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Short communication

Assessing the inclusion of health in national climate commitments: Towards accountability for planetary health☆

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Floods, heatwaves, wildfires, cyclones; every corner of the planet has been affected by extreme weather events this year, often with devastating and deadly consequences. For climate scientists, this comes as no surprise. In August 2021, the Intergovernmental Panel on Climate Change (IPCC) published the first part of its sixth report, on the physical science of climate change, stating that "it is unequivocal that human influence has warmed the atmosphere, ocean and land" [1]. The report reiterated facts presented repeatedly in recent decades, and was declared by United Nations (UN) Secretary General António Guterres to signal "code red for humanity".

Recent analysis suggests that under "a business as usual scenario", climate change will likely cause 83 million cumulative excess temperature-related deaths by 2100 [2]. Human health is irrevocably linked to the health of our planet. Failure to address the root causes of climate change will lead to exponential human and ecological harm, and the majority of countries already identify the health sector as particularly vulnerable to climate change [3]. The most severe health impacts of climate change occur in the Global South [4]. Action to limit and adapt to global heating protects populations, for example by reducing exposure to health hazards, while mitigating climate change additionally yields large benefits for public health such as cleaner air, healthier diets, increased physical activity and improved mental wellbeing.

The health of populations is defined not merely by the strength of their healthcare systems, but also by the environments and social settings in which they live. In order to respond effectively to the "code red for humanity", climate policy must protect the health of populations while maximizing the health and social benefits yielded by ambitious climate action. The global relevance of integrating health and climate policymaking is indisputable, necessitating a Health in All Policies (HiAP) approach [5].

The UN climate conference taking place this November, better known as COP26, is a pivotal moment in humanity's response to an issue which threatens our survival. Whether political will is demonstrated to prioritize people and planet in the face of ongoing challenges and competing interests remains to be seen. This will be the first COP since governments were due to submit updated national climate commitments to the Paris Agreement (termed "nationally determined contributions" - NDCs), making it central in evaluating the gap between current and required action to respond to climate change. According to the 2020 UN Emissions Gap Report, even if all unconditional commitments in NDCs were fulfilled, average global temperatures will increase by more than 3 °C this century compared to preindustrial times [6]. Meanwhile, climate related extreme events of the scale observed in recent years have occurred at just 1.1 °C of warming. The latest IPCC report concludes that limiting warming to

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1.5 °C requires major and immediate transformation at unprecedented scale and speed [1]. It is crucial that NDCs include commitments at the level needed to drive revolutionary progress. At the time of submission, countries contributing 51.9% of global emissions have submitted updated NDCs to the United Nations Framework Convention on Climate Change (UNFCCC) [7].

Whilst UNFCCC guidelines exist for the content of NDCs, submitted documents range widely in length and depth of content. There are no requirements for the inclusion of health considerations in NDCs, despite the right to health being fundamental to the Paris Agreement and the UNFCCC more widely (as outlined in UNFCCC Article 4.1.f). Health is inextricably related to climate change and should be an integral part of NDCs to achieve the goals of the Paris Agreement. Strong accountability initiatives already exist for NDC enhancement and for climate financing [8,9]. An accountability assessment that monitors and evaluates the inclusion of health considerations in NDCs with a view to incentivising action by governments to overcome identified inadequacies is therefore acutely relevant.

In recognition of the need to monitor the implications of national climate policies for health, and in continuation of prior assessments of health in NDCs [10,11], the Global Climate and Health Alliance (GCHA) and partners have collaborated to produce the Healthy NDCs Scorecard [12]. First launched in July 2021, the September iteration of the Scorecard evaluates 67 updated or enhanced NDCs spanning 93 countries (the EU27 submits a single joint NDC) for their ambition and inclusion of health considerations, across a range of categories.

Methods

NDCs were assessed based on their inclusion of health across five categories, with a total 'health consideration score' (hereinafter referred to as 'health score') assigned out of 15 points. These categories included health impacts, health in adaptation, health co-benefits of mitigation and in some cases adaptation responses, health in economics and finance, and additional 'bonus' points for other notable health mentions (detailed methods are described in the supplementary material). Where data was available on countries' overall level of climate ambition from the research group Climate Action Tracker, this was also included in the evaluation [13], but did not form part of the health score since data is not available for all countries. Mentions of equity were noted but were not allocated points in this analysis.

