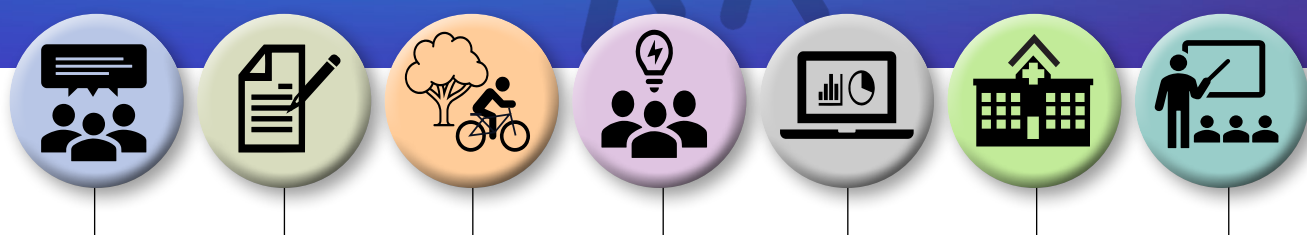


# ENHANCING HEALTH AND CLIMATE CHANGE COMMITMENTS IN UPDATED NATIONALLY DETERMINED CONTRIBUTIONS



**PAHO**



Pan American  
Health  
Organization



World Health  
Organization  
REGIONAL OFFICE FOR THE  
Americas

# ENHANCING HEALTH AND CLIMATE CHANGE COMMITMENTS IN UPDATED NATIONALLY DETERMINED CONTRIBUTIONS

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# Introduction

The 2015 Paris Agreement (1) entered into force following ratification/acceptance by 189 parties (countries) of the United Nations Framework Convention on Climate Change (UNFCCC) (2). The agreement establishes a long-term goal of limiting global warming to 1.5-2C above pre-industrial levels.

Through the agreement, each country is requested to prepare, communicate, and maintain successive nationally determined contributions (NDCs) outlining intended ambitions and progress in climate actions. Nationally determined contributions are at the heart of the Paris Agreement and embody efforts by each country for reducing greenhouse gas (GHG) emissions and adapting to the impacts of climate change.

In September 2019, the United Nations Climate Action Summit called upon countries to raise their climate ambition, step up mitigation and adaptation actions, and submit updated or new NDCs to the UNFCCC.<sup>1</sup>

In early 2020, the COVID-19 pandemic reached the Region of the Americas. The resulting loss of life and socioeconomic impacts have highlighted the importance of strengthening health care services and health surveillance systems, and that those must be informed by early warning systems (EWS) for the adequate measures of prevention, response, and rapid recovery. The climate crisis demands a similarly vigorous participation of the health community, integrated with other sectors.

Countries, the United Nations, and the World Health Organization (WHO) have called for a “healthy and green recovery” (3). The Pan American Health Organization (PAHO) firmly believes that this vision should be expressed in the NDC review process, as a mechanism of recovery from the COVID-19 pandemic, and for rethinking societal systems to combat and adapt to climate change and its effects.

## The updated round of nationally determined contributions

It is essential that post-COVID-19 plans be aligned with the Paris Agreement. Specifically, they should: emphasize the protection and preservation of natural ecosystems; ensure access to clean water and sanitation services; ensure a transition to renewable energy sources; promote a healthier more sustainable food system; build healthy and efficient cities; and stop funding for fossil fuels (4). As stated by Chile’s Minister of the Environment and President of the 2019 United Nations Climate Change Conference (COP 25), Carolina Schmidt, enhanced NDCs can provide “the blueprint for designing recovery strategies that are aligned with high emissions reductions” (5).

Ambitious NDCs are powerful tools that can influence the mobilization of funds and generate significant health benefits, such as: measuring and mitigating GHG emissions from health services; improving healthcare facilities to become climate resilient; improving air quality and waste management; enhancing and integrating data collection for EWS; increasing climate change and health literacy and technical capacities; and prioritizing climate policies and programs that promote health. Updated NDCs should commit to strengthening institutional and technical capacities to protect and promote health, and ensure that mitigation and adaptation actions appear in a coherent manner in all national strategies, programs, and commitments, such as health vulnerability and adaptation assessments (V&As),<sup>2</sup> health chapters in national adaptation plans (H-NAPs),<sup>3</sup> and nationally appropriate mitigation actions (NAMAs),<sup>4</sup> among others.

Updated NDCs should indicate countries’ willingness to adopt a structured approach consisting of: national analysis; updating and strengthening institutional frameworks and coordination mechanisms; aligning national policies, plans, and monitoring and evaluation measures in order to fully integrate health aspects into the national climate agenda. Updated NDCs should also lay the groundwork for the translation of national climate and health plans into action.

