

The imperative of climate action to protect human health in Europe

Summary of EASAC Policy Report No. 38

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The pace and extent of climate change pose serious challenges to global health gains made over recent decades. In its report on “The imperative of climate action to protect human health in Europe”, the European Academies’ Science Advisory Council (EASAC) focuses on the consequences of climate change for human health in the European Union (EU), recognising that climate change effects in other regions have tangible consequences for Europe and that the EU has roles and responsibilities in addressing problems outside its area. Although the EU is very actively engaged in collective efforts to reduce greenhouse gas (GHG) emissions and to identify suitable adaptation measures, the impacts of climate on health have been relatively neglected in EU policy. This must change. EASAC’s concern is motivated by risks to health in the near future.

EASAC’s main messages are the following:

- Climate change is happening on a global scale and is attributable to human activity.
- Climate change is adversely affecting human health and health risks are increasing over time.
- Rapid and decisive action to cut GHG emissions sufficiently to keep temperature increase below 2°C above pre-industrial level could greatly reduce risks to health.
- Climate change will have effects on health within the boundaries of the EU, and the EU should also be concerned about the effects of climate change on the health of populations outside the EU.
- Solutions are within reach and much can be done to reduce risks by acting on present knowledge, but this requires political will.
- The scientific community has important roles in generating new knowledge and countering misinformation on the health effects of climate change, on factors increasing vulnerability, and on the effectiveness of adaptation and mitigation strategies, in close collaboration with decision-makers.

In this report, EASAC advises on (1) using the available evidence to inform coherent health policy development for climate change mitigation and adaptation strategies, and their connection to other policy initiatives; and (2) the priorities for filling knowledge gaps through transdisciplinary and intersectoral research. The EASAC Working Group provided detailed evaluation of a broad range of scientific evidence, and drew the following **conclusions**:

1. **Climate change poses major risks to health in the EU** via both direct effects (e.g. due to increased exposure to extreme heat and floods) and effects mediated through ecosystems and socioeconomic systems. Climate change can increase risks of communicable and non-communicable diseases (including mental illness), and injuries. Among the most vulnerable groups are likely to be the elderly, the sick, children, and migrating and marginalised populations. City dwellers are exposed to higher levels of heat stress than rural populations because of the urban heat island effect. Without prompt and effective action, the problems are forecast to worsen considerably.
2. Despite challenges in attribution, **there is growing evidence that climate change is having effects on health** associated with high temperatures, wildfires, flooding, changes in infectious disease transmission and in allergens. Climate change is likely already affecting agricultural productivity in some parts of Europe and in regions that trade with Europe, with potential implications for EU and global food and nutrition security.
3. **The Arctic and the Mediterranean region** are the European territories likely to be **most vulnerable** to the effects of climate change with consequences for the rest of the EU.
4. Projected future effects on health depend on the magnitude of climate change and the adaptive responses made. Despite uncertainty on temporal and spatial scale, robust projections suggest **an increasingly negative balance of effects on health**. Climate change will also affect the ability of health systems to function effectively, particularly when confronted by climate extremes.
5. Responding to climate change requires **integrated strategies for mitigation and adaptation**. Certain mitigation actions will also bring ancillary (co)-benefits for health. For example, a zero-carbon economy would potentially avert several hundred thousand deaths annually in the EU from air pollution caused by fossil fuel combustion. Major health benefits are also likely to accrue from policies to mitigate the contribution of agriculture to GHG emissions and from adaptation to increasing threats from infectious disease, heat, and other direct and indirect effects of climate change.
6. Although many adaptation and mitigation plans have been compiled across the EU, **concrete objectives for health are often weak**. Health impact assessment should be part of all proposed initiatives, and monitoring should link climate and health data to assess the effectiveness of adaptation and mitigation strategies.
7. **Health co-benefits of mitigation can be clearly identified**, but optimization of individual initiatives requires adoption of systems thinking to identify potential for synergies, inadvertent consequences and trade-offs. Similarly, systems approaches are also

required to ensure adaptation strategies achieve their intended effects.

8. **A strategic disconnect in policy should be addressed:** there is significant EU collaboration in dealing with some aspects of climate change, but most health policy is decided at national level. EU-level action on health should be increased where appropriate, alongside the specific actions at country-level that need to be taken by EU Member States.
9. The **economic benefits** of action to address the current and prospective health effects of climate change **are likely to be substantial.** More work is needed on methodologies for economic valuation of costs and benefits, and on identifying alternatives to gross domestic product as a measure of societal progress.
10. **Tackling the barriers to action is a matter of urgency** and requires new commitment to engage with, and inform EU citizens about, the pressing issues of climate change and health. It is vital to **counter misperceptions** that may be fostered deliberately by those with vested interests.

As an overarching recommendation, EASAC reaffirms the top priority is urgently to stabilise climate and accelerate efforts to limit GHG emissions, with the aim of achieving a zero-carbon economy before 2050. In addition, collective priorities include building better strategic links between different research and policy communities; resolution of EU-level versus Member State responsibilities and effective integration of roles; and consideration of the effects of decisions by the EU on neighbouring countries and the rest of the world, and the implications of changes elsewhere for the EU.

Priorities for linking research outputs and policy development continue to be the following:

- Elucidating and quantifying climate change effects on health, and improving methods for attribution of health effects to climate change.
- Improving understanding of the multiple benefits for health of policies to mitigate climate change.
- Clarifying the challenges to, and effective policies for, adaptation.
- Evaluating unintended consequences of policy action and proposing effective approaches to minimise them.

Published June 2019. The full report is available at <https://easac.eu/publications/details/the-imperative-of-climate-action-to-protect-human-health-in-europe/>

EASAC

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EASAC's recommendations pertaining to human health can be summarised as follows:

Health in all policies: Make best use of the current evidence base to develop coherent and coordinated EU policy framework to encompass benefits to health as a major consideration in adaptation and mitigation actions, including the following:

- Reform of the EU Adaptation Strategy to increase focus on health consequences of climate change.
- Health impact assessment in all climate change adaptation and mitigation strategies.
- Development of healthy, climate-smart food systems, with corresponding modifications of the Common Agricultural Policy.
- Development and promotion of dietary guidelines for sustainable healthy diets, including consideration of when and, if so, how the EU and Member States should use health and/or environmental criteria to influence food system policies.
- Linkage of climate change and health objectives into all key EU domestic policies, e.g. for reducing air pollution, and neighbouring country and international development policy initiatives.
- Continue to build links between EU climate and health policies with global organisations such as the World Health Organization, Group of Seven (G7) and Group of Twenty (G20), and with collective action on the United Nations Sustainable Development Goals (SDGs) and the United Nations Framework Convention on Climate Change (UNFCCC). Health considerations should be integrated into the implementation of Nationally Determined Contributions (NDCs) under the Paris Climate Agreement.

Fill knowledge gaps through research and integration of data sets:

Alongside continued commitment to basic research, further research is needed to characterise alternative scenarios, tipping points, effective adaptation and mitigation strategies, as is improved surveillance and linkage between environmental, socio-economic and health data.

Health risk communication: Raise awareness of current and potential effects of climate change on health. The scientific community must do more to understand individual and institutional behaviour, counter misinformation and polarisation, and strengthen the response of health services and EU agencies.