

# The influence of health concerns in scientific and policy debates on climate change

Stefanie Schütte,<sup>1</sup> Anneliese Depoux,<sup>1,2</sup> Sara Vigil,<sup>3,4</sup> Corinne Kowalski,<sup>1</sup> François Gemenne,<sup>3,5</sup> Antoine Flahault<sup>1,6</sup>

## INTRODUCTION

In 2009, scientists argued that climate change was the ‘biggest global health threat of the 21<sup>st</sup> century’,<sup>1</sup> and 6 years later ‘the greatest global health opportunity of the 21<sup>st</sup> century’.<sup>2</sup> While a minority of populations may experience health benefits (mostly due to a reduction in diseases related to cold weather), the global burden of disease and premature death is expected to increase progressively.<sup>3</sup> For instance, one study showed that heat-related deaths would be expected to rise by around 257% by the 2050s from a current annual baseline of approximately 2000 deaths.<sup>4</sup>

Much of the policy development on climate change comes from the negotiations between the 195 parties to the United Nations Framework Convention on Climate Change (UNFCCC), working towards a common long-term vision of limiting global warming.

The 21<sup>st</sup> Conference of the Parties (COP21) in Paris in December 2015 was one milestone in the fight against climate change, as all countries agreed to take action by curbing greenhouse gas emissions (GHGE) and keep global warming well below 2°C. The agreement also included a regular review of national commitments every 5 years to check progress. Moreover, it represented an important step to protect and promote health in the face of climate change: for the first time ‘the right to health’ was mentioned in the global

agreement on climate change. The WHO referred to the COP21 as ‘a historic win for human health’, and this climate treaty might actually become a public health treaty as countries take action to develop adaptation plans that will protect human health from the worst impacts of climate change.<sup>5</sup> This opinion article seeks to present the role of health concerns in the scientific debates on climate change, but also in actual climate policies and international negotiations.

## Climate change-related health concerns in scientific debates

Awareness of the health risks caused by global climate change started relatively recently: initial scientific works and international reports on climate change impacts, in the 1990s, paid little attention to its health impacts.<sup>6,7</sup> In recent years, the global health community has been increasingly involved in the debates on climate change through various scientific committees,<sup>8,9</sup> but also through medical institutions themselves, which have shown a growing awareness on this issue. For instance, the World Medical Association has taken a leadership role in promoting the participation of physicians in climate action since 2009 and published a series of articles on the last COP events.<sup>10,11</sup>

The WHO has also been very active in promoting the health argument in the climate change debate with various initiatives, such as the Call to Action on climate and health, the Paris Platform for Healthy Energy, a partnership with the campaign ‘Our Climate, Our Health’, and the adoption in 2008 of a resolution (61.19) on climate change and health, which gives a framework for action to governments. The resolution emphasises the health sector’s responsibility to increase efforts on climate change adaptation projects, to raise awareness on climate change health impacts at national and international levels, as well as to strengthen political attention and awareness.

The establishment of the Intergovernmental Panel on Climate Change (IPCC)

in 1988 was a major juncture in the scientific debate on climate change. The IPCC reports started with climatological assessments from climate scientists and later incorporated the human dimensions of climate change, including its effects on health. Thus the collaboration with health scientists was initiated by climate scientists: research and publications coming out of these joint efforts had an obvious climatological perspective, as interest for climate change in the public health community was rather limited back then.<sup>12</sup> To date, the IPCC has published five assessment reports since 1990 on the scientific evidence of climate change. From 1995 onwards (the second report), a whole chapter has been dedicated to health concerns. Since then the number of pages of the health chapter has also the increasing space of health concerns in the scientific debate of climate change.

Such concerns remain however less addressed than other issues in the literature on climate change. Verner *et al*,<sup>6</sup> for example, compared the number of climate change publications across different sectors and found that the topic of health was less studied than others such as transportation, industry, economy and energy; each of them had twice as many publications as the health sector. However the authors observed a trend of ‘mainstreaming health’ in the debate on climate change impacts, indicating that in recent IPCC reports, more mentions of health came from non-health chapters. This shows that the collaboration of scientists coming from different disciplines, including an effective mobilisation of the public health community, has been very productive in the mainstreaming of health concerns in scientific debates on climate change.

