

## Fifth Workshop on the Global Goal on Adaptation

*Transformational adaptation: changing mindsets, indigenous issues, and cross-cutting themes*

Health community submission, 28 February 2023



*This submission is made by the World Health Organization, the Global Climate and Health Alliance, Pathfinder Initiative (based within the London School of Hygiene and Tropical Medicine), Health Care Without Harm, Health in Harmony, and the UK Faculty of Public Health.*

### Introduction

The Paris Agreement acknowledges the relevance of the right to health, to climate action. In its sixth assessment report published in 2022, the IPCC describes the scientific evidence confirming climate change to be a “threat to human well-being” as “unequivocal”<sup>1</sup>. Indeed, climate change is recognised by the World Health Organization (WHO) as the greatest threat to health of the 21st century<sup>2</sup>. Human health is inextricably linked to the integrity of the ecosystems within which we live and on which we depend. The impacts of climate change on ecosystems undermines the right to health and a healthy environment, including through slow onset and emerging health risks such as increasing heat stress, migrating vector borne diseases and water and nutrition insecurity, also driving severe productivity losses with far-reaching economic consequences. Transformative adaptation can yield economic savings through improved health.

A common objective of adaptation in a given setting is to protect people from the impacts of climate change. Indeed, the state of health and wellbeing is an outcome of adaptation across sectors - **future oriented transformative adaptation can be considered to be that which protects human and wider ecosystem health for overall wellbeing.**

While ecosystem and societal resilience is needed in order to protect health and wellbeing, health and wellbeing can also be considered a core pillar of adaptation: measures to improve the health and wellbeing of a population will support healthy populations which are more resilient to climate impacts and more able to recover quickly from climate shocks. This can be understood as “health resilience”.

Climate change inflicts extensive and disproportionate health impacts on Indigenous communities<sup>3</sup>, and Indigenous knowledge is a core issue for equity including health equity<sup>4</sup>. A holistic approach to health and resilience requires the involvement of indigenous communities in decision-making, addressing the social determinants of health, prioritizing community-based approaches, and supporting capacity-building and resource-sharing. Traditional wisdom and knowledge should be central to adaptation.

As such, the overarching goal of adaptation can be considered to be the protection of health and wellbeing, and thus the promotion of continued functioning of societies and economies in harmony with the environment. Realisation of these interlinkages can be facilitated by incorporating health considerations into adaptation planning, such as identifying vulnerable populations, assessing health risks, and developing risk reduction strategies. This may include improving access to health services, enhancing disease surveillance and control, and ensuring food and water security. Addressing the health impacts of climate change requires collaboration across sectors.

The links between climate change, health, and Indigenous peoples are already acknowledged in GGA discussions. Health is included in a list of themes for the Framework of the GGA agreed in Sharm el-Sheikh, while knowledge

of Indigenous peoples is included as a cross-cutting consideration<sup>5</sup>. The Adaptation Committee has also previously proposed health metrics which could be used to measure progress towards the GGA, while also noting the need for global metrics to be complemented with contributions from Indigenous peoples and local communities<sup>6</sup>. Promoting, and subsequently quantifying these health and wellbeing gains (for example during the eighth GGA workshop, focussed on metrics), can help build widespread support for adaptation action and help evaluate the effectiveness of adaptation actions. This submission builds on health community submissions to the Global Stocktake<sup>7</sup>, with a view to ensuring complementarity across these interlinked processes.

In this submission, we explore how health and wellbeing gains arising from transformative adaptation measures across six key sectors can be maximised, before exploring the concept of health resilience. We conclude with a suggestion of a question which could be covered during the fifth workshop.

### Benefits of adaptation across sectors for health and wellbeing

**Food and agriculture:** The IPCC concludes with high confidence that food security will be increasingly affected by projected future climate change. Changes in rainfall and temperature lead to significant reductions in crop yields, both directly and due to impacts on pollinators<sup>8,9,10</sup>. The growth seasons of maize on average 9 days shorter in 2020, and the growth seasons of winter wheat and spring wheat 6 days shorter than for 1981–2010 globally<sup>11</sup>. Climate change is associated not only with reduced quantity of available foods, but with their nutritional quality - key crops have lower concentrations of zinc and iron at the elevated atmospheric CO<sub>2</sub> concentrations<sup>12</sup>. Zinc deficiency is currently responsible for large burdens of disease globally, and the populations who are at highest risk of zinc deficiency receive most of their dietary zinc from crops<sup>13</sup>. Consumption of fruit and vegetables (400gm daily) is important for the reduction of risks of common non-communicable diseases such as heart disease and stroke but is increasingly threatened by climate change<sup>14</sup>. Reduced availability of fresh produce can decrease affordability and also increase consumption of imported and processed food, with high associated emissions and increased risk of noncommunicable diseases. Measures to promote agricultural resilience can strengthen nutrition security, reducing malnutrition in all its forms. Agricultural resilience is a key element in the systems solutions for forest protection designed by rainforest communities. Reducing food loss and waste should be prioritised and reducing the consumption of food crops by domestic animals could also assist<sup>15</sup>. Subsistence farmers, particularly pregnant women, are at high risk of extreme heat exposure<sup>16</sup>. The consequences of climate shocks (economic and otherwise) can push vulnerable communities back into activities which are harmful to ecosystems and people, such as logging, poaching, and mining. These communities should be prioritised in adaptation planning.

