



EUROPE

Protecting health in Europe from climate change

World Health Day 2008



Protecting HEALTH in Europe from climate change
Protéger 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





Why climate change and health?

Never has it been more evident that health needs to be at the core of concerns on climate change. Health systems have a pivotal role to play in protecting health from the consequences of climate change.

This year World Health Day, dedicated to protecting health from climate change, provides an opportunity to share the best practices and to place these important issues at the hearth of local, national and international dialogue, policies and actions.

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In this presentation



1. Climate change



2. Health effects & health-systems responses



3. Vulnerable groups & inequalities



4. The role of health systems



5. Action by WHO/Europe

1. Climate change



Greenhouse-gas (GHG) emissions are warming the earth

- GHG emissions have increased by 70% over the last four decades (IPCC 2007).
- In Europe energy and transport are the biggest emitters. Transport emissions are projected to increase of about 50% by 2030 compared to 2000 (EEA 2007).
- The projected temperature increase for Europe by the end of the 21st century is 2.3 – 6 °C (IPCC 2007).



Photo: Istockphoto



Climate change's effects are already observed in Europe

Heat-waves

Floods



Droughts



Worsening air pollution

Water stress and unsafe food

Changes in vector distribution

All affect human health and well-being.

2. Health effects

Health-systems responses

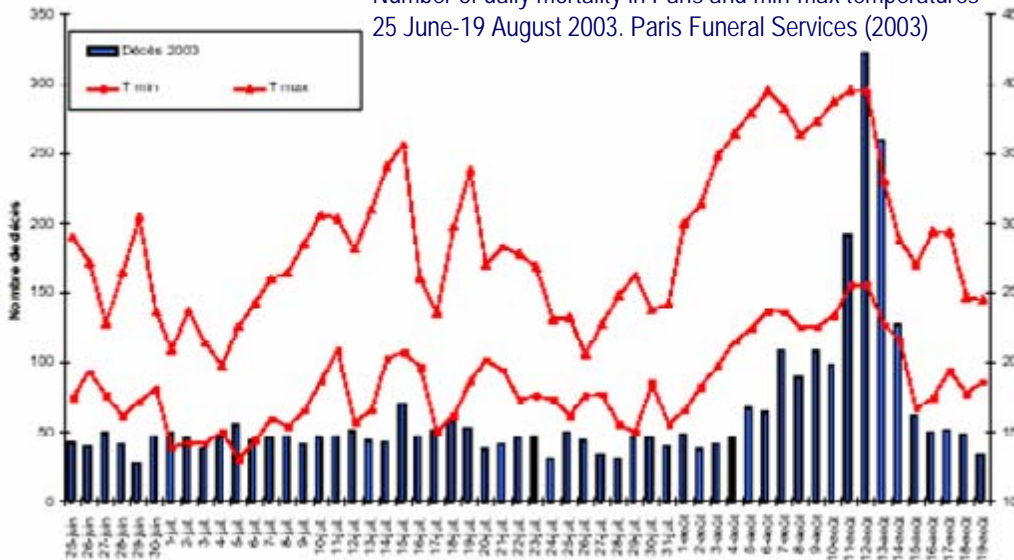


Increase in heat-waves is one of the most certain consequences of climate change

Mortality increases by 1–4% for each one-degree temperature rise (KOVATS 2006)

- Over 70 000 extra deaths reported in Europe in summer 2003 (ROBINE 2008).
- 86 000 extra deaths estimated per year with a global mean temperature increase of 3 °C in 2071–2100 in the EU (PESETA 2008).

Number of daily mortality in Paris and min-max temperatures
25 June-19 August 2003. Paris Funeral Services (2003)



HOW TO REDUCE HEALTH EFFECTS

Implement heat-health action plans by:

- ensuring health systems' preparedness and ability to respond;
- reducing community exposure to heat;
- providing timely weather-related health alerts and advice to citizens.

