Environment and health work in the WHO European Region

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Content

• The WHO work on environment and health – priorities in Europe
• Biodiversity and health go together
• WHO/Euro focus
  – urban green spaces
  – climate change
THE WHO WORK ON ENVIRONMENT AND HEALTH – PRIORITIES IN EUROPE
Health 2020: addressing European challenges

Lifestyle, social, economic and environmental determinants of health

Health equity

Good governance
WHO European Centre for Environment and Health: Implementing Health2020 and the SDGs
SDG target 3.9 on health improvement by environmental measures

SDG Target 3.9:
By 2030, substantially reduce deaths/illnesses from hazardous chemicals and air, water and soil pollution and contamination

Goal 2: agriculture
Goal 6: water and sanitation
Goal 7: sustainable energy
Goal 9: infrastructure and industrialization
Goal 11: cities and human settlements

Goal 12: consumption and production
Goal 13: climate change
Goal 14: marine resources
Goal 15: terrestrial ecosystems
How the environment affects health

- **Air Pollution**
  - including indoors and outdoors

- **Inadequate Water, Sanitation**
  - and hygiene

- **Chemicals**
  - and biological agents

- **Radiation**
  - ultraviolet and ionizing

- **Community Noise**

- **Occupational Risks**

- **Climate Change**

- **Built Environments**
  - including housing and roads

- **Agricultural Practices**
  - including pesticide-use, waste-water reuse
The health burden of inadequate environments

WHO European region: at least 1.4 million deaths per year are related to environmental conditions.

=> 15% OF ALL DEATHS
Air quality: the number one environmental health challenge in the WHO European region

- For 88% of urban residents, the WHO Air Quality Guidelines on Particulate Matter are not met
- 482,000 premature deaths/year due to ambient air pollution

WHO AQG = 20 µg/m³
Other environmental challenges in the WHO European region

**Inadequate housing** causes more than 100,000 deaths/year

Active mobility could prevent many of the 1,000,000 deaths/year attributable to **inadequate physical activity**

**Inadequate water, sanitation and hygiene** cause an estimated 14 diarrhoeal deaths per day in low and middle income countries
WHO tools and support

**Evidence:**
- WHO Guidelines and technical reports on environment conditions
  - Transport
  - Housing
  - Air pollution
  - Noise
  - Climate change
  - Water/sanitation
  - Green spaces
- Health Impact Assessments
- Economic assessments

**Tools:**
- AirQ+ on health impacts of air pollution
- Health Economic Assessment Tools for cycling and walking
- Heat-Health Action Plans
- Climate change and health adaptation cost tool
- Air Quality in Cities database
- Environmental Burden of Disease quantification methods
- Environmental health indicators
BIODIVERSITY AND HEALTH GO TOGETHER
Biodiversity and health – an old topic with new relevance

Ecosystem effects of biodiversity loss could rival impacts of climate change
Date: May 2, 2012

Tropical Mosquitoes Gain Foothold in Northern Europe
Date: May 9, 2016

Scientists warn of 'unsafe' decline in biodiversity
Date: July 15, 2016

Climate change: global reshuffle of wildlife will have huge impacts on humanity
Date: March 30, 2017
Importance of biodiversity and ecosystems to human health

“Nature’s goods and services are the ultimate foundations of life and health, even though in modern societies this fundamental dependency may be (...) poorly recognized.

We now need to look at environmental health through a broader lens (...)”

(Lee Jong Wook, former DG of WHO)
Linkages and co-dependencies at the intersection of biodiversity and human health
Ecosystem services are indispensable to the wellbeing of people everywhere.

Even wealthy populations cannot be fully protected from the impacts of degradation of ecosystem services.
OUR WORK FOCUS IN RELATION TO BIODIVERSITY:
- URBAN GREEN SPACES
- CLIMATE CHANGE
Political frameworks for our work on green space and health

- **WHO Parma Declaration** commitments:
  *By 2020: “to provide each child with access […] to green spaces in which to play and undertake physical activity”*

- **SDG agenda “Leaving no-one behind”** SDG 11.7:
  “provide universal access to safe, inclusive and accessible green and public spaces, in particular for women and children, older persons and persons with disabilities”

- **New Urban Agenda** adopted at Habitat III, Quito, 2016:
  “We envisage cities and human settlements that […] prioritize safe, inclusive, accessible, green and quality public spaces”
Compiling evidence for action

Urban green spaces and health
A review of evidence

Urban Green Space Interventions and Health
A review of impacts and effectiveness
Green space benefits: health, equity and beyond

Green spaces benefit cities and urban quality of life because they can:

- deliver positive environmental, social and health outcomes
- upgrade the social and environmental quality of disadvantaged and deprived areas
- make cities more liveable and enjoyable

Many urban green space interventions consider biodiversity and wildlife aspects!
Urban green spaces: a WHO brief for action
Climate-related increases in ill-health in the European Region will occur through

- Expected further impacts of extreme weather events on health
- Disruption and stress for health services
- Changing distributions of infectious diseases
- Changes in air quality, food and water quality and security
- Consequences for health of lost work capacity and reduced labor productivity
Climate change and high level of diversity

Arctic / Subarctic and Polar:
- Projected increases in temperatures and heavy precipitation;
- Permafrost reduction, retreat of glaciers, increase of lakes;
- Risk of injury and illness due to these extreme changes;
- Food insecurity;
- Impacts on livelihoods of indigenous people.