<sup>1</sup> The UNFCCC refers to this round of nationally determined contributions (NDCs) as “updated or new.” For brevity, the remainder of this document will refer to this round as “updated.”

<sup>2</sup> Vulnerability and adaptation assessments are diagnostic tools and approaches to identify national vulnerabilities to the adverse effects of climate change, and to evaluate adaptation measures being taken to meet countries’ specific needs and concerns arising from these adverse effects.

<sup>3</sup> National adaptation plans are detailed plans to reduce vulnerabilities to climate change through the integration of adaptation into national policies, programs, and actions in all sectors, including health.

<sup>4</sup> Nationally appropriate mitigation actions refer to actions that aim to reduce emissions in developing countries. They can be policies directed at transformational change within an economic sector, or national actions across sectors. They are supported and enabled by technology, financing, and capacity-building, and are aimed at achieving a reduction in emissions relative to “business as usual” emissions in 2020.

# Objectives and structure of this technical note

This technical note aims to help countries enhance their health commitments and actions in the updated round of NDCs. It provides seven key messages formulated from an analysis of NDCs submitted by countries of the Americas before March 2020.<sup>5</sup> Each key message is accompanied by key findings of the situation, rationale, suggested actions, inspiring examples, and additional resources that PAHO/WHO, the UNFCCC, and the NDC Partnership can offer to support countries' enhancement of health commitments in the updated round of NDCs.

This technical note represents an opportunity beyond NDC processes to ensure that recovery plans in the face of COVID-19 are low carbon and climate resilient, while identifying and maximizing health-related co-benefits.

## Health issues in the first submission of nationally determined contributions

All 35 countries of the Americas<sup>6</sup> submitted their first NDCs in the period from September 2015 to March 2019 (6). Considerations of the impact of climate change on health-determining sectors—such as water, sanitation, or agriculture—were included in most of them (31 NDCs), and most countries identified health as a priority sector (29 NDCs) and included at least one health-directed action (27 NDCs). Moreover, most countries included considerations for gender, equity, indigenous groups, or vulnerable populations (26 NDCs).

Despite the progress, some challenges and opportunities remain. Eight NDCs included actions to educate communities and health workers on how they can attenuate the impacts of climate change on health. More countries could adopt similar measures to raise awareness and harness support for multi-stakeholder climate action. Few NDCs committed to developing NAPs (10 NDCs), V&As (3 NDCs) and NAMAs (2 NDCs) for the health sector. Nine NDCs acknowledged the occurrence of measurable health co-benefits of their committed actions, but no NDCs included estimates for these benefits. While 32 NDCs described the need for external financial support, few (11 NDCs) committed to specific actions to strengthen access to funding. Almost half of all NDCs included plans to improve research (16 NDCs) and EWS (17 NDCs), but many lacked descriptions of scope. Twenty-four NDCs included plans to implement climate resilient infrastructure, but few (4 NDCs) included health facilities in these plans.

## Enhancing health commitments in the updated round of nationally determined contributions

This technical note elaborates on seven key messages generated to help countries address the challenges and opportunities observed in the analysis of the first round of NDCs. Each key message is presented with a brief situation analysis, rationale, suggested actions, inspiring examples, and additional resources from PAHO/WHO, the United Nations Environment Programme – Technical University of Denmark Partnership (UNEP DTU), the NDC Partnership, and other partners.

**The first two key messages refer to enabling conditions that should be achieved before or in parallel to preparation of updated NDCs.** These enabling conditions are important to enhance the health sector's participation in the overall NDC process. **The remaining five key messages refer to actions that should be incorporated into updated NDCs.**

