

POLICY BRIEF

CLIMATE CHANGE AND GLOBAL HEALTH: WHAT ARE THE GOVERNANCE CHALLENGES?^{1,2}

The state of the science on climate change indicates serious worldwide impacts, including many affecting global health. These range from mortality from heat waves and storm disasters, to increases in climate-sensitive vectorborne and waterborne diseases, air pollution-related illnesses, malnutrition, and mental health disorders. Some of the indirect effects on public health infrastructure, food prices and available water or natural resources could cause even more widespread challenges to global health.

Consensus is also strong on human attribution to climate change, particularly from fossil fuel combustion and tropical deforestation. Most concerning is that about half of anthropogenic greenhouse gas (GHG) emissions since the start of the industrial revolution, has occurred just in the past 40 years. Growth in emissions has been greatest in the last decade (2.2% per year) compared with 1.3% during 1970-2000. Emissions

continue to increase; 2011 emissions exceeded those in 2005 by 43%. Climatologists calculate that to avoid heating the earth more than 2°C from pre-industrial levels, anthropogenic CO₂ emissions must be reduced 40% to 70% of current levels by mid-century, and completely eliminated by 2100.³

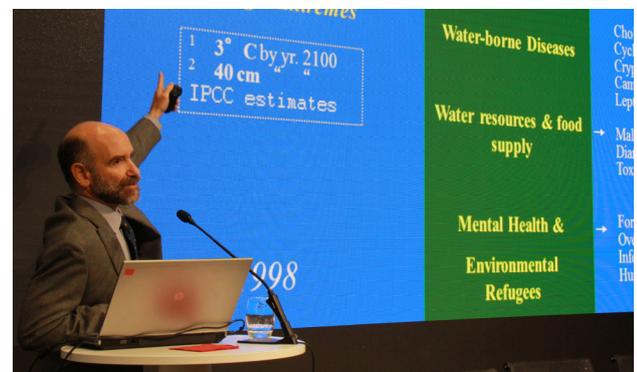
A range of solutions exists to mitigate climate change, many of which could greatly improve human health almost immediately. From decreasing rates of non communicable diseases (NCDs) to reducing motor vehicle crashes, there are many potential health “co-benefits” that will emerge from policies geared toward combatting climate change. Adopting sustainable energy technologies, shifting transportation patterns, and reducing meat in Western diets represent policies that simultaneously serve both planet and people.

PUBLIC EVENT: OPPORTUNITIES AT THE NEXUS OF HEALTH AND CLIMATE CHANGE

This intersection of global health, climate change policy, and governance set the stage for the public event held on 27 October 2014 at the Graduate Institute and jointly organised by its Global Health Programme and the Institute of Global Health at the University of Geneva. This conference brought together thought leaders from across academia, international agencies, and government. Ilona Kickbusch (Director, Global Health Programme, GIIIDS), and Muriel Peneveyre (Deputy Head, Division of International Affairs and Head, Global Health Section, Swiss Federal Office of Public Health) opened the event, organised in cooperation between the Global Health Programme (GIIIDS) and the Institute of Global Health at the University of Geneva.

The objective of the discussion was to consider the governance challenges involved and emphasise potential health and climate change mitigation co-benefits ahead of the Lima 2014 and Paris 2015 climate talks. In his keynote address, Jonathan Patz (Professor and Director, Global Health Institute, University of Wisconsin) described the range of health impacts climate change has through multi-exposure pathways and the potential

exacerbation of these impacts through increasing temperatures and extremes of the hydrologic cycle, among others. He also emphasised some of the many examples of health co-benefits from climate change



Prof Jonathan Patz at the keynote address at the Graduate Institute, Geneva.

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mitigation policies and explored the cost-benefit analyses of combatting climate change, all of which incentivise curbing current practices.

In his keynote address, Diarmid Campbell-Lendrum (Team Leader, Climate Change and Health, Department of Public Health, Environmental and Social Determinants of Health, WHO) underlined that though health is a central principle of the original 1992 Rio Declaration on Environment and Development and the United Nations Framework Convention on Climate Change (UNFCCC), health has been neglected in key discussions on climate change. While climate change rises on the health agenda, stronger linkages between health and international climate change policy are needed to promote sustainable development objectives. Similarly, health is underrepresented in current climate change adaptation plans and mitigation strategies. The focus, he emphasised, should be on the co-benefits of action, on cost-effective and efficient public policies, and giving health greater weight in climate discussions.

The panel discussion, introduced by Antoine Flahault (Director, Institute of Global Health, University of Geneva), and moderated by Ilona Kickbusch, included Merewalesi Falemaka (Ambassador and Permanent Representative, Permanent Delegation of the Pacific Islands Forum), Lisa Brodey (Political Counselor, Permanent Mission of the United States of America to the UN in Geneva), Hongbing Chen (Counselor, Permanent Mission of the People's Republic of China to the UN in Geneva) and Peter

White (Chief Operating Officer, World Business Council on Sustainable Development).

