



Better Health. Better Environment. Sustainable Choices.

Fact sheet 3

Climate Change and Health

Strengthening adaptive capacity and resilience and supporting measures to mitigate climate change

The climate has a serious adverse impact on health as well as future economic prosperity, political stability and societal productivity. Governmental and societal short- and long-term choices for reducing greenhouse gas emissions – or mitigation – and preparing for and managing the current and projected consequences of a changing climate – or adaptation – will affect population health and well-being for all.



Overview

Climate change affects the health of people in Europe through warming temperatures and changing weather patterns. It is set to become one of the most challenging threats populations will face in the coming decades and needs to be tackled urgently. A WHO assessment concluded that climate change is expected to cause over 250 000 additional deaths globally per year between 2030 and 2050. European populations will not be spared – climate change and its impacts recognize no borders. The Paris Climate Agreement provides a critical opportunity to advance public health as a central element not only in response to climate change, but also to the overall 2030 Agenda for Sustainable Development. The cost savings of the health co-benefits achieved by policies to cut greenhouse gas emissions are potentially large: reductions in emissions from fossil fuels reduce both air pollution and cardiovascular and respiratory diseases, while safer active transport reduces rates of obesity, diabetes, coronary heart disease, stroke and traffic injuries. In addition, reducing emissions of short-lived climate pollutants, such as black carbon and methane, would slow the rate of global warming while also saving nearly 2.5 million lives per year globally.



Key messages

- ▶ Climate change is affecting health now and will continue to do so. Evidence shows that extreme weather events and changing infectious and non-communicable disease patterns will continue for many decades to come, with further impacts on people and ecosystems.
- ▶ Mitigating climate change brings substantial and immediate benefits for health, the economy and society.
- ▶ Reducing greenhouse gas emissions to limit further temperature increases to 2°C is still possible. But it requires substantial technological, economic, institutional and behavioural changes. The cost savings of the health co-benefits achieved by policies to cut greenhouse gas emissions are substantial.
- ▶ Health protection is a priority for both financial investments and long-term health benefits. Evidence suggests that there is a very high benefit-to-cost ratio for health adaptation, with higher benefits being achieved with early adaptation action. Creating climate-resilient communities means managing climate change impacts through applying well-known and tested public health and health service interventions. Health systems can lead by example in mitigating emissions, promoting adaptation and advocating for health.
- ▶ Some countries are already taking important action, but wider and more ambitious efforts are needed. Only 24 of the 53 Member States of the WHO European Region have included health in their national adaptation strategies (see Fig.1). The Working Group on Health and Climate Change – part of the WHO Regional Office for Europe’s European Environment Health Task Force – provides an ideal platform to further advocate for mitigation and adaptation action as well as monitor developments and share lessons learned.
- ▶ SDG 13 (Climate action) has a significant health dimension, as its implementation will ensure that all current and future climate change mitigation and adaptation measures, policies and strategies integrate health issues at all levels. Furthermore, it can strengthen resilience and adaptive capacity in the health sector.

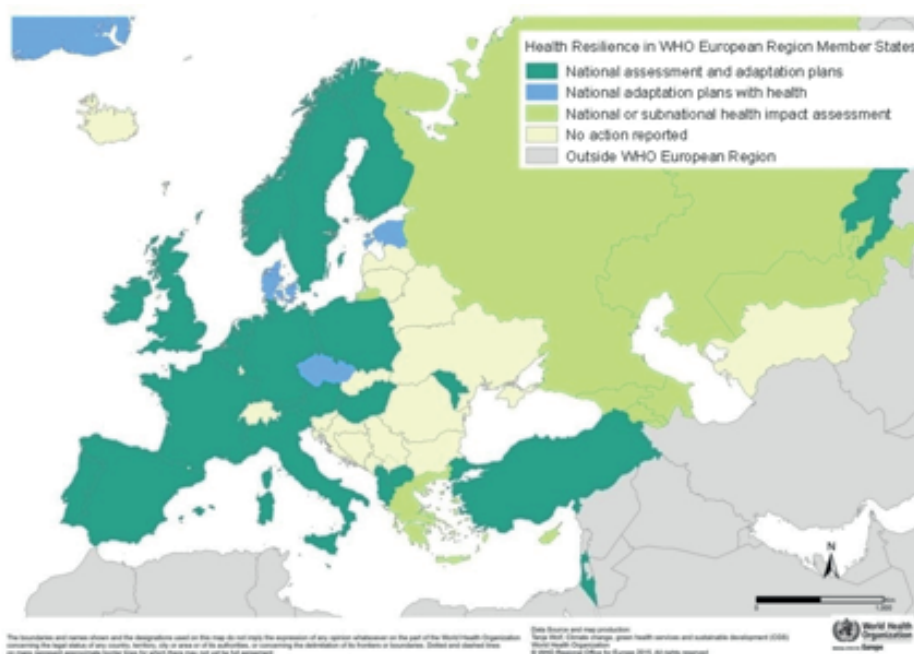


Figure 1: Countries that have carried out a vulnerability, impact and adaptation assessment and/or developed national adaptation plans.