Results and discussion

Based on this method, the highest health scores were received by Cambodia, Cape Verde and Moldova (14/15), followed by Costa Rica (13/15) (see Fig. 1 and supplementary Table 1). By contrast, Australia, Brazil, New Zealand and Norway were among those receiving scores of zero.

The highest average health scores were allotted to NDCs from countries in the WHO African (n = 7) and Eastern Mediterranean Regions (n = 4), with an average of 9 points each in both regions. Meanwhile, NDCs submitted by countries from the WHO European Region (n = 14) received an average of 3.6 points; the lowest of any WHO Region. When grouped by World Bank income classification, high (n = 16), upper-middle (n = 27), lower-middle (n = 19) and low income (n = 4) countries received an average of 3.8, 6.7, 7.1 and 5.8 points respectively. The EU contains both high and upper-middle income countries (thus was not included in calculations of averages by income group), and scored 1 point. Annex 1 countries (UNFCCC terminology for a group of predominantly high-income countries) scored an average of 2.9, while Non-Annex 1 countries scored an average of 6.6 points. These findings underscore how in general, countries which are more vulnerable to climate change or are already bearing the brunt of climate-sensitive health outcomes give greater attention to health. Despite very limited resources, NDCs submitted by low income countries scored higher on average than those submitted by high income countries.

Health was mostly included in relation to adaptation and health impacts. Health co-benefits were less often referred to, and health was only rarely included as part of considerations of economics and finance. While the immediate nature of health impacts are recognised by many countries, greater promotion of the health co-benefits of climate policies is still needed. Moreover, financing for health adaptation and co-benefit mitigation interventions is essential to enable implementation, while attention to returns on investment is needed to guide cost-effective policy making and public spending. For Non-Annex 1 countries which seek to both mitigate and adapt to climate change despite contributing only a small fraction of cumulative