Northern and Western Europe:
- Observed and projected hot days increase;
- Observed and projected increase in precipitation;
- Projected increase in dryness and short term droughts;
- Shift from cold to heat related mortality in England and Wales;
- River and coastal flooding;
- Extension of seasonal activity of pests and plant diseases;
- Northern expansion of tick disease vectors from south.

Central Asia:
- Projected increase in hot days;
- Increased mean temperature;
- Spatially varying trends for precipitation and dryness;
- Increases in food production in north eastern Kazakhstan;
- Reductions in food production in Turkmenistan and Uzbekistan;
- Adequate water supply is major challenge and could be exacerbated by temperature increases.

Central and Eastern Europe:
- Hot day increases projected for east central but not currently observed;
- Projected increase in winter precipitation and decrease in summer precipitation;
- Projected increase in dryness and short term droughts;
- Increase in forest fires and air pollution;
- Northern expansion of tick disease vectors from south.

Southern Europe and Mediterranean:
- Most sensitive to hot weather and highest heat wave exposure;
- Increased heat wave mortality and morbidity;
- Increase food borne disease;
- Increase in dryness and desertification;
- Reductions in food production;
- Increase in forest fires;
- Changes in distribution of water borne and vector borne diseases.
### Examples of vector-borne diseases in the WHO European Region

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<th>Mosquito-borne</th>
<th>Sandfly-borne</th>
<th>Tick-borne</th>
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<td>• Dengue fever</td>
<td>• Leishmaniasis</td>
<td>• Lyme disease</td>
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<tr>
<td>• Chikungunya</td>
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<td>• Tick-borne encephalitis (TBE)</td>
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<td>• Malaria</td>
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<td>• Crimean–Congo haemorrhagic fever</td>
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<td>• West Nile fever (WNF)</td>
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Key facts – WHO European Region

• 77 000 Europeans on average fall sick from vector-borne diseases every year.

• Mosquito species, such as *Aedes aegypti*, are re-emerging, and *Ae. albopictus* is emerging.
Increasing and decreasing trends

Over recent decades, many plant and animal species have shifted their geographical ranges, altered their abundance and shifted their seasonal activities in response to observed climate change (e.g. bird migration or pollen production). These shifts may increase the incidence of pollen allergies and vector-borne diseases in the European Region.

Number of cases: 1990, 2000, 2010

Source: WHO centralized information system for infectious diseases (CISID) (http://data.euro.who.int/cisid).
Growing public health concern

A combination of factors increases the threat of vector-borne diseases in the WHO European Region:

• changing social and economic conditions;
• globalized travel and trade;
• increased urbanization;
• climate change;
• biodiversity changes.
Projected change in the climatic suitability for chikungunya transmission

- Unsuitable
- Rather unsuitable
- Partly suitable
- Rather suitable
- Suitable

Legend:
- No data
- Outside coverage

Maps for different time periods and emission scenarios (A1B and B1) are shown, indicating changes in climatic suitability for chikungunya transmission across Europe.
Public health action

3 phases of vector and disease prevention and control

• Control the vector
• Prevent the disease
• Limit the spread
Opportunity to Link Health, Biodiversity and Climate Change

Important for the climate change community to explicitly recognize that human health and well-being are influenced by the health of local plant and animal communities, and the integrity of the local ecosystems.
Structure and processes on environment and health
European EH Process (EHP)

An institutional framework ensures appropriate coordination between national implementation and international policies, and the proper level of monitoring and implementation.

- **National mechanisms and structures** are to be set up or strengthened in countries.
- **The European Environment and Health Ministerial Board (EHMB)** is the political face and driving force of international policies and commitments made within the EHP. The EHMB is composed of four ministers of health, four ministers of environment and four representatives of intergovernmental organizations.

- **The European Environment and Health Task Force (EHTF)** is the leading international body for implementation and monitoring of the EHP, meeting annually. Task Force members are leading officials from all Member States in the WHO European Region, nominated at national level as focal points for the Process.

- **Secretariat**: The whole institutional framework will be serviced by WHO/Europe, which will cooperate closely with UNECE and UNEP Regional Office for Europe.
Ministerial Conferences on EH

- 1989 Frankfurt
- 1994 Helsinki
- 1999 London
- 2004 Budapest
- 2010 Parma
- 2017 Ostrava

...to gather environment and health ministries
...to achieve common commitments and promote intersectoral action
...to identify key priorities for WHO work on environment and health
Environment and Health structure

WHO Regional Office for Europe
Division of Policy and Governance for Health and Well-being

European Environment and Health Process (EHP)

Copenhagen office
- Environment and health policies
- Transport and health

Bonn office
- Living / working environments
- Water and Climate
- Environment and health impact assessment
# Programmatic work areas

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