

The inclusion of health in major global reports on climate change and biodiversity

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To cite: Dasandi N, Cai W, Friberg P, *et al*. The inclusion of health in major global reports on climate change and biodiversity. *BMJ Global Health* 2022;**7**:e008731. doi:10.1136/bmjgh-2022-008731

Handling editor Valery Ridde

Received 8 February 2022

Accepted 14 May 2022



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ABSTRACT

This article argues that human health has become a key consideration in recent global reports on climate change and biodiversity produced by various international organisations; however, greater attention must be given to the unequal health impacts of climate change and biodiversity loss around the world and the different health adaptation measures that are urgently required.

INTRODUCTION

The relationship between human health and the natural environment has long been recognised. Over the past decade, there has been a significant increase in research on how climate change and biodiversity loss—resulting from anthropogenic pressures on the environment—negatively impact people's health around the world.^{1 2} This research has focused on the impacts of climate change and biodiversity loss on health, the need for health adaptation and on the ways in which measures to address climate change and biodiversity loss have a mutually beneficial effect on health. A key question is the extent to which this research has influenced wider political and public engagement with the health dimensions of climate change and biodiversity loss. Some, for example, have argued that health remains peripheral to climate change politics.³

We consider this question by looking at the extent to which, and how, health is discussed in major global reports on climate change and biodiversity in recent years. These global reports play a crucial role in bridging research and politics, thereby shaping the global policy agenda.⁴ They do this in various ways—from synthesising the state of knowledge on these issues to inform policy decisions—to generating significant global media attention that influences public and political debates on climate change and biodiversity. Hence, these

Summary box

- ⇒ Most recent major global reports on climate change and biodiversity produced by international organisations emphasise the links with human health, which shows that health is becoming a central issue in climate change/biodiversity policy.
- ⇒ These major global reports emphasise the health impacts and the health cobenefits of mitigation action. They also focus particularly on food, air pollution and extreme weather events.
- ⇒ There is a lack of detailed attention in these reports on the need to adapt health systems and policies to the effects of climate change and biodiversity loss.
- ⇒ This includes a lack of consideration of the vast differences in the capacities of health systems around the world to adapt to these effects.
- ⇒ There is an urgent need for greater focus on the unequal health impacts of climate change and biodiversity loss, as these reports currently pay insufficient attention to the disproportionate consequences in low-income and middle-income countries, and on vulnerable groups.

reports sit at the intersection of science, politics and public spheres.

We selected around 30 major global reports on climate change and biodiversity that have been published between 2018 and 2021 by relevant international organisations,⁵ and examined the ways human health was discussed in these reports. We did this through a combination of an automated search of health-related terms and more in-depth qualitative reading of the reports.⁶ Given these reports go into considerable detail on the different aspects of the relationship between climate change/biodiversity and health, there are major differences in how health is discussed across these reports. Hence, there is a risk that any common themes identified may be driven by the specific selection of reports. However, looking across these different reports, several broader issues emerge that we believe provide

discussion of the disease link compared with other climate change/biodiversity-health links. This is despite the considerable research in the past few years on the effects of climate change on changing diseases vectors.¹ With the exception of malaria—which is largely discussed in the context of the Sustainable Development Goals—there is little mention of the effects of climate change on specific climate-sensitive diseases such as dengue, chikungunya, *Vibrio* or Lyme disease. There are exceptions—for example, the IPCC Special Report on Global Warming of 1.5°C⁸ contains a detailed discussion on how increases in global warmings will increase risks from specific vector-borne and tick-borne diseases. However, more generally, there is less focus on the disease link. In part, this may be due to the significant variation across different regions in how climate change impacts the spread of infectious disease, which may be seen to undermine the notion that health impacts of climate change and biodiversity loss are experienced globally.

