Health, water and climate change

World Health Organization
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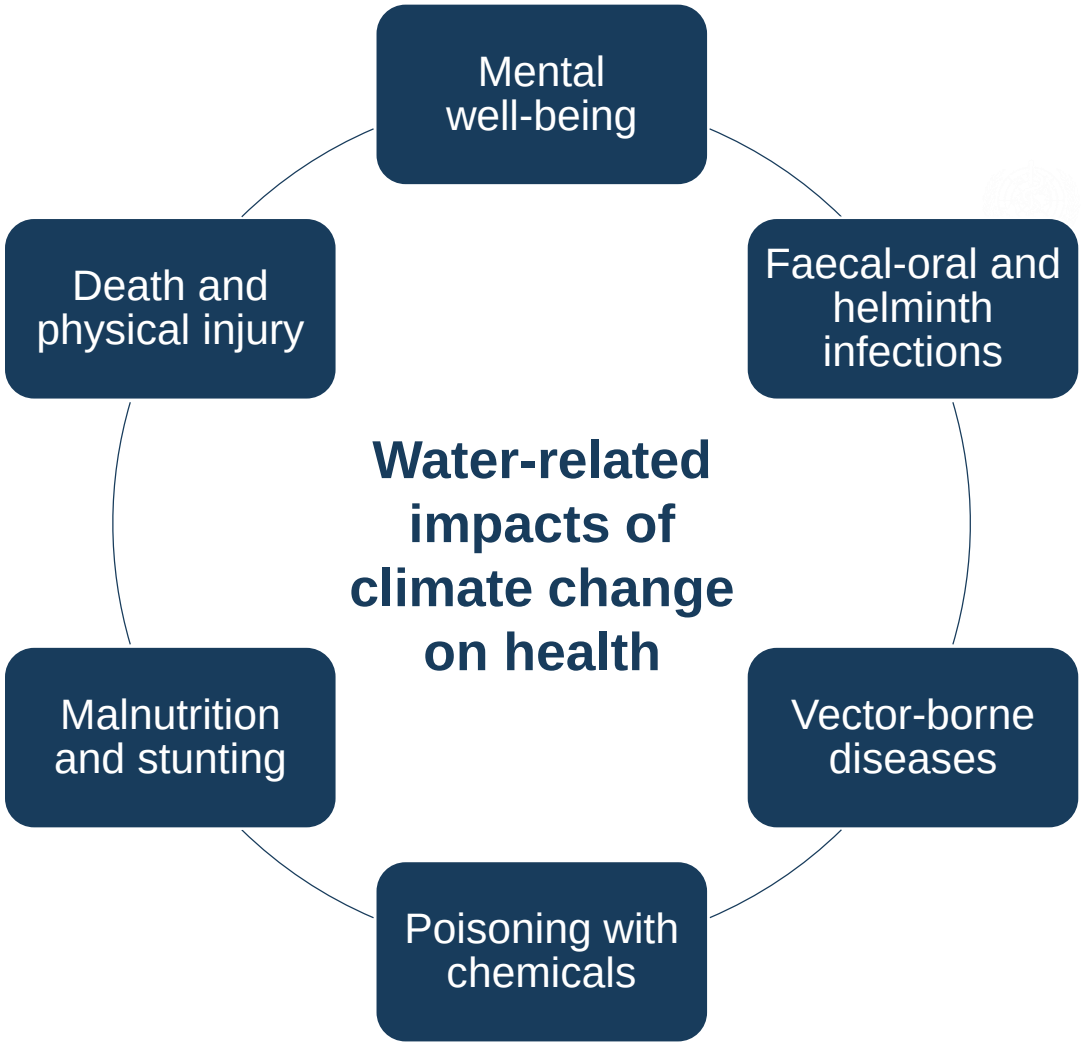
"Climate change and the European water dimension – Enhancing resilience" (4-5 November 2020)

Climate change is happening now

- Increases in water-related disasters
- Increases in areas suffering from water stress
- Increases in poor water quality related outcomes