Source: Improving environment and health in Europe: how far have we gotten? Copenhagen: WHO Regional Office for Europe; 2015.

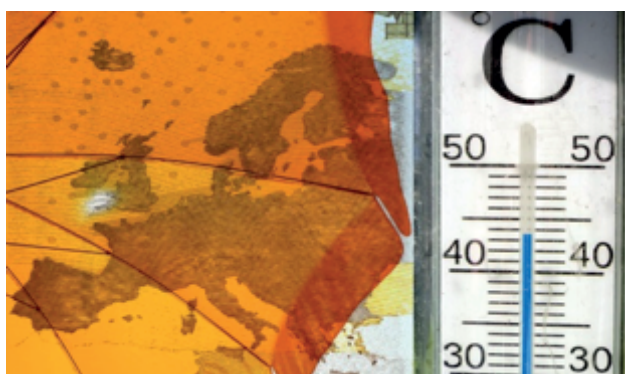
Key Facts

- ▶ Heat waves were the deadliest extreme weather event in the WHO European Region between 1991 and 2015, causing tens of thousands of premature deaths. The length, frequency and intensity of heat waves will increase in the future.



- ▶ Flooding killed more than 2000 people and affected approximately 9 million people between 1991 and 2011. Heavy rain is likely to become more frequent in many parts of the WHO European Region.
- ▶ Climate change is projected to lead to the spreading and increase of disease vectors including: the castor bean tick (*Ixodes ricinus*), which transmits viral and bacterial pathogens; the Asian tiger mosquito (*Aedes albopictus*), which can transmit several diseases including dengue, chikungunya and Zika; and the *Phlebotomus* species of sandflies, which transmits leishmaniasis.
- ▶ Climate change can increase food safety hazards throughout the food chain.
- ▶ Crop yields could decrease by 25–30% in Central Asia and in southern parts of Europe by the middle of the 21st century.

Figure 2: Heatwave in Europe



Source: 123RF [website]. (www.123rf.com). Copyright (famveldman / 123RF Stock Photo)

Figure 3: Flooded playground, Paris, France, 2016



Source: 123RF [website]. (www.123rf.com). Copyright (famveldman / 123RF Stock Photo)

“Best buys”

- ▶ Health care provision accounts for approximately 10% of gross domestic product in the WHO European Region. Energy efficiency, shifting to renewables, and greener procurement and delivery chains can improve services and business continuity, cut carbon emissions and improve the climate resilience of health systems.
- ▶ Mitigating emissions could help avoid between 128 000–138 000 deaths in the WHO European Region if all countries implemented their Intended Nationally Determined Contributions (INDCs), according to estimates from the WHO Regional Office for Europe.
- ▶ Furthermore, the implementation of the INDCs may represent, by the year 2030, savings equivalent to 1–2% of the aggregate annual GDP of the Member States in the WHO European Region. These savings are the quantified and monetized health benefits from reduced emissions which include avoided cases of illness (health morbidity), fewer premature deaths, and gained life years from an extension in life expectancy among the exposed population. This takes into consideration the prevented health care expenditures and productivity losses, plus the social costs attributed to avoided premature deaths, or life years gained.
- ▶ Estimates from the WHO Global Burden of Disease Study suggest that dietary risk factors account for one-tenth of the global disease burden. Reducing meat consumption has co-benefits for environment and health. Reduced dietary saturated fat consumption from animal products improves nutrition and reduces cardiovascular disease. Furthermore, the production of animal products releases significant amounts of CO₂ and methane into the air. There are therefore large potential benefits to health from adopting diets with lower associated greenhouse gas emissions.



- ▶ Professional health organizations and associations should be mobilized to use health arguments to advocate for climate change adaptation and mitigation in climate change policy discussions, debates and planning. Health professionals are respected and trusted members of communities. They can educate patients and peers on the health effects of climate change and promote behavioral adaptation at all levels, such as for heat wave and flood preparedness, and enhanced surveillance and disaster response capacity.
- ▶ Expand health system resilience to climate change by building on successful national experiences in health system adaptation over the past 15 years.
- ▶ Continue regional support and coordination for the health components of national adaptation planning processes and adaptation actions, and for prioritizing mitigation actions that also improve health.
- ▶ Facilitate coordination across sectors by promoting health in the context of the 2030 Development Agenda.

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