## Health in mitigation and adaptation policies and strategies

Climate policy includes two types of strategies: mitigation, which tackles the problem at the source and aims to reduce the concentration of greenhouse gases in the atmosphere, and adaptation, which aims to reduce the impacts of climate change. While primary prevention is central for public health, mitigation policies come largely from other sectors, such as energy and transportation. However, and despite increased recognition of how slowing global warming can substantially reduce its adverse effects on human health, only 15% of the nationally determined contributions to the Paris Agreement mention the cobenefits of mitigation for public health.<sup>13</sup>

<sup>1</sup>Centre Virchow-Villermé for Public Health Paris-Berlin, Université Sorbonne Paris Cité, Paris, France

<sup>2</sup>Groupe de recherches interdisciplinaires sur les processus d’information et de communication (EA 1498), Université Paris Sorbonne Cité - Celsa, Paris, France

<sup>3</sup>The Hugo Observatory, Université de Liège, Liège, Belgium

<sup>4</sup>International Institute of Social Studies, Erasmus University Rotterdam, The Hague, The Netherlands

<sup>5</sup>Sciences Po, Paris, France

<sup>6</sup>Institute of Global Health, University of Geneva, Geneva, Switzerland

**Correspondence to** Professor Antoine Flahault, Institute of Global Health, University of Geneva, 9 Chemin des Mines, Geneva 1202, Switzerland; Antoine.Flahaault@unige.ch

More conventionally, public health approaches focused rather on adaptation strategies in order to address the health impacts of climate change. In Europe, for example, a majority of national adaptation strategies<sup>14</sup> include an assessment of health as a vulnerable sector and suggest to strengthen health systems, early warning systems, disaster preparedness, awareness-raising of citizens, as well as specific legislative changes for buildings and constructions to regulate heat in the internal environment. This cannot hide however an overall lack of mainstreaming between climate change and public health. Although there have been significant advances, there are still few cases where climate change is brought into national public health development processes.<sup>2-9</sup> Even in developed countries with high adaptive capacities and resources, the implementation of health adaptation plans remains highly uneven.<sup>15</sup> An analysis by the WHO of the inclusion of health within the National Adaptation Programmes of Action (NAPAs), undertaken by the least developed countries (LDCs) and small island states, showed that 95% of them contained health as a priority sector, with only 11% of the priority projects focusing on health. Only around 4% of the portfolio of the LDCs Fund supporting the NAPA process targeted health adaptation.<sup>16</sup> While more than 95% of LDCs identify health as a priority sector for adaptation, and about 67% of countries cited health in their intended nationally determined contributions to the Paris Agreement, less than 1.5% of international finance for climate change adaptation is currently allocated to health projects.<sup>13</sup> The commitments made in Paris towards the Green Climate Fund and the Adaptation Fund, however, could provide the needed financial assistance, requiring a sufficient share of this funding is allocated to health-related projects.

The submissions made by Parties and organisations to the Nairobi Work Programme on Health and Adaptation ahead of the COP22 in Marrakech underlined the lack of implementation of health adaptation plans and projects, an insufficiency of early-response systems, a gap in the surveillance of climate sensitive diseases and a lack of downscaled climate models. Additionally, at the subnational level, easily accessible and available information is lacking, and there is a lack of awareness both at the public level and in the healthcare sector.<sup>17</sup>

### Health concerns in the negotiation processes

Minimising the adverse effects of climate change on health has been part of the UNFCCC objectives since its very inception in 1992. Although the UNFCCC provides an important forum for the public health sector to engage with climate change action, the representation of health has been relatively weak in the negotiation process.<sup>18</sup> In the reports from the Earth Negotiation Bulletin published by the International Institute for Sustainable Development, which summarise the content of the talks, health appears in only 1% of the meetings proceedings. However, in recent years, the WHO has been actively emphasising the need to address health cobenefits in climate change policies, and national governments have increasingly referred to health concerns in their national parties' reports.<sup>12</sup>