Cold weather still affects Europe, especially in northern latitudes

- Cold outdoor and indoor thermal conditions can cause cardiovascular and respiratory health effects.
- Deaths and disease during cold spells may be most serious for poorer households.
- Health risks may arise from the use of solid fossil fuels; these are linked to 13 000 deaths yearly in children (WHO 2004).
- Most European countries suffer from 5–30% excess winter mortality (IPCC 2007).



HOW TO REDUCE HEALTH EFFECTS

Ensure health-system preparedness by:

- *adapting health care infrastructures;*
- *advocating access to clean, affordable and reliable energy with other sectors;*
- *promoting energy efficiency.*

Projected climate-related increases in precipitation will make floods more frequent and severe

- Winter floods are projected to rise in north-western Europe and flash floods throughout the Region.
- Coastal flooding is likely to threaten up to 1.6 million additional people per year in the EU (IPCC 2007).

HOW TO REDUCE HEALTH EFFECTS

- *Shift action from disaster response to risk management*
- *Strengthen health-system preparedness*
- *Develop infrastructure measures*
- *Establish links with early warning systems*
- *Deliver awareness-raising campaigns before floods happen*



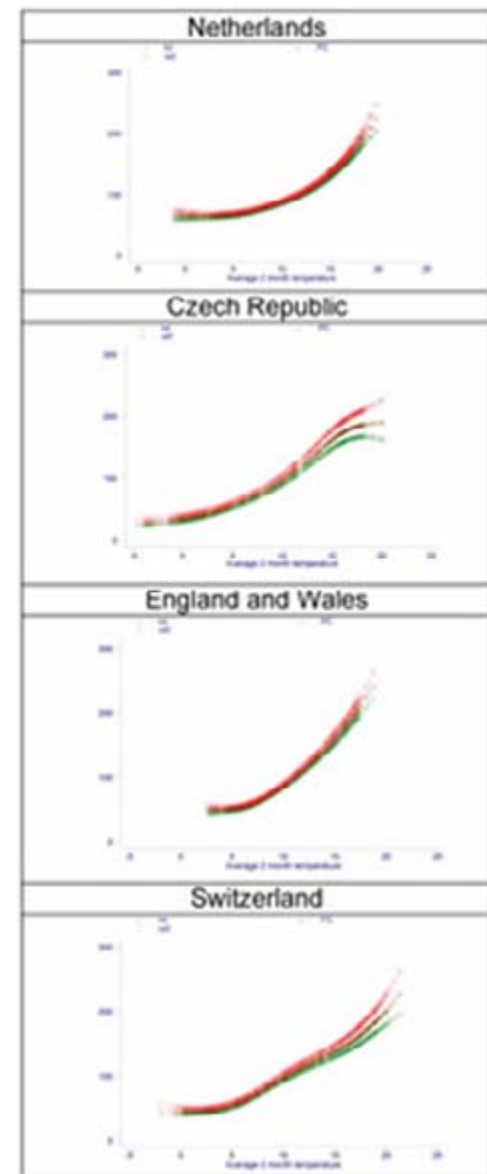
Climate change affects nutrition and food safety

- Food productivity will decrease in the Mediterranean, south-eastern Europe and central Asia. Crop yields could fall up to 30% in central Asia by the 21st century (IPCC 2007).
- Higher temperatures favour the growth of bacteria in food, such as *Salmonella* spp. (KOVATS 2006).

HOW TO REDUCE HEALTH EFFECTS

Implement the WHO Food and Nutrition Action Plan by:

- strengthening surveillance and monitoring;
- detecting changes and analysing trends in foodborne and nutrition-related diseases;
- educating and informing consumers on healthy diets and food safety practices.