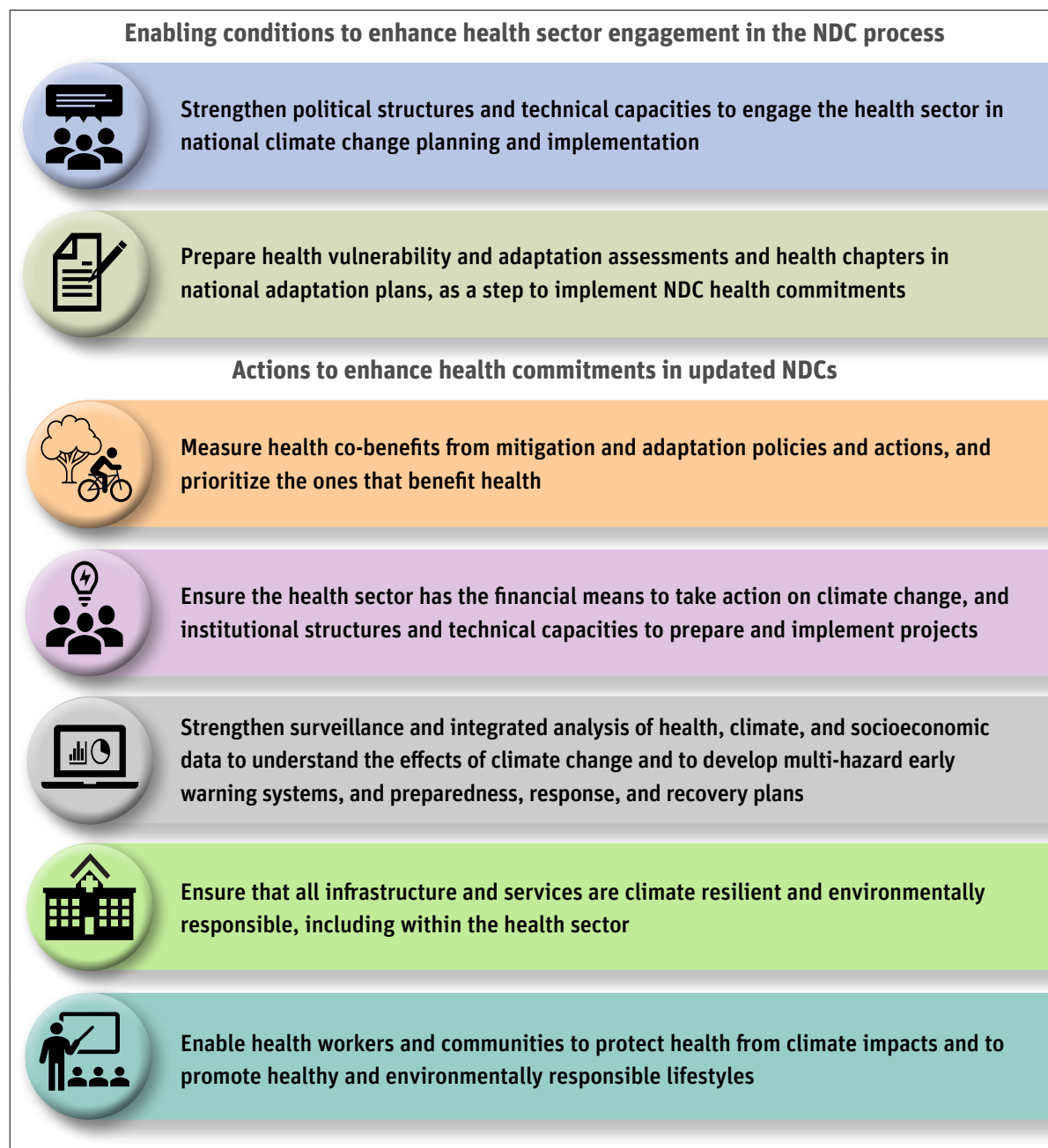
<sup>5</sup> To maintain consistency among countries, Suriname's updated NDC (published in December 2019) was not included in this analysis.

<sup>6</sup> Countries of the Americas that form part of the United Nations: Antigua and Barbuda, Argentina, the Bahamas, Barbados, Belize, Bolivia (Plurinational State of), Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Dominica, the Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, the United States of America, Uruguay, and Venezuela (Bolivarian Republic of).

These actions can help countries prevent disease caused and/or accelerated by climate change, as well as promote health and well-being, and help societies increase resilience to climate change (Figure 1).

As cross-cutting issues, these key messages fall under one or more overarching themes of health sector mitigation actions, health co-benefits of mitigation, and health and adaptation actions. Thus, each country can adapt these messages to its own document structure and needs, and incorporate them accordingly.

**Figure 1.** Actions to enhance health commitments in updated nationally determined contributions (NDCs)







## Strengthen political structures and technical capacities to engage the health sector in national climate change planning and implementation

**Situation analysis:** Twenty-nine NDCs identified health as a vulnerable sector, and 27 NDCs mentioned at least one health adaptation action. However, there are opportunities to further strengthen the capacity and engagement of the health sector in climate change interministerial committees, and to guarantee that the NDC commitments properly address current and projected climate-related health impacts.

**Rationale and suggested actions:** Climate change will affect all countries, and the consequent health impacts will result in a significant increase in mortality, morbidity, and associated health care costs. Reducing these consequences will require the alignment of health priorities within countries' national climate agendas. In addition, the health sector will require strong political leadership and collaboration between all sectors in order to effectively address the full range of climate-sensitive health risks. Countries can achieve these aims by addressing the following in the NDC sections on health sector mitigation actions, and health and adaptation actions:

- ✓ Designate a climate change focal point in the Ministry of Health.
- ✓ Set up active multi-stakeholder working groups within the Ministry of Health to prepare, revise, and consolidate policies and programs on climate change and health.
- ✓ Guarantee the health sector's participation in interministerial and high-level climate change committees, including in the process of preparation of national documents, plans, and strategies, such as the NDC.
- ✓ Maintain coherence and implement health proposals across national documents, plans, and strategies.

