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DOI:

[10.1136/bmjgh-2022-008731](https://doi.org/10.1136/bmjgh-2022-008731)

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### Document Version

Publisher's PDF, also known as Version of record

### Citation for published version (Harvard):

Dasandi, N, Cai, W, Friberg, P, Jankin, S, Kuylenstierna, J & Nilsson, M 2022, 'The inclusion of health in major global reports on climate change and biodiversity', *BMJ Global Health*, vol. 7, no. 6, e008731. <https://doi.org/10.1136/bmjgh-2022-008731>

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# 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.<sup>1 2</sup> 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.<sup>3</sup>

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.<sup>4</sup> 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,<sup>5</sup> 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.<sup>6</sup> 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



**Figure 1** Word cloud of the most frequent words used when discussing health in major global reports on climate change and biodiversity. The 75 most frequent words that appear within a 25-word window around the term ‘health’ across the different reports.

some important insights on current engagement with the health dimensions of climate change and biodiversity. We summarise these key themes, and their policy implications.

## HEALTH ENGAGEMENT

We find that health is discussed in all the climate change and biodiversity reports that we examined. The majority of reports highlight the significant negative consequences of rising temperatures on human health. Most reports also included detailed references to different health impacts, and around half the reports had specific sections dedicated to health. Therefore, engagement with health in global reports on climate change and biodiversity supports the notion that over the past few years’ health has moved from being peripheral to policy discussions about climate change and biodiversity to being a central issue.<sup>7</sup>

The types of health references and discussions varies considerably across the different reports. The word cloud presented in [figure 1](#) shows the most frequent terms used when discussing health in these reports. As we would expect, there is strong emphasis on the different health impacts of climate change and biodiversity loss in most reports. Perhaps, slightly more unexpected is the significant focus on health cobenefits of mitigation that can be seen across the reports. The Intergovernmental Panel on Climate Change (IPCC) Special Report on Global Warming of 1.5°C, for example, states that limiting warming to 1.5°C ‘can provide large public health benefits through improved air quality, preventing millions of premature deaths’.<sup>8</sup> While various health cobenefits were discussed—air pollution and food received the most attention. The former relates to the transition

from coal to clean energy, which in addition to reducing carbon emissions ‘also delivers major short-term benefits including cleaner air, which means healthier lives.’<sup>9</sup> The latter focuses on how ‘balanced diets, featuring plant-based foods... present major opportunities for adaptation and mitigation while generating significant cobenefits in terms of human health’.<sup>10</sup> This emphasis on health cobenefits was especially emphasised in biodiversity reports. Several biodiversity reports—such as the Global Biodiversity Outlook 5<sup>11</sup> report and the Report of the Conference of the Parties to the Convention on Biological Diversity<sup>12</sup>—also explicitly promote the One Health approach, which is a multidisciplinary approach that focuses on achieving optimal health outcomes by recognising the interconnection between people, animals, plants and their shared environment.<sup>13</sup>

While there is a strong emphasis on health impacts, and health cobenefits, there is much less discussion of health adaptation. Several reports highlight the need to adapt health systems to a changing climate, but there is less in the way of detailed discussions of specific adaptations measures that need to be implemented. The few reports that do discuss specific health adaptation measures were those that focused explicitly on climate change adaptation, such as the WMO’s 2020 State of Climate Services report.<sup>14</sup>

## LINKS BETWEEN CLIMATE CHANGE/BIODIVERSITY AND HEALTH

There is also considerable variation in the specific types of links between climate change/biodiversity and health discussed in the reports. The most frequent links, or mechanisms, discussed are food, air pollution and extreme weather events. The emphasis on food systems and food security is particularly interesting as these global reports appear to pay significantly more attention to this issue than occurs in the wider research on climate change and health. This is partly because several global reports on climate change and biodiversity in recent years have focused explicitly on food and agricultural issues. This includes the recent IPCC Special Report on Climate Change and Land,<sup>10</sup> which has a strong emphasis on food systems, as well as the report from the UN Food Systems Summit in 2021.<sup>15</sup> Yet, even reports that do not explicitly focus on food and agricultural—such as the WMO’s Global Climate Report<sup>16</sup> and the 2020 Global Biodiversity Outlook 5 report<sup>11</sup>—have a strong focus on the food security, and the ways in which climate change/biodiversity loss impact human health through affecting food systems. In part, this emphasis on food and air pollution is also driven by the engagement with health cobenefits mentioned previously.

In contrast, we find that other climate change/biodiversity and health links receive less attention. This can be seen with discussions of climate sensitive diseases across the reports. While most reports mention the link between climate change/biodiversity loss and increased disease burdens, there is much less in the way of detailed

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.<sup>1</sup> 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°C<sup>8</sup> 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.<sup>17</sup> 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’.<sup>1</sup> 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.<sup>18</sup> 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.<sup>19</sup> 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.<sup>20</sup> 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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