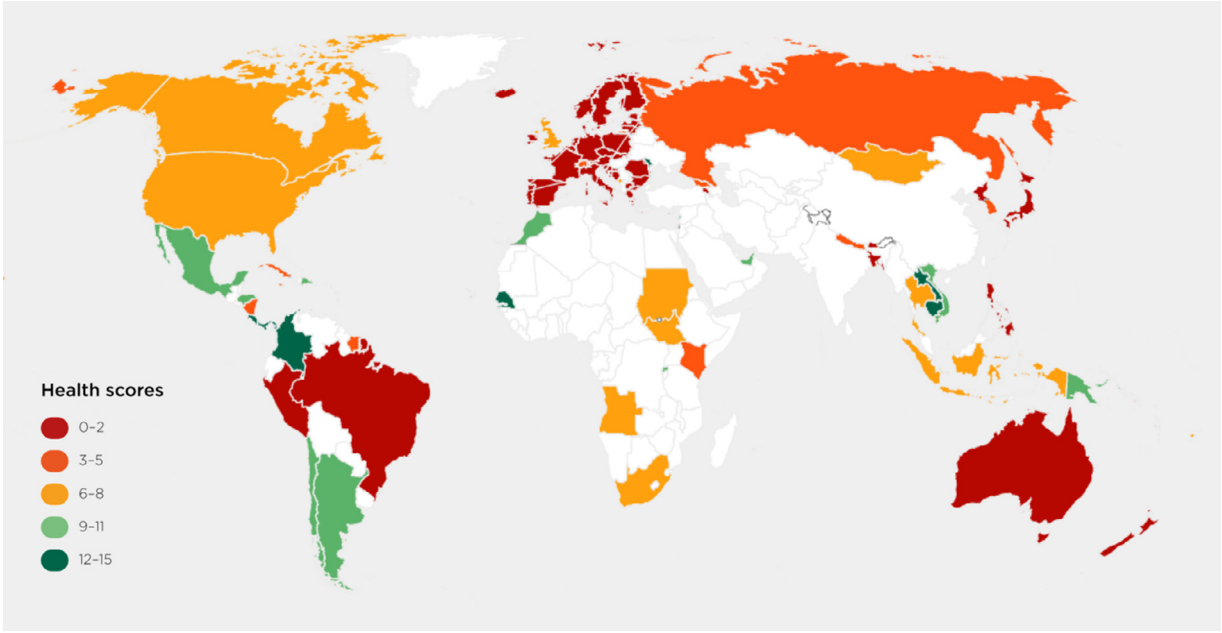

Fig. 1. Health consideration scores of nationally determined contributions. A maximum of 15 points can be achieved.

global emissions, delivering ambitious climate action with benefits for people worldwide will be heavily dependent on high-income countries delivering a promised 100bn USD climate finance annually, a commitment reaffirmed under the Paris Agreement [14].

Concepts relating to equity were also integrated throughout many NDCs. Often these mentions were broad in scope, but some countries also referred to more specific forms of equity, including intergenerational equity (Argentina), equitable access to opportunities for indigenous peoples (Canada), and gender equity (Indonesia).

Comparisons can also be made between health scores and overall climate ambition, which is the ultimate determinant of long-term health outcomes. Costa Rica's NDC, for example, includes both an integrated focus on health and emissions reductions targets aligned with the Paris Agreement. In other countries, including Mexico, the UAE and Vietnam, high health scores were not matched by climate ambition, but were instead in line with temperature rises far in excess of the Paris Agreement goals, with catastrophic implications for health. Countries whose climate ambition is in line with 2 °C, 3 °C, 4 °C and >4 °C scored an average of 7.6, 3.8, 6.3 and 5.0 points respectively, with a lack of correlation in the relatively small sample of 27 countries which have both submitted updated or enhanced NDCs and are rated by Climate Action Tracker. Health considerations in climate policy are hollow without sufficiently ambitious climate action.

Strengths of our analysis included a comprehensive, global, and standardized approach. The Scorecard serves as a barometer indicating the extent to which health is included in national climate commitments, and as a comparator between different countries. There were several limitations to our analysis, most notably relating to the nature of NDCs as government *commitments* that sparsely record action undertaken to date. Commitments are a prerequisite for action but can be easier to pen than to deliver. Only *action* can elicit progress. In addition, the Scorecard analysis focused exclusively on NDCs and not wider national policies relating to climate change and health, including those relating to the energy, food and agriculture, and transport sectors. Most high-income countries omit detailed information concerning adaptation from their NDCs and instead opt to submit separate adaptation communications, leading to a lower total health score than would otherwise have been assigned. Furthermore, this evaluation focused on health, and did not include a quantified assessment of governments' focus on equity, which itself underpins health; nor did it include reference to food, water or other health-determining sectors unless explicitly linked to health. Finally, as a globally developed scorecard, the selected criteria are unlikely to be sufficiently sensitive to local circumstances. We welcome input and feedback to improve any future analyses.

Conclusion

Inclusion of health considerations in climate policies not only protects populations and maximises social and economic benefits, but could also strengthen public backing for ambitious climate policies[15]. The Healthy NDC Scorecard indicates the extent to which countries include health considerations in their NDCs and provides a starting point for policy accountability in planetary health.

At COP26 and beyond, it is imperative that countries submit NDCs which are ambitious, and consider health and equity. Ongoing cooperation between nations to bridge the chasm between current and required climate ambition will be crucial for the protection of people and the planet. COP26 is not a cliff edge, but rather the starting line for a phase of unprecedented action against the existential threat of climate change - and health considerations must be at its center.

Author contributions

JB contributed to conceptualization, formal analysis, investigation, methodology, project administration, validation, and writing (original draft and editing). KRvD, BPC, LJ, AW and JCM contributed to conceptualization, data curation, formal analysis, investigation, methodology, validation, and writing (review and editing). IMB and OEO contributed to conceptualization, methodology, and writing (review and editing). JMi contributed to conceptualization, funding acquisition, supervision, and writing (review and editing).

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Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.joclim.2021.100085.

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