### Additional resources:

- Bakhtiari F, Hinostroza M, Puig, D. Institutional capacities for NDC implementation: a guidance document [Internet]. Copenhagen: UNEP DTU Partnership; 2018 [cited 16 Dec 2020]. Available from: [https://www.transparency-partnership.net/system/files/document/UNEP%20DTUP%202018\\_%20Institutional%20Capacities%20For%20NDC%20Implementation.pdf](https://www.transparency-partnership.net/system/files/document/UNEP%20DTUP%202018_%20Institutional%20Capacities%20For%20NDC%20Implementation.pdf)
- NDC Partnership. Climate toolbox [Internet]. NDC Partnership; 2020 [cited 16 Dec 2020]. Available from: <https://ndcpartnership.org/ndc-toolbox>
- Pan American Health Organization. Caribbean Action Plan on Health and Climate Change [Internet]. Washington, PAHO: WHO; 2019 [cited 16 Dec 2020]. Available from: [https://iris.paho.org/bitstream/handle/10665.2/38566/PAHOCDE19007\\_eng.pdf?sequence=19](https://iris.paho.org/bitstream/handle/10665.2/38566/PAHOCDE19007_eng.pdf?sequence=19)
- World Health Organization. Operational Framework for Building Climate Resilient Health Systems [Internet]. Geneva: WHO; 2015 [cited 16 Dec 2020]. Available from: [https://apps.who.int/iris/bitstream/handle/10665/189951/9789241565073\\_eng.pdf?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/189951/9789241565073_eng.pdf?sequence=1)



## Prepare health vulnerability and adaptation assessments and health chapters in national adaptation plans, as a step to implement NDC health commitments

**Situation analysis:** Nineteen NDCs committed to the preparation of national adaptation plans (NAPs), and 10 specified health as a priority sector to be elaborated upon within said NAPs. Seven NDCs committed to the preparation of V&As, and three specified that a V&A would be conducted for health. Ten NDCs committed to the development or implementation of NAMAs, 5 of which may improve air quality. Thus, the alignment and linkage between NDCs, V&As, NAPs, and NAMAs aims at accelerating important climate change and health actions.

**Rationale and suggested actions:** The health impacts of climate change vary between and within countries, requiring the development of targeted assessments and response plans. The preparation of national climate change and health documents, such as health V&As and H-NAPs, is an essential exercise to help countries diagnose their most pressing health needs, and to implement priority adaptation options in a specified period, given available resources. Moreover, having these documents prepared can assist greatly in the acquisition of climate change and health financing from sources such as the Green Climate Fund (GCF), and in ensuring that there is weight behind the actions stated in NDCs. Countries can achieve these aims by addressing the following in the NDC section on health and adaptation actions:

- ✓ Conduct broad consultations with national climate change committees and key stakeholders to identify national health priorities and adaptation options.
- ✓ Garner agreement between the financial sector and high-level executive bodies to ensure that the actions/plans in national documents are followed by concrete means of implementation.
- ✓ Prepare health V&As, NAMAs, NAPs, H-NAPs, and other strategies, plans, and programs that address identified national health priorities and which build upon one another in a coherent manner.

### Inspiring examples from first nationally determined contributions:

- ➔ Ecuador's NDC mentioned plans to develop systematized and coherent health V&As, NAMAs, and an H-NAP (7).

### Additional resources:

- NDC Partnership. Climate toolbox [Internet]. NDC Partnership; 2020 [cited 16 Dec 2020]. Available from: <https://ndcpartnership.org/ndc-toolbox>
- Pan American Health Organization. Protecting Health from Climate Change: vulnerability and adaptation assessment [Internet]. Washington, DC: PAHO; 2011 [cited 17 Dec 2020]. Available from: <https://www.paho.org/en/documents/protecting-human-health-climate-change-2011>
- World Health Organization. Operational Framework for Building Climate Resilient Health Systems [Internet]. Geneva: WHO; 2015 [cited 16 Dec 2020]. Available from: [https://apps.who.int/iris/bitstream/handle/10665/189951/9789241565073\\_eng.pdf?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/189951/9789241565073_eng.pdf?sequence=1)



## Measure health co-benefits from mitigation and adaptation policies and actions, and prioritize the ones that benefit health

**Situation analysis:** All 35 NDCs of the Americas included information on national GHG inventories—although with different levels of detail and sectoral information. All NDCs included plans to reduce GHG emissions, which may directly benefit health through improved air quality and reduced respiratory morbidity, among other benefits. Thirty-one NDCs included plans for land-use change, forestry, and actions by other health-determining sectors (e.g., agriculture, water, and sanitation). These intersectoral actions can benefit health by reducing diseases and outbreaks, by reducing air and water pollution, by increasing water and food security, and through the provision of other ecosystem services. Despite this, only 9 NDCs acknowledged the occurrence of health benefits derived from those actions, and no NDCs provided estimates of these health benefits.