GLOBAL INEQUALITIES AND POLITICS

This global focus of the health dimensions of climate change and biodiversity leads to a broader issue that emerges from the analysis of the reports, which is the lack of attention to health inequities. It is widely recognised that it is the poorest and most climate-vulnerable countries—whose economies have contributed least to climate change—that face the worst health consequences of climate change but lack the resources to address these accelerating impacts.¹⁷ Indeed, a central message emerging from recent research on climate change and health is that ‘although the health impacts are felt across the world, climate change disproportionately affects disadvantaged populations, exacerbating their vulnerabilities’.¹ Therefore, it is somewhat surprising that the issue of unequal health impacts receives little attention in recent global reports on climate change and biodiversity. Again, there are exceptions—but across the reports, there is a noticeable absence of discussion on global health inequities. It is worth noting that many of these reports do discuss wider inequalities between richer and poorer countries in their discussion of climate change and biodiversity—however, they do not discuss such inequalities regarding health outcomes. It is also worth noting that the unequal health impacts of climate change and biodiversity loss on vulnerable groups, such as young children and the elderly, also receives scant attention in these reports. There is also little consideration of the vast differences in the capacities of health systems around the world to cope with the impacts of climate change.

We believe that there are a couple of explanations for the lack of attention to the unequal health impacts of climate change in these reports. First, it is likely to reflect inequalities in the production of research on climate change and health—in that there is disproportionate focus on high-income countries in scientific research, with research produced in, and focusing on, low-income and

middle-income countries clearly under-represented.¹⁸ Second, we believe the lack of emphasis on health inequalities is linked to the notion that health provides a framing of climate change that can help build public support and overcome the divisions in global climate politics have undermined global responses to climate change that could be observed at the recent COP26 summit in Glasgow. It has long been argued that because climate change impacts people’s health in all countries, a health framing can help to overcome these divisions.¹⁹ The discussion of health across the major global reports emphasises the global nature of the health dimensions of climate change and biodiversity loss. Hence, the lack of attention to unequal health impacts appears to be an effort to reinforce, rather than undermine, a message about the shared global health consequences of climate change and biodiversity loss.

In contrast, recent studies have suggested engagement with the health dimensions of climate change in intergovernmental institutions, such as the Nationally Determined Contributions and the UN General Assembly, is shaped by traditional geopolitical divisions—with high-income countries avoiding references to health dimensions, and low-income and middle-income countries emphasising the disproportionate health impacts they face to remind richer nations of their responsibilities.²⁰ Therefore, our analysis of these reports highlights something of a dilemma in terms of health inequalities in climate change politics: discussing the specific health consequences that poorer countries face risks undermining a global narrative and politicising the issue in a way that means it is ignored by richer high-emitting nations; yet, focusing on common global health consequences risks ignoring the specific and disproportionate health impacts of climate change on the poorest and most vulnerable around the world.

CONCLUSION

The human health implications of climate change and biodiversity loss have long been recognised by those in the health community. Yet, health has remained peripheral to climate change and biodiversity politics and policy in recent decades. This is changing rapidly. Major global reports on climate change and biodiversity in the last few years increasingly focus on human health. Given these reports have a major influence on media coverage, public debates and policy actions, the emphasis on health in these reports has significant real-world implications. Indeed, the growing attention to health impacts and health cobenefits in these global reports marks a positive development that may help ratchet up global efforts to tackle climate change and biodiversity loss. The coverage of health in recent major reports on climate change and biodiversity also highlight significant limitations in current research and policy, which urgently need to be addressed. This includes the need for greater attention to the different health adaptation measures

that are required around the world, along with ensuring that resources are made available for this adaptation. The most important issue that needs to be addressed is the lack of attention to the unequal health consequences of climate change and biodiversity loss around the world. It is crucial that in seeking to emphasise the global health impacts of climate change and biodiversity loss; we do not ignore the disproportionate effects being felt by the poorest and most vulnerable around the world.

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Contributors ND and SJ collected the data and conducted the data analysis, with all authors contributing to additional analysis. ND drafted the manuscript and all authors made significant intellectual contributions and edits, and approved the final draft. ND is the guarantor.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not applicable.

