December, 2024

HGPI Health and Global Policy Institute

[POLICY RECCOMENDATIONS]
Integrating Climate and Health for a Sustainable Society: Incorporating a Planetary Health Perspective into Nationally Determined Contributions (NDCs)

Health and Global Policy Institute (HGPI)

[Background]

Nationally Determined Contributions (NDCs) are commitments under the Paris Agreement that set greenhouse gas (GHG) reduction targets and significantly impact Japan's energy and growth strategies. The outcomes of scenarios such as Representative Concentration Pathways (RCPs) and Shared Socio-economic Pathways (SSPs), which are based on the targets and energy strategies established through NDCs, will differ greatly. While efforts are underway to achieve the Paris Agreement's 1.5°C target, the Earth System Boundaries concept introduced in 2023 highlights the need for even stricter goals, such as limiting global warming to 1°C, when considering harm to humans and other species alongside the Planetary Boundaries framework.

In some cases, NDCs also include adaptation strategies. Recently, an increasing number of countries have begun incorporating health considerations into their NDCs. Addressing health issues is not only essential for the current generation but also crucial for ensuring the health of future generations and achieving a sustainable society. In 2019, 70% of NDCs (129 out of 184 countries) included health considerations, and by 2022, this figure rose to 91% (175 out of 193 countries). However, countries like Japan, Australia, and New Zealand have yet to include references to health in their NDCs.

The impacts of climate change on health are diverse. The Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6) identifies several issues, including the spread of infectious diseases, worsening mental health, heat-related illnesses, malnutrition, and damage caused by wildfires. As global warming progresses, the threshold for extreme temperatures that significantly impact health is predicted to be exceeded more frequently. Some studies detail specific differences in health impacts depending on climate change scenarios (RCPs and SSPs). Additionally, some NDCs in Asia and G7 countries (11% of 21 countries in total) include GHG emission reductions and adaptation measures specific to the healthcare sector to protect health. For instance, Myanmar's NDC emphasizes the co-benefits of mitigation measures in the health sector for adaptation and resilience. Similarly, the UK's NDC outlines an air purification strategy to address all forms of air pollution, and the EU's NDC highlights the importance of nature-based solutions.

Japan’s Long-term Low Emission Development Strategy (LT-LEDS) commits to fiscal reforms aimed at promoting a healthy and green recovery from COVID-19, incorporating health considerations. However, these considerations are not yet sufficient. In contrast, countries like Germany, the UK, and the United States prioritize long-term climate goals to maximize public health and well-being in their LT-LEDS.

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The Paris Agreement mandates that countries submit updated NDCs with targets for post-2035 by 2025. Japan has already initiated steps toward this revision. In response, the Health and Global Policy Institute (HGPI) presents the following recommendations to ensure health perspectives are adequately reflected in Japan's NDCs for 2025.

[Recommendations]

Request 1: Include the extensive health impacts of climate change as a rationale for climate action

According to the 2024 Lancet Countdown report, the global mortality rate from heatstroke among individuals aged 65 and older increased by 167% in 2023 compared to the 1990s, marking a record high. This figure far exceeded the predicted increase of 65% in the absence of temperature rises by 102 percentage points. Additionally, outdoor workers were exposed to 27.7% more hours of heat stress risk than the 1990s average, and sleep duration was reduced by 6% compared to the 1986–2005 average. The risks of extreme weather events are also escalating. Between 1961–1990 and 2014–2023, the frequency of extreme rainfall increased across 61% of the world's land area, leading to heightened risks of flooding, infectious disease outbreaks, and water pollution. Furthermore, the health impacts of extreme weather and climate change have reduced labor productivity, with heat exposure in 2023 causing the loss of 512 billion potential working hours and an estimated $835 billion in economic losses.

Other studies (2024) predict that, in Japan, the average daily temperature increase by the 2090s compared to the 2010s will range from a minimum of 0.95°C under SSP1-2.6 to a maximum of 4.7°C under SSP5-8.5. Temperature-related all-cause mortality (including all causes such as cardiovascular and respiratory diseases) is generally higher for cold-related deaths than heat-related deaths, and as a result, it is expected to decrease with rising temperatures. For example, under SSP1-2.6, morbidity is estimated at 332.84 cases per 100,000 population by the 2090s, while under SSP5-8.5, it is projected to reach 531.18 cases. On the other hand, temperature-related morbidity is estimated to be 332.84 cases per 100,000 population under the SSP1-2.6 scenario by the 2090s, whereas it is projected to reach 531.18 cases under the SSP5-8.5 scenario. Thus, morbidity caused by non-optimal temperatures is projected to increase significantly, with particularly pronounced increases among individuals aged 65 and older, as well as men. Additionally, disparities in mortality and morbidity rates between prefectures are expected to grow. Prefectures anticipated to experience larger temperature increases, such as Hokkaido and Aomori, and those with significant population declines, including Aomori, Akita, Yamanashi, Wakayama, and Kochi, are likely to face greater impacts. When considering climate change measures, it is essential to account for these prefectural differences.