**Rationale and suggested actions:** The health co-benefits of achieving the Paris Agreement climate targets substantially outweigh the implementation costs of mitigation efforts in all scenarios (8). In addition, adaptation actions from nearly all sectors provide extensive health co-benefits. Countries should capitalize on the raised ambition in their updated NDCs by including plans to quantify the substantial health cost savings derived from strengthened mitigation and adaptation efforts using innovative tools, such as the Carbon Reductions Benefits on Health (CaRBonH) calculation tool and Health Economic Assessment Tool (HEAT). By accounting for health, countries will be better informed on which policies and actions provide the best return on investment regarding health and economy. These measurements may also illuminate existing policies that inadvertently cause or contribute to adverse health impacts. Countries can achieve these aims by addressing the following in the NDC sections on health sector mitigation actions, health and adaptation actions, and health and mitigation co-benefits:

- ✓ Include health impact assessments and tools such as CaRBonH in the planning of mitigation and adaptation policies and actions.
- ✓ Prioritize climate policies and actions that benefit health (e.g., promoting walking/bicycling in cities can improve air quality while improving cardiovascular health).
- ✓ Avoid climate policies and actions with unintended negative health impacts (e.g., geosequestration of carbon dioxide underground may contaminate freshwater sources).

### Inspiring examples from first nationally determined contributions:

- ➔ Mexico's NDC indicated that priority would be given to the least costly mitigation actions with known health co-benefits over actions that do not have this information, as part of its climate change law (9).
- ➔ Ecuador's NDC mentioned progress in the identification and estimation of various mitigation co-benefits (7).
- ➔ The NDCs of Belize, Saint Lucia, and Trinidad and Tobago recognized that actions to reduce vulnerability and GHG emissions in sectors such as transportation, energy, and waste could promote health co-benefits such as improved air and water quality, among others (10,11,12).
- ➔ El Salvador's NDC recognized the importance of health co-benefits through its plan to integrate health, occupational, and food safety adaptation with targets for reducing pollution and increased climate change resilience in key urban areas and vulnerable populations (13).

### Additional resources:

- NDC Partnership. Climate toolbox [Internet]. NDC Partnership; 2020 [cited 16 Dec 2020]. Available from: <https://ndcpartnership.org/ndc-toolbox>
- World Health Organization. Achieving health benefits from carbon reductions manual for CaRBonH calculation tool [Internet]. Copenhagen: WHO; 2018. [cited 17 Dec 2020]. 25 p. Available from: [https://www.euro.who.int/\\_data/assets/pdf\\_file/0004/386923/health-carbon-reductions-eng.pdf](https://www.euro.who.int/_data/assets/pdf_file/0004/386923/health-carbon-reductions-eng.pdf)
- World Health Organization. GreenUr: the green urban spaces and health tool [Internet]. WHO; 2020 [cited 17 Dec 2020]. Available from: <https://www.euro.who.int/en/health-topics/environment-and-health/urban-health/activities/greenur-the-green-urban-spaces-and-health-tool>
- World Health Organization. Health economic assessment tool (HEAT) for cycling and walking [Internet]. WHO; 2020 [cited 17 Dec 2020]. Available from: <https://www.euro.who.int/en/health-topics/environment-and-health/Transport-and-health/activities/guidance-and-tools/health-economic-assessment-tool-heat-for-cycling-and-walking>
- World Health Organization. iSThAT: the integrated sustainable transport and health assessment tool [Internet]. WHO; 2020 [cited 17 Dec 2020]. Available from: <https://www.euro.who.int/en/health-topics/environment-and-health/urban-health/activities/isthat-the-integrated-sustainable-transport-and-health-assessment-tool>



## Ensure the health sector has the financial means to take action on climate change, and institutional structures and technical capacities to prepare and implement projects

**Situation analysis:** Thirty-two NDCs identified mitigation and adaptation actions that were conditional upon the provision of financial support and technology. Of these, 13 NDCs included general cost estimates for conditional mitigation actions, and 11 NDCs mentioned cost estimates for certain conditional adaptation actions. Fourteen NDCs mentioned the GCF as a potential source of financial support. Although 29 countries recognized health as a priority topic in their NDCs, only 8 countries submitted climate change and health concept notes to the GCF. Moreover, only five NDCs mentioned actions to strengthen countries' access to the GCF.