Too much water matters

Photo: Oliver Schmoll/WHO

- Climate change correlates to the increase of frequency and severity of floods
- Over the past 20 years, floods killed more than 2,000 people and affected more than 9 million people in the WHO European Region
- Flood events account for 36% of the damages recorded from natural disasters in Europe, and generated at least €72 billion in losses

Too little water matters, too

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Atmospheric processes

Heat, air pollution and dust emissions

Meteorological droughts

Health outcomes

Heat mortality and morbidity
Respiratory and cardiovascular diseases

Terrestrial processes

Soil properties, crop productivity and environmental degradation

Agricultural droughts

Health outcomes

Tick- and rodent-borne diseases
Malnutrition and stunting
Mental health issues

Direct human processes

Water abstraction and access, and use of urban water containers

Hydrological droughts

Health outcomes

Water-borne diseases
Dengue, West Nile virus and Chikungunya

Climate change limits availability of local water sources

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- Compromised hygiene practices at low quantities available
- Increased distances to (alternative) sources:
  - Carrying heavy containers can cause pain, physical injury and musculoskeletal disorders
  - Impacts school attendance
  - Harassment of woman and girls

Photo: Oliver Schmoll/WHO

Climate change alters water quality and quantity patterns

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RAIN AND FLOODING

- Increased upstream erosion and run-off
- Damage to assets and infrastructure
- Overwhelmed storm- and wastewater containment systems
- Overwhelmed water treatment and distribution facilities

DROUGHT

- Increased dependence on less-safe alternatives
- Increased concentration of pollutants
- Increased competition for scarce water resources
- Release of contaminants from reservoir sediments

INCREASED TEMPERATURE

- Higher water demand
- Increase in algae blooms (± toxigenic)
- More favourable growth conditions for pathogens
- Reduced stability of residual chlorine

SEA-LEVEL RISE

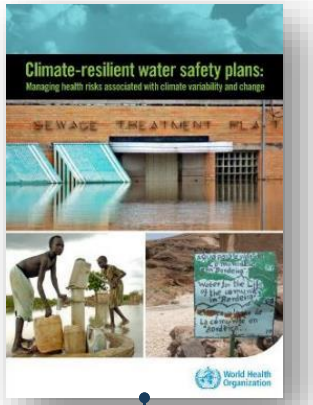
- Intrusion into distribution networks
- Intrusion into aquifers
- Inundation of critical assets and infrastructure

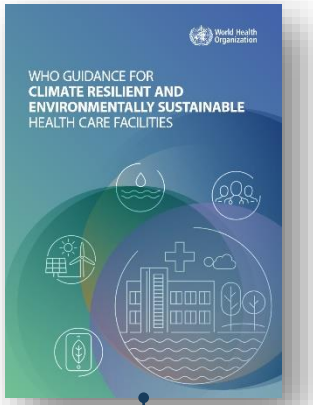
Climate change alters our restorative relationship to water

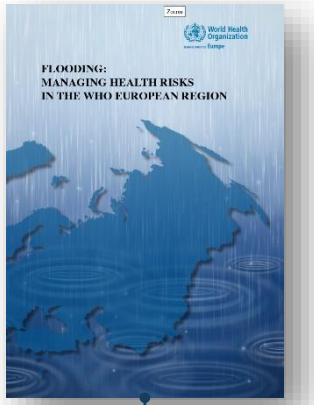
- Climate change may proliferate water-based diseases:
  - Increased transmission areas for *Schistosoma* and *Leptospira*
  - Increased abundance of *Vibrio vulnificus* in sea water
- Health and well-being benefits of urban water environments (“blue space”)
- Increased (urban) water storage *versus* breeding of vectors

Photo: Oliver Schmoll/WHO

We can work together to strengthen communities' resilience







Climate-sensitive resources mgmt.

