



Statement, November 2015

The Co-Benefits of Actions on Climate Change and Public Health

Over the past century, public health measures such as vaccination, sanitation, water treatment and waste management have improved the lives of many million people across the world. However, this humanitarian progress is now seriously threatened by anthropogenic global warming, which is likely to increase the planetary surface temperature by more than 4°C till the end of this century under a business-as-usual scenario. The physiological, economic and sociocultural impacts of such an *environmental shock* would be devastating for many societies, most notably for the highly vulnerable populations in the low-income countries.

There is a common cause to man-made climate change and a plethora of health problems: the *extraction and combustion* of fossil fuels. But there is also a strong effect relationship: If we fail to confine global warming to less than 2°C, the public health systems will have to face unprecedented challenges. By way of contrast, a transition to sustainable lifestyles and diets would significantly reduce greenhouse gas emissions from agriculture, infrastructure and settlements. In fact, the recent “Lancet Commission on Health and Climate” report stated: “Responding to climate change could be the greatest global health opportunity of the 21st century.” The co-benefits of actions on climate change and public health become indeed more evident every day.

There is also an important *psychological factor* involved: Health is valued and prioritized by all human beings, irrespective of culture and development status. It is a common value appreciated by every individual and every society. Therefore, connecting the climate policy agenda with the public health issue can mobilise tremendous additional support and enthusiasm for environmental sustainability.

Based on these fundamental insights, we ask

policy-makers and stakeholders

to

- **Accelerate the move away from fossil fuels and the move towards clean energy sources:**
This transformation of the global industrial metabolism is the critical precondition for safeguarding life and wellbeing on Earth, including humanity and all other creatures and ecosystems.
- **Acknowledge the overall climate-health nexus:**
Climate action is needed to avoid unmanageable health risks, while public health measures are needed to manage unavoidable climate change impacts.
- **Appreciate the gigantic benefits of reduced air pollution:**
While CO₂ has no direct impact on human health, the by-products of fossil fuel combustion (e.g. aerosols, nitrous oxides, fine particulate matter, tropospheric ozone) cause an unacceptable number of premature deaths every year. As a consequence, a rapid phase-out of coal-fired power plants is imperative, since these utilities also emit substantial amounts of toxic substances like mercury, lead and arsenic.
- **Promote health measures that help to mitigate climate change:**
Active lifestyles and dietary shifts away from meat and fat tend to reduce greenhouse gas emis-

sions while simultaneously fostering human well-being. These moves also help to protect natural resources such as soils, freshwater carriers and ecosystems.

- **Advance health systems adaptation to current and future climate variability:**
Especially extreme events such as heat waves, floods and windstorms need to be addressed more seriously in public health planning. Also, conventional quarantine schemes as well as epidemic and pandemic preparedness and response may have to be revised in view of increasing levels of transboundary migration due to environmental crises.
- **Design climate-resilient cities that provide essential health services throughout the 21st century:**
This requires abandoning the conventional urban paradigm organised around fossil-fuel driven transport. A more sustainable paradigm would combine climate mitigation & adaptation objectives with major improvements of human well-being such as the avoidance of pollution, waste, noise and accidents. Special attention has to be given to informal settlements where about 4 billion people may live after 2050.

In view of the cognitive challenges involved in the climate-health nexus, we recommend

scientific communities, academic institutions and funding agencies

to address the following strategic questions.

- How much health impacts of what kind and to which communities can be attributed to global warming in the short, medium and long term?
- How do people relate, adapt and respond to climate related health challenges?
- What specific health services will be needed to protect public well-being under climate change conditions at reasonable cost?
- What concrete and quantitative health co-benefits accrue from climate action and, conversely, what climate co-benefits can be derived from health policies?
- What data campaigns and methodological advances are required for robust answers to the above-listed questions?
- What collaboration schemes and joint ventures between health and climate research have to be initialised in order to maximise the “cooperation dividend”?

Finally, we emphasise a

structural commonality

between health and environmental sciences:

In either case the topics addressed are too complex to allow for apodictic statements. The nature of the problems involved implies irreducible uncertainties and persistent error bars. On the other hand, both communities often deal with matters of life and death, requiring recommendations to stakeholders based on imperfect information. In other words, health and environmental sciences share a **common culture of responsibility under uncertainty**. This should be explored together through an intensified dialogue.