**Rationale and suggested actions:** Additional investment in the health sector is needed in order to effectively protect health from climate change. Countries of the Americas have access to the GCF and several other sources of funding.<sup>7</sup> The GCF is a global fund established within the framework of the UNFCCC to assist developing countries in adaptation and mitigation practices to counter climate change, and it is the largest single source of climate financing in the world. All developing countries of the Americas now have functional national designated authorities (NDAs)—which serve as focal points to the GCF. Despite their availability, the GCF and other funding sources are largely underutilized by the health sector, with just 0.5% of multilateral climate finance being spent on health projects globally in 2018 (14). Increased participation of the health sector in the GCF Country Readiness Programme<sup>8</sup> will facilitate greater access to GCF funds, which can yield significant health benefits through investments in expanding population coverage for climate-sensitive diseases, retrofitting of health facilities to withstand disasters, and increasing the capacity of health systems, among other examples. Countries can achieve these aims by addressing the following in the NDC sections on health sector mitigation actions, and health and adaptation actions:

- ✓ Allocate national funds to build capacities for Ministry of Health personnel to develop climate change proposals and to manage funds and projects.
- ✓ Increase engagement between the health sector and NDAs, to work in collaboration with technical institutions that act as delivery partners for Readiness programs, and coordinate with accredited implementing entities.
- ✓ Stimulate and provide support to regional/national technical agencies so they can become accredited by the GCF.
- ✓ Create a pipeline of priority projects for health and climate change issues.
- ✓ Conduct cost estimates for health adaptation and mitigation actions.

### Inspiring examples from first nationally determined contributions:

- ➔ Antigua and Barbuda's NDC mentioned the accreditation of its Department of Environment as an accredited national implementing agency for the GCF (15).
- ➔ Chile's NDC mentioned a national climate change financing strategy, which included the creation of institutions to optimize their coordination and relationship with the GCF (16).

### Additional resources:

PAHO provides technical support for capacity-building to access GCF financing, facilitates the preparation of project proposals that benefit health, and serves as a delivery partner for the implementation of projects.

- Green Climate Fund. Financing [Internet]. GCF; 2020 [cited 17 Dec 2020]. Available from: <https://www.greenclimate.fund/sectors>
- Green Climate Fund. Overview of the Readiness Programme [Internet]. GCF; 2020 [cited 17 Dec 2020]. Available from: <https://www.greenclimate.fund/readiness>
- Green Climate Fund. What are NDAs? [Internet]. GCF; 2020 [cited 17 Dec 2020]. Available from: <https://www.greenclimate.fund/about/partners/nda>
- NDC Partnership. Climate Finance Explorer [Internet]. NDC Partnership; 2020 [cited 17 Dec 2020]. Available from: <https://ndcpartnership.org/climate-finance-explorer>

<sup>7</sup> Additional funding sources include the Adaptation Fund, Caribbean Development Bank, Climate Investment Fund, European Union, Global Environment Facility, and Inter-American Development Bank, among many others.

<sup>8</sup> The GCF Country Readiness Programme provides grants and technical assistance to national designated authorities and/or focal points with the objective of enhancing the capacity of national institutions, such as the health sector, to efficiently engage with the GCF.



## Strengthen surveillance and integrated analysis of health, climate, and socioeconomic data to understand the effects of climate change and to develop multi-hazard early warning systems, and preparedness, response, and recovery plans

**Situation analysis:** Sixteen NDCs included plans to improve climate change research, the majority (12 NDCs) of which described broad improvements with no specified climate change topics. Four NDCs specified improvements to research in agricultural resilience, and two NDCs mentioned improved research for extreme weather events, both of which are important for health. Ecuador and Uruguay were the only countries to mention in their NDCs that research improvements should include a focus on the health effects of climate change. Seventeen NDCs included plans to improve EWS. Twelve NDCs specified that EWS for extreme weather events should be improved, which is important for health. Three NDCs included improved EWS for agriculture, which is also relevant for health. Cuba was the only country to include health indicators in its EWS for infectious diseases, as mentioned in its NDC. Three NDCs did not specify any topics in their plans to improve EWS. Prominent health topics mentioned in the NDCs, such as water security (28 NDCs), extreme weather events (26 NDCs), food security (19 NDCs), and vector-borne diseases (15 NDCs), were not always accompanied with plans to develop or improve EWS for those topics.

**Rationale and suggested actions:** The health consequences of climate change vary immensely and are based on the interaction of a location's climate, population health, GHG inventory, economy, and social factors. Increased monitoring and analysis of these factors allows countries to: anticipate outbreaks and emergencies related to climatic conditions; build evidence; strengthen decision-making; and accelerate development of new technologies, strategies, tools, and instruments. Countries can achieve these aims by addressing the following in the NDC section on health and adaptation actions:

- ✓ Create an integrated data platform to consolidate collection and analysis of health, climate, social, and economic data.
- ✓ Use the integrated platform to improve preparedness, response, and recovery plans.
- ✓ Use the integrated platform to evaluate the effectiveness of climate change policies.
- ✓ Include health, social, and economic indicators in research, EWS development, and planning.
- ✓ Expand research and EWS development to include other climate change and health topics such as water security, extreme weather events, food security, and vector-borne diseases.
- ✓ Continue to measure national and sector-specific GHG inventories.