A shift was observed at COP21 in Paris, where the global health community was more visible and active than at any previous COP, with various side events underlining the importance of health concerns related to climate change. For instance, during the Climate and Health Summit at COP21, over 1700 health organisations, 8200 hospitals and health facilities, and 13 million health professionals were represented as signatories and called on governments to reach a strong agreement that would protect the health of patients and communities. This had never been done before and brought the global medical consensus on climate change to a new level.<sup>10</sup> This increased engagement of the health community resulted in the inclusion of some wording related to health in the text of the Paris Agreement: the 'right to health' was mentioned in the preamble of the text, while the decision annexed to the agreement acknowledged 'the social, economic and environmental value of voluntary mitigation actions and their co-benefits for adaptation, health and sustainable development'.

Besides their official recognition in the text of the agreement, health concerns also affected some countries' stance in the negotiations. By far the most obvious example of the influence of health concerns is the evolution of China's position. While China is currently the world's leading contributor to GHGs, it was still widely seen as an obstacle to a global agreement a few years ago. China was, however, acknowledged as a key facilitator of the Paris Agreement. Some observers would go as far as portraying China as a future leader in the international cooperation

against climate change. This evolution is explained, to a great extent, by the importance of health concerns related to atmospheric pollution at the domestic level.<sup>19</sup> Climate change and air pollution are linked: air pollution contributes to climate change and is exacerbated by it. Most of the country's energy currently comes from coal, but this fossil fuel source has dramatically increased air pollution in the country and led to serious public health problems as air pollution may cause 1.6 million premature deaths every year in China according to a recent study.<sup>20</sup> This health concern has become a major social issue in China and has played a key role in the evolution of the country's stance in the international cooperation effort to curb climate change.

### CONCLUSION

The Paris Agreement and its recognition of health as a pivotal factor represent a substantial milestone in the advocacy for the integration of health concerns into climate policies. This achievement was made possible thanks to a public health community moving forward in rightly framing the threat of climate change for humankind as a health issue, in order to protect populations from its worst consequences. This also shows that the Parties are responsive to well-framed advocacy by the public health community, and may be influenced to support population health as a focal objective as they implement the agreement. Thus we can conclude that the mutual scientific and political influences on climate change and health are considerable, and that mobilisation of the public health scientific community has had a tangible impact on the policy process.

Although there have been significant policy advances, the representation of health remains however relatively weak in the UNFCCC process, and there are still only few cases where climate change is brought into national public health development processes. Pushing for a greater integration of health concerns in climate policies needs to remain a priority, but so does the need to integrate climate change into public health policies.

**Contributors** SS and AD equally contributed in planning, conducting and reporting of the work in this paper. Conception and interpretation were done by FG and AF, who both supervised the work. SV and CK provided substantial contribution in writing and in final editing of the paper.

**Funding** This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

**Competing interests** None declared.

**Provenance and peer review** Commissioned; externally peer reviewed.

© Article author(s) (or their employer(s) unless otherwise stated in the text of the article) 2017. All rights reserved. No commercial use is permitted unless otherwise expressly granted.



CrossMark

**To cite** Schütte S, Depoux A, Vigil S, et al. *J Epidemiol Community Health* Published Online First: [please include Day Month Year]. doi:10.1136/jech-2015-206962