In his concluding remarks, Antoine Flahault observed that though there were many messages of hope "we have to acknowledge that it is still only modest achievement made so far in the fight against climate change" and that the calls to action reiterated during the discussion must be followed.



Dr Diarmid Campbell-Lendrum, Team Leader on Climate Change and Health at WHO, speaking on the diplomatic efforts on health and climate change.

HEALTH AND CLIMATE CO-BENEFITS

Cleaner energy policies and healthy lifestyles, including active transport and reduced meat consumption, can mutually benefit both people and the planet. Examples include:

- Monetized human health benefits associated with improved air quality can offset between 26 to 1,050% of the cost of low-carbon policies in the US⁴; in other words, the value of health dividends could swamp the costs of striving for an energy efficient, low-carbon economy. Strategies to address short-lived climate pollutants, especially black carbon, complement those that address CO₂ and could prevent 0.7 to 4.7 million premature deaths annually.⁵
- Physical inactivity is a risk factor for many non-communicable diseases and may be responsible for 3.2 million deaths annually. Active transport in Shanghai, China, could reduce colon cancer risk by 48% in men and 44% in women, and bike commuting in London could lower ischemic heart disease by 10 to 19%. In the US, comparing cities with highest versus lowest levels of active transport, obesity rates are 20% lower

and diabetes rates are 23% less. Bicycling commuters in Copenhagen have a 39% reduction in mortality rate compared to non cycling commuters.⁶

- In the UK, if 50% of meat and dairy in the diet were replaced by fruit, vegetables and cereals, greenhouse gas emissions might drop by 19%, while at the same time potentially 30,192 to 43,592 deaths could be averted per year by the reduction of saturated fat in the diet.⁷

However, there remain social, economic, and political barriers to achieving reductions in GHG emissions. These include difficulties in changing behavior, costs of implementing energy and industrial policies, opposition of vested interests, and the challenge of international coordination across countries at varying stages of development. Therefore, a priority is to create carbon reduction policies with ancillary co-benefits, such as improved air quality or fitness-promoting urban design. These will add a more near-term element, and thus politically more attractive than climate mitigation alone.

HOW HAS HEALTH FEATURED IN RECENT CLIMATE CHANGE DISCUSSIONS?

THE WORLD HEALTH ORGANIZATION – GENEVA, AUGUST 2014

The World Health Organization hosted the first-ever ministerial-level Conference on Health and Climate Change in August 2014 in Geneva and more than 400 delegates (including 25 ministers of health or environment) from 96 countries had agreed that climate change poses, 'unacceptable risks' to global public health. At the same time, it was also recognised that policy-makers in health have to join forces with climate negotiators, as well as actors across sectors to confront climate change.

UNITED NATIONS CLIMATE SUMMIT – NEW YORK, SEPTEMBER 2014

Heads of States and Government have agreed at the UN Climate Summit held in September 2014 in New York that climate change is a defining issue of our time and that bold action is needed to reduce emissions and

build resilience. It was also acknowledged that climate action should be undertaken within the context of efforts to eradicate extreme poverty and promote sustainable development. This conference was to create and raise the political momentum for a new meaningful and universal agreement under the UN Framework Convention on Climate Change (UNFCCC). 400,000 people participated in the People's Climate March in New York City ahead of the UN Climate Summit, demonstrating the strong support of public opinion in tackling climate change.

UNFCCC CONFERENCE OF THE PARTIES – LIMA, DECEMBER 2014

The 20th session of the UNFCCC Conference of the Parties (COP) was held in December 2014 in Lima, Peru. The Conference laid the groundwork for a new agreement to be adopted in Paris 2015 and was important in its

recognition of the importance of adaptation measures, placing its priority in line with emissions reduction. It was also significant for its acknowledgment of co-benefits, outlined in Article 19 where the COP “Decides to continue the technical examination of opportunities with high mitigation potential, including those with adaptation, health and sustainable development co-benefits, in the period 2015–2020.”⁸

Panel discussion with Peter White, Ambassador Merewalesi Falemaka, Lisa Brodey, Hongbing Chen (from left to right).



KEY ISSUES AND RECOMMENDATIONS GOING FORWARD

HEALTH & ADAPTATION PLANS

Current climate change adaptation plans largely do not give enough consideration to health. Under the UNFCCC, Least Developed Countries are able to identify priority activities for urgent climate adaptation needs under the National Adaptation Programmes of Actions (NAPAs) process. Though health is recognized as a sector affected by climate change, its vulnerability to climate variability is under emphasized, as shown by a study noted by Dr. Campbell-Lendrum, wherein:

- 95% of National Adaptation Programmes of Action include health as a sector affected by climate change
- 73% of NAPAs included health interventions within adaptation needs
- However, only 23% had a comprehensive vulnerability assessment
- Only 27% of the interventions were considered adequate⁹

Vulnerability to climate change is already acute in many parts of the world. The Pacific Islands is illustrative of this effect, where rising sea levels have led to coastal erosion and freshwater resource degeneration. Severe weather-induced natural disasters, such as typhoons and floods, are increasingly likely¹⁰, and have the potential to have both direct and indirect effects on the health of millions of inhabitants. Not only do these events cause immediate damage to health infrastructure and endanger the health and security of residents, but they can also lead to disease outbreaks in their aftermath. Moreover, as noted by Ambassador Falemaka at the public event, these natural disasters threaten agricultural production, which has led to a dependence on food aid, leading away from healthy, traditional local diets and towards a crisis-level burden of NCDs, which account for up to 75% of all deaths in the Pacific¹¹. Though it is notable that adaptation measures received due elevation at Lima 2014, it will be crucial for the COP in Paris 2015 to ensure that accelerated and effective mitigation and adaptation measures recognise the vulnerability of health.

