temperature difference between urban centre and rural area)

Air temperature

Rural Suburban Urban

Cliff Plateau Peak

Residential areas Park

Awareness raising

- Keep your house/apartment cool
- Keep the body cool and hydrated
- Help others
- Be alert!
Examples of Adaptation Measures to Reduce Vectorborne Diseases

- Decision support tools
  - Early warning systems

- Technology development
  - Vaccines and more rapid diagnostic tests

- Surveillance and monitoring
  - Effective vector surveillance and control programs that incorporate climate change concerns

- Infrastructure development
  - Consider possible impacts of infrastructure development, such as water storage tanks
Investments made in the next 10-20 years will have significant impacts on us and future generations

IPCC, 2007
Emission control costs to meet the EU air quality and climate targets

EU-27, 2020

(Source: IIASA’s GAINS model)

Business as usual
National energy projections (+3% CO₂ in 2020)

Illustrative energy projections meeting the EU climate target (-20% CO₂ in 2020)

Indicative costs for changes in the energy system to meet climate and energy targets
Costs for further measures to achieve the targets of the EU Thematic Strategy on Air Pollution
Costs for implementing current air pollution legislation
Costs for implementing current air pollution legislation

€20 bn/yr
Mitigation Can Provide Significant Health Co-Benefits

- Estimates of the co-benefits of reducing air pollution from coal-fired power plants and transport suggest the immediate health benefits will be significant.

- Examples include:
  - Cleaner vehicles can reduce urban air quality, reducing morbidity and mortality from air pollutants.
    - However, there also can be negative health impacts if the manufacture or use of these vehicles increases exposure to toxic materials.
  - Transport policies can increase public transport and create more walkable-friendly cities.
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