### Inspiring examples from first nationally determined contributions:

- ➔ Costa Rica's NDC mentioned the consolidation of information from its national information system with its geo-environmental information center to enhance EWS (17).
- ➔ The NDCs of Saint Vincent and the Grenadines, and Venezuela (Bolivarian Republic of) included plans to increase the number and density of meteorological data collection stations (18, 19).
- ➔ Ecuador's NDC included a plan to prepare a database of climate change impacts to link them with human health indicators and to develop EWS and risk management (7).
- ➔ Colombia's NDC described the creation of climate change innovation clusters to promote research and technology transfer to share knowledge with other countries in the Americas (20).
- ➔ Uruguay's NDC mentioned the development of environmental health indicators associated with climate change and health status of the population, to estimate the disease burden linked to climate change; as well as the development of EWS for natural disasters, heat waves, frost, and floods (21).

### Additional resources:

- NDC Partnership. Climate toolbox [Internet]. NDC Partnership; 2020 [cited 16 Dec 2020]. Available from: <https://ndcpartnership.org/ndc-toolbox>
- World Health Organization. Operational Framework for Building Climate Resilient Health Systems [Internet]. Geneva: WHO; 2015 [cited 16 Dec 2020]. Available from: [https://apps.who.int/iris/bitstream/handle/10665/189951/9789241565073\\_eng.pdf?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/189951/9789241565073_eng.pdf?sequence=1)
- World Health Organization. WHO-UNFCCC Health and Climate Change Country Profile Project [Internet]. Geneva: WHO; 2015 [cited 16 Dec 2020]. Available from: <https://www.who.int/globalchange/resources/countries/en/>



## Ensure that all infrastructure and services are climate resilient and environmentally responsible, including within the health sector

**Situation analysis:** Twenty-four NDCs included plans to increase climate resilient infrastructure such as through improved waste management, resilient crop techniques, urban planning, and drainage structures to prevent flooding. These actions yield health co-benefits such as reduced water-, food-, and vector-borne disease, malnutrition, and heat stress. However, only four NDCs included healthcare facility infrastructure plans.

**Rationale and suggested actions:** Changing climatic conditions can severely compromise health facilities' ability to safely provide care on a regular basis, especially during or after an emergency. About 77% of health facilities in Latin America and the Caribbean are in disaster-prone areas (22). Moreover, the global healthcare system represents close to 10% of global gross domestic product and contributes 4.4% to global net GHG emissions (23). Countries can address these conditions by including the following in the NDC sections on health sector mitigation actions, and health and adaptation actions:

- ✓ Measure and report estimated GHG emissions attributable to the health sector.
- ✓ Specify how health facilities are incorporated into infrastructure plans.
- ✓ Reduce health facilities' climate footprint through mitigation efforts, such as installation of off-grid renewable energy sources, efficient lighting and cooling systems, practicing of green procurement, and by increasing overall energy efficiency.
- ✓ Increase health facilities' climate resilience through adaptation efforts, such as updating building codes, upgrading potable water collections and storage, and increasing overall water use efficiency.

### Inspiring examples from first nationally determined contributions:

- ➔ The NDCs of Antigua and Barbuda, and Dominica included the installation of off-grid renewable energy sources to provide electricity for vulnerable communities and health facilities (15, 24).
- ➔ El Salvador's NDC included an integrated plan to implement climate resilient infrastructure in the water, housing, road, electricity, urban sanitation, agriculture, and health sectors (13).

### Additional resources:

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## Enable health workers and communities to protect health from climate impacts and to promote healthy and environmentally responsible lifestyles

**Situation analysis:** Nine NDCs included plans to increase community or health worker awareness and training on how to respond to climate change impacts. Six NDCs specified the inclusion of climate change impacts in formal education settings. Four NDCs included plans to train or educate government staff or policy/decision makers on the impacts of climate change.

**Rationale and suggested actions:** NDCs ought to include plans to enable the general public and health workers to respond to climate change impacts. A trained population is better prepared to act during natural disasters and vector-borne disease outbreaks, and may engage in responsible energy and water use. Likewise, trained health workers will be prepared to manage climate change health impacts and to increase health facilities' resilience. Accordingly, trained government personnel will be better equipped to make informed decisions on climate change and health planning. Countries can achieve these aims by addressing the following in the NDC section on health and adaptation actions:

- ☑ Assess the educational capacity of the country and establish recommendations to improve curricula.
- ☑ Include climate change and health education in public school curricula.
- ☑ Use targeted training and communication campaigns to enable ministries, communities, and health workers to address the health impacts of climate change.