Climate-resilient water supply

Safe wastewater reuse

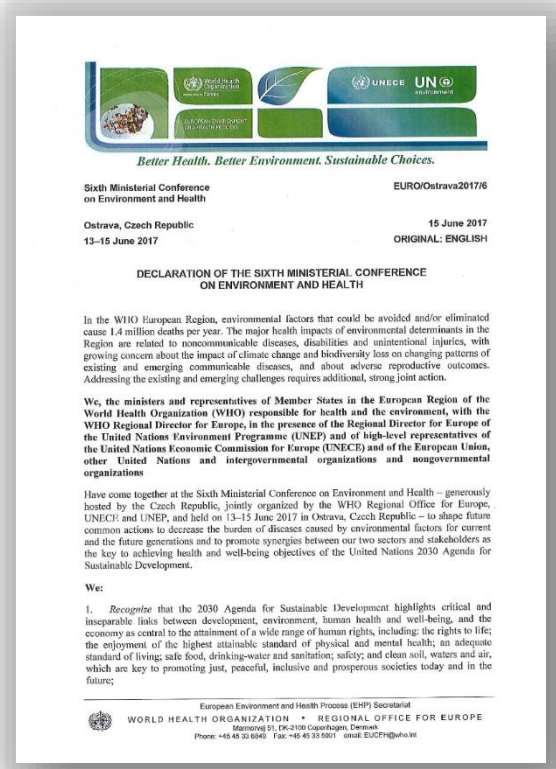
Efficient water use

Alternative sources

Climate-resilient health care facilities

Flood prep. & resp. health planning

Play existing multilateral frameworks



Better Health. Better Environment. Sustainable Choices.

Sixth Ministerial Conference on Environment and Health — EURO/Ostrava2017/6

Ostrava, Czech Republic, 13–15 June 2017 — 15 June 2017, ORIGINAL: ENGLISH

DECLARATION OF THE SIXTH MINISTERIAL CONFERENCE ON ENVIRONMENT AND HEALTH

In the WHO European Region, environmental factors that could be avoided and/or eliminated cause 1.4 million deaths per year. The major health impacts of environmental determinants in the Region are related to noncommunicable diseases, disabilities and unintentional injuries, with growing concern about the impact of climate change and biodiversity loss on changing patterns of existing and emerging communicable diseases, and about adverse reproductive outcomes. Addressing the existing and emerging challenges requires additional, strong joint action.

We, the ministers and representatives of Member States in the European Region of the World Health Organization (WHO) responsible for health and the environment, with the WHO Regional Director for Europe, in the presence of the Regional Director for Europe of the United Nations Environment Programme (UNEP) and of high-level representatives of the United Nations Economic Commission for Europe (UNECE) and of the European Union, other United Nations and intergovernmental organizations and nongovernmental organizations

Have come together at the Sixth Ministerial Conference on Environment and Health – generously hosted by the Czech Republic, jointly organized by the WHO Regional Office for Europe, UNECE and UNEP, and held on 13–15 June 2017 in Ostrava, Czech Republic – to shape future common actions to decrease the burden of diseases caused by environmental factors for current and the future generations and to promote synergies between our two sectors and stakeholders as the key to achieving health and well-being objectives of the United Nations 2030 Agenda for Sustainable Development.

We:

1. *Recognize* that the 2030 Agenda for Sustainable Development highlights critical and inseparable links between development, environment, human health and well-being, and the economy as central to the attainment of a wide range of human rights, including: the rights to life; the enjoyment of the highest attainable standard of physical and mental health; an adequate standard of living; safe food, drinking-water and sanitation; safety; and clean soil, waters and air, which are key to promoting just, peaceful, inclusive and prosperous societies today and in the future;

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- Improve indoor and outdoor air quality
- Ensure access to safe drinking-water, sanitation and hygiene
- Minimize adverse effects of chemicals
- Strengthen adaptation to and mitigation of climate change
- Prevent/eliminate adverse effects of waste management and contaminated sites
- Support cities and regions to become healthier
- Build the environmental sustainability of health systems

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Thank You

Stay healthy and Safe

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