*J Epidemiol Community Health* 2017;**0**:1–3.  
doi:10.1136/jech-2015-206962

## REFERENCES

- Costello A, Abbas M, Allen A, et al. Managing the health effects of climate change: Lancet and University College London Institute for Global Health Commission. *Lancet* 2009;373:1693–733.
- Watts N, Adger WN, Agnolucci P, et al. Health and climate change: policy responses to protect public health. *Lancet* 2015;386:1861–914.
- Woodward A. Heat, cold and climate change. *J Epidemiol Community Health* 2014;68:595–6.
- Hajat S, Vardoulakis S, Heaviside C, et al. Climate change effects on human health: projections of temperature-related mortality for the UK during the 2020s, 2050s and 2080s. *J Epidemiol Community Health* 2014;68:641–8.
- WHO. *WHO | Newnew climate change agreement a historic win for human health* : WHO, 2015. <http://www.who.int/mediacentre/commentaries/climate-change-agreement/en/>
- Verner G, Schütte S, Knop J, et al. Health in climate change research from 1990 to 2014: positive trend, but still underperforming. *Glob Health Action* 2016;9:30723. <http://www.globalhealthaction.net/index.php/gha/article/view/30723>
- Herlihy N, Bar-Hen A, Verner G, et al. Climate change and human health: what are the research trends? A scoping review protocol. *BMJ Open* 2016;6:e012022. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC5223655/>
- Hunter DJ, Frumkin H, Jha A. Preventive Medicine for the Planet and Its Peoples. *N Engl J Med* 2017;376:1605–7.
- Tong S, Confalonieri U, Ebi K, et al. Managing and Mitigating the Health Risks of Climate Change: Calling for Evidence-Informed Policy and Action. *Environ Health Perspect* 2016;124:A176–9.
- Tcholakov Y, Wiley E, Hornung T, et al. The Road to Paris: what is at Stake for Health in COP21 negotiations? *World Med J* 2015;61:114.
- Wiley E, Tcholakov Y, Braithwaite I, et al. The climate/Health Nexus at COP21 & Beyond. *World Med J* 2015;61:158.
- Stordalen GA, Rocklöv J, Nilsson M, et al. Only an integrated approach across academia, enterprise, governments, and global agencies can tackle the public health impact of climate change. *Glob Health Action* 2013;6:20513.
- WHO. Health and climate change Report by the Secretariat. Executive Board. 139th session: World Health Organization; 2016. Report No.: EB 139/2. [http://apps.who.int/gb/ebwha/pdf\\_files/EB139/B139\\_6-en.pdf](http://apps.who.int/gb/ebwha/pdf_files/EB139/B139_6-en.pdf)
- Biesbroek GR, Swart RJ, Carter TR, et al. Europe adapts to climate change: comparing National Adaptation strategies. *Global Environmental Change* 2010;20:440–50.
- Austin SE, Biesbroek R, Berrang-Ford L, et al. Public Health Adaptation to Climate Change in OECD Countries. *Int J Environ Res Public Health* 13 2016.
- WHO. *WHO guidance to protect health from climate change through health adaptation planning*. Geneva: World Health Organization, 2014. [http://apps.who.int/iris/bitstream/10665/137383/1/9789241508001\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/137383/1/9789241508001_eng.pdf).
- UNFCCC. 10th focal point forum of the nairobi work programme: Health and adaptation. United nations framework on climate change. 2016. [http://unfccc.int/adaptation/nairobi\\_work\\_programme/items/9926.php](http://unfccc.int/adaptation/nairobi_work_programme/items/9926.php)
- WHO. *Conference on Health and climate Change - Final Report*. Geneva: World Health Organization, 2014. <http://www.who.int/globalchange/mediacentre/events/climate-health-conference/whoconferenceonhealthandclimatechange/finalreport.pdf>
- Huchet J-F. La crise environnementale en Chine. *Evolutions et limites des politiques publiques*: Sciences Po (Les Presses de). <https://lectures.revues.org/21574>
- Rohde RA, Muller RA. Air pollution in china: Mapping of concentrations and sources. *PLoS One* 2015;10:e0135749.



## The influence of health concerns in scientific and policy debates on climate change

Stefanie Schütte, Anneliese Depoux, Sara Vigil, Corinne Kowalski, François Gemenne and Antoine Flahault

*J Epidemiol Community Health* published online June 29, 2017

---

Updated information and services can be found at:

<http://jech.bmj.com/content/early/2017/06/28/jech-2015-206962>

---

*These include:*

### References

This article cites 12 articles, 3 of which you can access for free at:  
<http://jech.bmj.com/content/early/2017/06/28/jech-2015-206962#BIBL>

### Email alerting service

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

---

### Notes

---

To request permissions go to:

<http://group.bmj.com/group/rights-licensing/permissions>

To order reprints go to:

<http://journals.bmj.com/cgi/reprintform>

To subscribe to BMJ go to:

<http://group.bmj.com/subscribe/>