GLOBAL SHARED RESPONSIBILITY

Climate change is a global problem requiring collective solutions. It is clear that some countries are greater contributors to greenhouse emissions, and that other countries are disproportionately affected by climate change. Health impacts are also unfairly distributed, whereby certain populations, such as the elderly, women, children, and people with chronic illnesses are adversely affected. Though the science of climate change is generally accepted, nations are hesitant to make commitments in the short-term to achieve ‘uncertain’ shared environmental benefits in the long-term – a key reason why past climate talks have failed to deliver.

The Sustainable Development Goals process allows for developing countries to take strong action in advancing responsibly. Industrialised nations must also lead by example in this regard, in recognition of the environmental impact their own development has had. Policy tools should reflect individual country contexts and conditions, based on reliable and comprehensive data, while also recognising the global influences of their policies. Political commitment at the national level, as well as governance ability to implement, promote and enforce policies, are necessary to mainstream and prioritize health and climate change on the national and international agenda. All sectors of society and government have a role to play in mitigating climate change and simultaneously addressing its health impacts.

“The concept of ‘governance for health’ can best be illustrated as the culmination of three waves in the expansion of health policy, from intersectoral action, to healthy public policy, to the ‘health in all policies’ approach, all of which are now integrated in whole-of-government and whole-of society approaches to health and well-being.”

Professor Ilona KICKBUSCH

HOW MIGHT A WHOLE-OF-GOVERNMENT APPROACH BEST CONTRIBUTE?

Health is affected by climate change through multi-exposure pathways, necessitating a multi-sectoral response. Whole-of-government and whole-of-society approaches allow health and climate to be addressed holistically, based on the core competencies of respective sectors, resulting in more effective policies. Stronger linkages between sectors and on objectives should allow for mutually supportive strategies and approaches.

HEALTHY CITY POLICY

By 2050, nearly 70% of the world's population is projected to be urban¹². Increasing global temperatures may also lead to city 'heat islands' leading urban planning to become further intertwined with public health policy. Transportation policy and urban design also directly influence public health via air quality from vehicle emissions, and from opportunities for

physical fitness – especially linked to “active transport” by bike or on foot. WHO's Public Health, Environmental and Social Determinants of Health Department is fully engaged in Urban Health and Healthy Cities initiatives.

GREEN HOSPITALS

The health sector should also take the opportunity to develop more sustainable health systems through initiatives such as green hospitals designed to limit energy consumption. Exploring alternative energy solutions such as solar power could address power surges, outages, or over-consumption in hospitals in countries with sunny climates. In recognising the need for health to remain at the core of climate change mitigation and adaptation strategies, the health sector must continue to propose solutions in cooperation with other stakeholders.

CONCLUSIONS

From the panel discussion it is clear that some regions of the world (particularly Pacific Islands) are already experiencing adverse consequences of climate change that are threatening their existence, warranting rapid adaptation efforts. As these risks have been caused by activities of industrialized nations, responses must be international coordinated and the economic burden of adaptation must not fall upon developing countries.

Recent agreements between China and the United States, also echoed by their mission representatives participating in the panel of this GIIHS event, show promise for progress in negotiating meaningful reductions in greenhouse gas emissions that are heating our planet. Health is both a central concern with climate change risks, and in offering substantial “co-benefits” as decision makers grapple with climate change policy. This is especially pertinent with the critical Conference of the Parties (COP) 21 just one year away, December, 2015, in Paris.

In summary, by accounting for health co-benefits, the cost of GHG emission policies may yield net economic benefit and costs to the health system may be reduced. Policymakers will have additional incentives, therefore, beyond those of curtailing climate change, to reduce the emissions of both CO₂ and short-lived climate pollutants.

Changing the argument to focus on the health co-benefits of climate change mitigation, the cost-benefit analyses, and indeed the climate co-benefits of healthy lifestyles, offers a positive approach to tackling climate change by mobilising the inherent relevance of health. Health is an original justification for climate change talks; the aim must be to give it greater weight in international climate change negotiations, mitigation strategies, and adaptation policies.



Ambassador Merewalesi Falemaki sharing her experience from the Pacific Islands on the intersection of health and climate change.

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2. The organisers thank the Swiss Federal Office of Public Health for their financial support.

All references and other event materials, including videos, can be downloaded at <http://bit.ly/14s7jH8>

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