Ethics approval Not applicable.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available in a public, open access repository. The data can be publicly accessed at: <https://doi.org/10.7910/DVN/I1PRLH>.

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REFERENCES

- Romanello M, McGushin A, Di Napoli C, *et al*. The 2021 report of the Lancet countdown on health and climate change: code red for a healthy future. *Lancet* 2021;398:1619–62.
- Whitmee S, Haines A, Beyrer C, *et al*. Safeguarding human health in the Anthropocene epoch: report of the Rockefeller Foundation–Lancet Commission on planetary health. *The Lancet* 2015;386:1973–2028.
- Workman A, Blashki G, Bowen KJ, *et al*. The political economy of health co-benefits: embedding health in the climate change agenda. *Int J Environ Res Public Health* 2018;15:674.
- Meckling J, Allan BB. The evolution of ideas in global climate policy. *Nat Clim Chang* 2020;10:434–8.
- Un DAG Hammarhjold library, Intergovernmental panel on climate change, Intergovernmental Science-Policy platform on biodiversity and ecosystem service, convention on biological diversity, un environmental programme. Available: <https://research.un.org/en/climate-change/reports> <https://www.ipcc.ch/reports/> <https://ipbes.net> <https://www.cbd.int/> <https://www.unep.org/publications-data>
- Benoit K, Watanabe K, Wang H, *et al*. quanteda: an R package for the quantitative analysis of textual data. *J Open Source Softw* 2018;3:774.
- Times NY. Effort to reframe climate change as a health crisis gains steam. Available: <https://www.nytimes.com/2021/11/04/climate/public-health-climate-change.html> [Accessed 4 November 2021].
- IPCC. Special report: global warming of 1.5°C, 2018. Available: https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Full_Report_Low_Res.pdf
- Secretary General UN. Report of the Secretary-General on the 2019 Climate Action Summit and the way forward in 2020, 2019. Available: https://www.un.org/sites/un2.un.org/files/cas_report_11_dec_0.pdf
- IPCC. Special report: climate change and land, 2019. Available: <https://www.ipcc.ch/srcl/>
- Secretariat of the Convention on Biological Diversity. *Global biodiversity outlook 5*. Secretariat of the Convention on Biological Diversity, 2020. <https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf>
- Convention of Biological Diversity. *Report of the conference of the parties to the convention on biological diversity*. UNEP, 2019. <https://www.cbd.int/doc/c/1081/32db/e26e7d13794f5f011cc621ef/cop-14-14-en.pdf>
- CDC. One health basics. Available: <https://www.cdc.gov/onehealth/basics/index.html>
- World Meteorological Organization. *State of climate services: risk information and early warning systems*. Geneva, Switzerland: WMO, 2020. https://library.wmo.int/doc_num.php?explnum_id=10385
- The Scientific Group for the UN Food System Summit. *Science and Innovations for food systems transformation and Summit actions*. The Scientific Group for the UN Food System Summit, 2021. https://sc-fss2021.org/wp-content/uploads/2021/09/ScGroup_Reader_UNFSS2021.pdf
- World Meteorological Organization. *The global climate in 2015–2019*. Geneva, Switzerland: WMO, 2019. https://reliefweb.int/sites/reliefweb.int/files/resources/Five_year_report_2015-2019_0.pdf
- Dasandi N, Graham H, Lampard P, *et al*. Engagement with health in national climate change commitments under the Paris agreement: a global mixed-methods analysis of the nationally determined contributions. *Lancet Planet Health* 2021;5:e93–101.
- Berrang-Ford L, Sietsma AJ, Callaghan M, *et al*. Systematic mapping of global research on climate and health: a machine learning review. *Lancet Planet Health* 2021;5:e514–25.
- Costello A, Abbas M, Allen A, *et al*. Managing the health effects of climate change. *The Lancet* 2009;373:1693–733.
- Dasandi N, Graham H, Lampard P, *et al*. Intergovernmental engagement on health impacts of climate change. *Bull World Health Organ* 2021;99:102–11.