Changing infectious disease transmission results from altering vectors' geographical distribution

- Climate change will challenge the progress made towards eliminating malaria in Europe and central Asia, and increase the risk of local outbreaks (WHO 2004).
- Lyme disease is shifting to higher latitudes and altitudes, following movement of ticks (WHO 2005).
- Leishmaniasis, a disease transmitted by sand flies, is travelling northwards (WHO 2005).
- In the 2007 outbreak of Chikungunya virus in Italy, the presence of a suitable vector allowed sustained local transmission (ECDC 2007).

HOW TO REDUCE HEALTH EFFECTS (in collaboration with veterinary services)

- *Provide vaccination, where needed*
- *Strengthen vector surveillance and control*
- *Ensure rapid diagnosis*
- *Raise awareness of protective behaviour*



Water stress is projected to affect 16–44 million more people by 2080

- Reduced summer water flows (of up to 80%) will result in loss of fresh water and increased potential for contamination (IPCC 2007).
- The quality of coastal waters is endangered, putting bathers and seafood eaters at risk of infection.
- This may worsen access to safe water and sanitation, which is already unequal in Europe.

HOW TO REDUCE HEALTH EFFECTS

Ensure water safety through the Protocol on Water and Health by:

- *providing access to safe drinking-water and sanitation*
- *enhancing risk assessment and management*
- *strengthening disease surveillance and outbreak detection.*



Photo: N. Di Tanno



Changes in air quality, more heat-waves and earlier pollen seasons affect respiratory diseases

- Climate change may affect concentrations and dispersion of air pollutants.
- Changes in wind patterns favour long-range transport of air pollutants.
- Heat-waves' health effects are stronger when air pollution is high.
- Ozone and particulate matter (PM) are of greatest health concern.
- Climate change is responsible for an earlier onset of the spring pollen season.



HOW TO REDUCE HEALTH EFFECTS

- *Enforce air quality standards, avoiding health-damaging measures*
- *Promote energy efficiency and reduced motorized transport*
- *Educate people to avoid outdoor exercise when ozone levels are high and roads polluted*
- *Be vigilant on allergies and inform the public about preventive actions and treatments*

3. Vulnerable groups

Inequalities



Climate change will affect everybody but everybody is not equally vulnerable

Populations differ in vulnerability.

- As developing organisms with long-term exposure, children are most at risk from the effects of climate change.
- Heat primarily affects old people: chronic diseases and drugs can decrease their ability to cope with extreme hot weather.
- Emergency services providers and labourers in outdoor environments are especially affected by extreme weather events.



Climate change will have adverse effects on economic growth

More than 60 million people in eastern Europe are living in absolute poverty.

- Climate change can significantly worsen health inequities within and among countries and put additional stress on poorer groups.
- Climate change is estimated to cost up to 5% of the gross domestic product (GDP) globally by the end of this century (IPCC 2007).
- Climate change threatens to undermine progress made towards the Millennium Development Goals (MDGs) (IPCC 2007).



4. The role of **health** systems

*Protect Europe's **health** from climate change*



Climate-related health effects have stimulated the strengthening of health systems' capacities

Health systems are in a unique position to:

- put health concerns high in the climate change agenda;
- implement strategies to limit the health impacts;
- advocate action in other sectors to benefit health;
- lead by example.



Photo: Istockphoto

The capacity of health systems to protect health from climate change varies greatly across Europe.



All health systems can take common actions to strengthen preparedness and response

1. Identify problems, most vulnerable populations and needs for training, communication and supplies.
2. Reinforce health systems' interventions to adapt to climate change (i.e. ensuring clean water and sanitation, safe and adequate food, immunization, disease surveillance and response, vector control, and disaster preparedness).
3. Train health professionals on climate-related health issues (i.e. new transmission patterns of infectious diseases and symptoms and treatments of diseases linked to extreme weather events).



Common actions for all health systems (continued)

4. Deliver accurate and timely information and communication

to decision-makers, the general public, other stakeholders for proper action to protect health from climate change.

5. Strengthen health security

e.g. facilitate collaboration between countries to respond to climate-related health crises when health security calls to enforce the International Health Regulations.