Request 2: Include mitigation measures addressing the health impacts of climate change

Climate change severely affects human health, particularly through heat-related illnesses, the spread of infectious diseases, and physical and mental stress from weather disasters. By 2022, 91% of NDCs (175 out of 193 countries) included health considerations. To avoid falling behind global trends, Japan's NDCs should address the health impacts of climate change and outline mitigation measures to minimize these effects.

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To mitigate health impacts, it is essential to set targets consistent with the 1.5°C goal. Furthermore, the 2023 Earth System Boundaries concept highlights the need for stricter targets, such as limiting global warming to 1°C, considering harm to humans and other species.

Achieving the 1.5°C or 1°C goal requires increasing the share of renewable energy to at least 66%. Japan should align its mitigation strategies with the 28th Conference of the Parties (COP28) to the United Nations Framework Convention on Climate Change (UNFCCC), which recommends a target of tripling global renewable energy capacity by 2030. Additionally, while Japan aims for carbon neutrality by 2050, the next NDC, due in 2035, must ensure sufficient emissions reductions within the constraints of the carbon budget.

Request 3: Include measures to promote co-benefits by advancing mitigation and adaptation in tandem

Efforts that generate positive effects for both mitigation and adaptation (including health) are known as "co-benefits." However, Japan's current NDC, submitted in 2021, has been criticized for lacking references to co-benefits. The new NDC should align with the 2025 revision of Japan's Climate Change Adaptation Plan and include measures to promote co-benefits.

A literature review suggests that green infrastructure, urban greening, and transportation initiatives are highly likely to deliver co-benefits. For instance, sustainable urban transportation systems not only reduce GHG emissions but also decrease traffic injuries, lower diseases related to air pollution, increase physical activity, and prevent lifestyle-related illnesses. Moreover, sustainable food systems contribute to reducing food waste, promoting environmentally friendly food production, encouraging healthy diets, and reducing lifestyle-related diseases. To maximize the health co-benefits across these multiple sectors, NDCs should include specific policies and targets and foster comprehensive health measures in collaboration with relevant sectors.

Request 4: Incorporate measures to promote mitigation within the healthcare sector

Some NDCs from Asian and G7 countries (11% of 21 countries) include measures for GHG reductions specifically targeting the healthcare sector, emphasizing health protection. For example, Myanmar's NDC highlights mitigation measures in the healthcare sector that provide co-benefits for adaptation and resilience.

The healthcare sector accounts for 6.4% of Japan's total GHG emissions. To achieve the 1.5°C target, this sector must contribute to emission reductions. In May 2024, Japan joined the Alliance for Transformative Action on Climate and Health (ATACH), committing to the development of climate-resilient, low-carbon, and sustainable healthcare systems. Japan should follow the examples of countries like Myanmar and the UK by explicitly addressing GHG reductions in the healthcare sector within its NDC.

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Request 5: Address the establishment of climate-resilient healthcare systems as an adaptation strategy

Even with strong measures to address climate change in the future, health impacts are inevitable. To mitigate these health impacts, we recommend incorporating concrete action plans to establish climate-resilient healthcare systems as part of adaptation strategies. Specifically, this includes assessing climate change vulnerabilities and reflecting them in Business Continuity Plans (BCPs), developing integrated surveillance systems that combine climate data with health (disease) information, and building education programs and organizational frameworks to strategically and effectively advance disaster prevention and mitigation efforts against climate change.

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About Health and Global Policy Institute

Health and Global Policy Institute (HGPI) is a Tokyo-based independent and non-profit health policy think tank, established in 2004. Since our establishment, HGPI has been working to help citizens shape health policy by generating policy options and bringing together stakeholders as a non-partisan think-tank. Our mission is to enhance the civic mind along with individuals' well-being and to foster sustainable, healthy communities by shaping ideas and values, reaching out to global needs, and catalyzing society for impact. We commit to activities that bring together relevant players from various fields to deliver innovative and practical solutions and to help interested citizens understand available options and their benefits from broader, global, long-term perspectives.

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