**Water and sanitation:** Climate change threatens water security<sup>17</sup>. Drought drives populations to consume unsafe water, while floods can damage or overwhelm water and sanitation infrastructure leading to the contamination of water supplies. Both impacts increase the risk of water-borne diseases such as cholera and diarrhoea. Improved resilience of water and sanitation reduces these risks, as well as ensuring a supply of water for agricultural irrigation, which in turn promotes nutrition security as described above.

**Healthcare:** Alongside water and agriculture, the healthcare sector is among the top three sectors prioritised for adaptation in NDCs<sup>18</sup>. The World Health Organization has published guidance on climate resilient and environmentally sustainable healthcare facilities<sup>19</sup>. Beyond the individual facility, the resilience of medical supply chains and storage, and routes to clinics or hospitals, must also be considered. Adaptation in the healthcare sector is required to address the slow onset growing and emerging health threats associated with climate change, but critically also to enable continuity of service provision during and after climate related extreme weather events, when the population is most in need of reliable access to care. In the Caribbean, the PAHO SMART hospitals programme focuses on improving hospitals' resilience, strengthening structural and operational aspects and providing green technologies, with similar initiatives in Pacific SIDS including the Maldives<sup>20,21</sup>. Within a framework of transformational adaptation, health 'systems' can be reimagined to comprise whole ecosystems which are both healthy and health-promoting, protecting human inhabitants but also offering climate and biodiversity solutions.

**Energy:** Local renewable energy grids can provide more reliable energy access without the risk of being cut off from the grid during an extreme event. Reliable energy access is needed for maintaining habitable building temperatures (whether in terms of heating or cooling) and refrigeration and cooking food, all of which are directly related to health. Evidence shows that improved grid access and connectivity is generally associated with positive health outcomes, such as reduced mortality, lower rates of disease, and improved quality of and access to care<sup>22</sup>. Furthermore, access to reliable energy supply supports education, and job creation<sup>23</sup>, positively influencing the social determinants of health.

**Nature based solutions:** At city level, green and blue infrastructure protect populations from the urban heat island effect<sup>24</sup>, while also promoting physical activity and mental wellbeing. Green space can also improve air quality. Beyond urban environments, selected nature-based solutions can maximise health gains by creating an environment which supports and is preserved by human thriving. Indigenous communities, as traditional custodians of lands and waters, have deep knowledge on the issue of protection and restoration of ecosystems as the foundations for healthy lives and livelihoods. In Borneo, increased affordability of healthcare was associated with reduced illegal logging (through clinic discounts to offset costs previously met through logging), illustrating additional planetary health connections<sup>25</sup>.

**Housing:** Climate resilient housing offers protection from extreme weather events, such as heatwaves and storms. Well insulated and passively cooled homes protect from extremes of temperature, while also offering co-benefits for mitigation due to improved energy efficiency.

### Health resilience et al

Planetary health (a concept based on the understanding that human health and human civilisation depend on ecosystem health and the wise stewardship of ecosystems) is considered an enabler of climate-resilient development under the IPCC<sup>26</sup>. Healthy populations, which can be ensured by mitigation and adaptation action across sectors, are necessary for both economic productivity and overall climate resilience, being more likely to withstand and recover from climate shocks. This can be understood as health resilience. Better public health means that the costs of healthcare provision are lower, and fewer labour days are lost. These gains are also reflected in economic terms.

### Suggested question for the fifth workshop

- How can health and wellbeing gains be maximised through transformational adaptation?

## References

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- <sup>20</sup> Pan American Health Organization, n.d. Smart Hospitals. ([link](#))
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- <sup>25</sup> Jones et al, 2020. Improving rural health care reduces illegal logging and conserves carbon in a tropical forest. ([link](#))
- <sup>26</sup> IPCC, 2022. AR6 Working Group II Summary for Policy Makers. ([link](#))