6. Advocate health in other sectors

where reduction of emissions can benefit health (energy, transport, housing, land use, water management).

5. Set the example in tackling the root causes of climate change by taking actions to reduce health systems' "carbon footprint".



5. Action by WHO/Europe

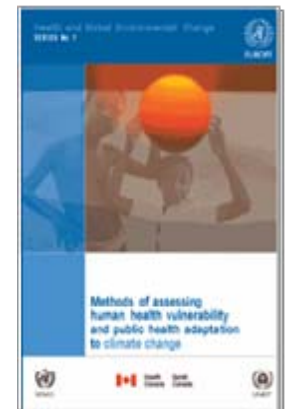
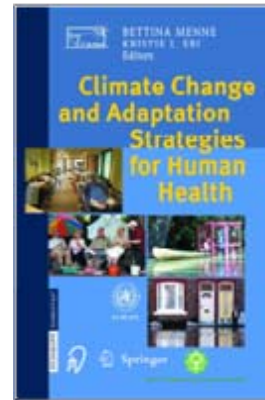
Support to countries



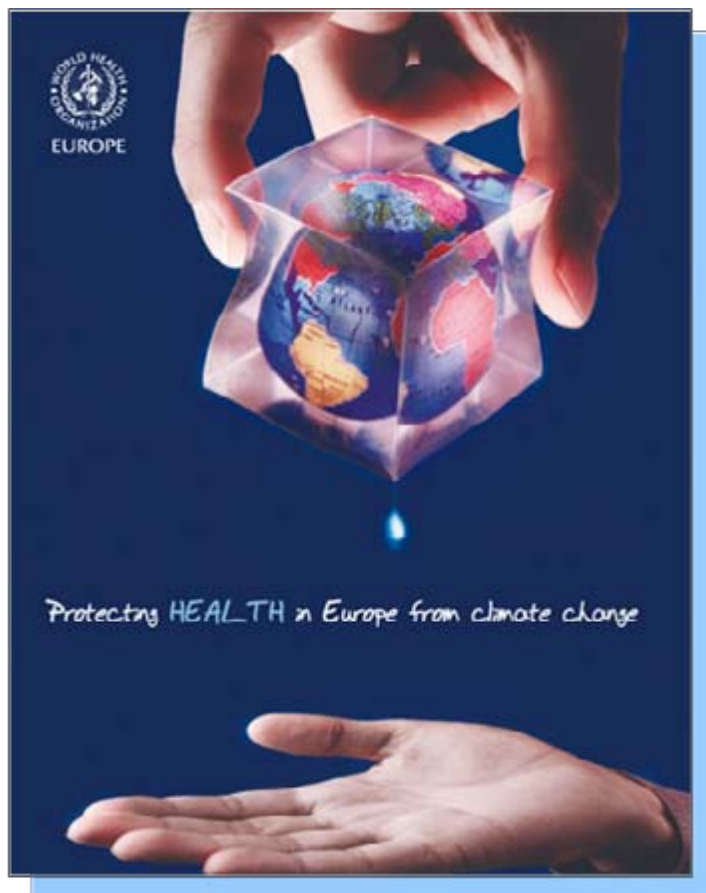
WHO supports European countries

WHO/Europe's activities build on decades of experience with strengthening countries' health systems to protect health from climate change. They include:

- heat-health action plans;
- disaster preparedness;
- programmes to combat infectious disease, improve water and sanitation services and respond to natural disasters;
- information to the public on how to avoid risks;
- coordination of scientific reviews of the evidence of the links between climate and health;
- capacity building on climate change and health.



A new WHO tool for European decision-makers on World Health Day 2008



Protecting health in Europe from climate change

presents the current and projected health effects related to climate change and provides practical guidance on specific actions that people and countries can take *now* to protect their health.



[www . euro . who . int](http://www.euro.who.int)

[www . euro . who . int / globalchange](http://www.euro.who.int/globalchange)

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