### Inspiring examples from first nationally determined contributions:

- ➔ The NDCs of Argentina, Chile, Haiti, Saint Vincent and the Grenadines, Uruguay, and Venezuela (Bolivarian Republic of) mentioned plans to incorporate climate change impacts and adaptation strategies in public education curricula (**16, 18, 19, 21, 25, 26**).
- ➔ The Bahamas' NDC described plans for education aimed at health personnel and the general public about climate-related health impacts such as vector-borne disease and heat stress (**27**).
- ➔ Uruguay's NDC described the creation of distinct climate change training programs about health and disaster preparedness for health providers, decision makers, and the general public (**21**).

### Additional resources:

- NDC Partnership. Climate toolbox [Internet]. NDC Partnership; 2020 [cited 16 Dec 2020]. Available from: <https://ndcpartnership.org/ndc-toolbox>
- Pan American Health Organization. Climate change and health [Internet]. Washington DC: PAHO; 2020. [cited 17 Dec 2020]. Available from: <https://www.paho.org/en/topics/climate-change-and-health>
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# Checklist of health commitments in nationally determined contributions



## Strengthen political structures and technical capacities to engage the health sector in national climate change planning and implementation

- ☐ Designate a climate change focal point in the Ministry of Health.
- ☐ Set up active multi-stakeholder working groups within the Ministry of health to prepare, revise, and consolidate policies and programs on climate change and health.
- ☐ Guarantee the health sector's participation in interministerial and high-level climate change committees, including in the process of preparation of national documents, plans, and strategies, such as the NDC.
- ☐ Maintain coherence and implement health proposals across national documents, plans, and strategies.



## Prepare health vulnerability and adaptation assessments and health chapters in national adaptation plans, as a step to implement NDC health commitments

- ☐ Conduct broad consultations with national climate change committees and key stakeholders to identify national health priorities and adaptation options.
- ☐ Garner agreement between the financial sector and high-level executive bodies to ensure that the actions/plans in national documents are followed by concrete means of implementation.
- ☐ Prepare health V&As, NAMAs, NAPs, H-NAPs, and other strategies, plans, and programs that address identified national health priorities and which build upon one another in a coherent manner.



## Measure health co-benefits from mitigation and adaptation policies and actions, and prioritize the ones that benefit health

- ☐ Include health impact assessments and tools such as CaRBonH in the planning of mitigation and adaptation policies and actions.
- ☐ Prioritize climate policies and actions that benefit health (e.g., promoting walking/bicycling in cities can improve air quality while improving cardiovascular health).
- ☐ Avoid climate policies and actions with unintended negative health impacts (e.g., geosequestration of carbon dioxide underground may contaminate freshwater sources).



## Ensure the health sector has the financial means to take action on climate change, and institutional structures and technical capacities to prepare and implement projects

- ☐ Allocate national funds to build capacities for Ministry of Health personnel to develop climate change proposals and to manage funds and projects.
- ☐ Increase engagement between the health sector and NDAs, to work in collaboration with technical institutions that act as delivery partners for Readiness programs, and coordinate with accredited implementing entities.
- ☐ Stimulate and provide support to regional/national technical agencies so they can become accredited by the GCF.
- ☐ Create a pipeline of priority projects for health and climate change issues.
- ☐ Conduct cost estimates for health adaptation and mitigation actions.





### **Strengthen surveillance and integrated analysis of health, climate, and socioeconomic data to understand the effects of climate change and to develop multi-hazard early warning systems, and preparedness, response, and recovery plans**

- ☐ Create an integrated data platform to consolidate collection and analysis of health, climate, social, and economic data.
- ☐ Use the integrated platform to improve preparedness, response, and recovery plans.
- ☐ Use the integrated platform to evaluate the effectiveness of climate change policies.
- ☐ Include health, social, and economic indicators in research, EWS development, and planning.
- ☐ Expand research and EWS development to include other climate change and health topics such as water security, extreme weather events, food security, and vector-borne diseases.
- ☐ Continue to measure national and sector-specific GHG inventories.



### **Ensure that all infrastructure and services are climate resilient and environmentally responsible, including within the health sector**

- ☐ Measure and report estimated GHG emissions attributable to the health sector.
- ☐ Specify how health facilities are incorporated into infrastructure plans.
- ☐ Reduce health facilities' climate footprint through mitigation efforts, such as installation of off-grid renewable energy sources, efficient lighting and cooling systems, practicing of green procurement, and by increasing overall energy efficiency.
- ☐ Increase health facilities' climate resilience through adaptation efforts, such as updating building codes, upgrading potable water collections and storage, and increasing overall water use efficiency.



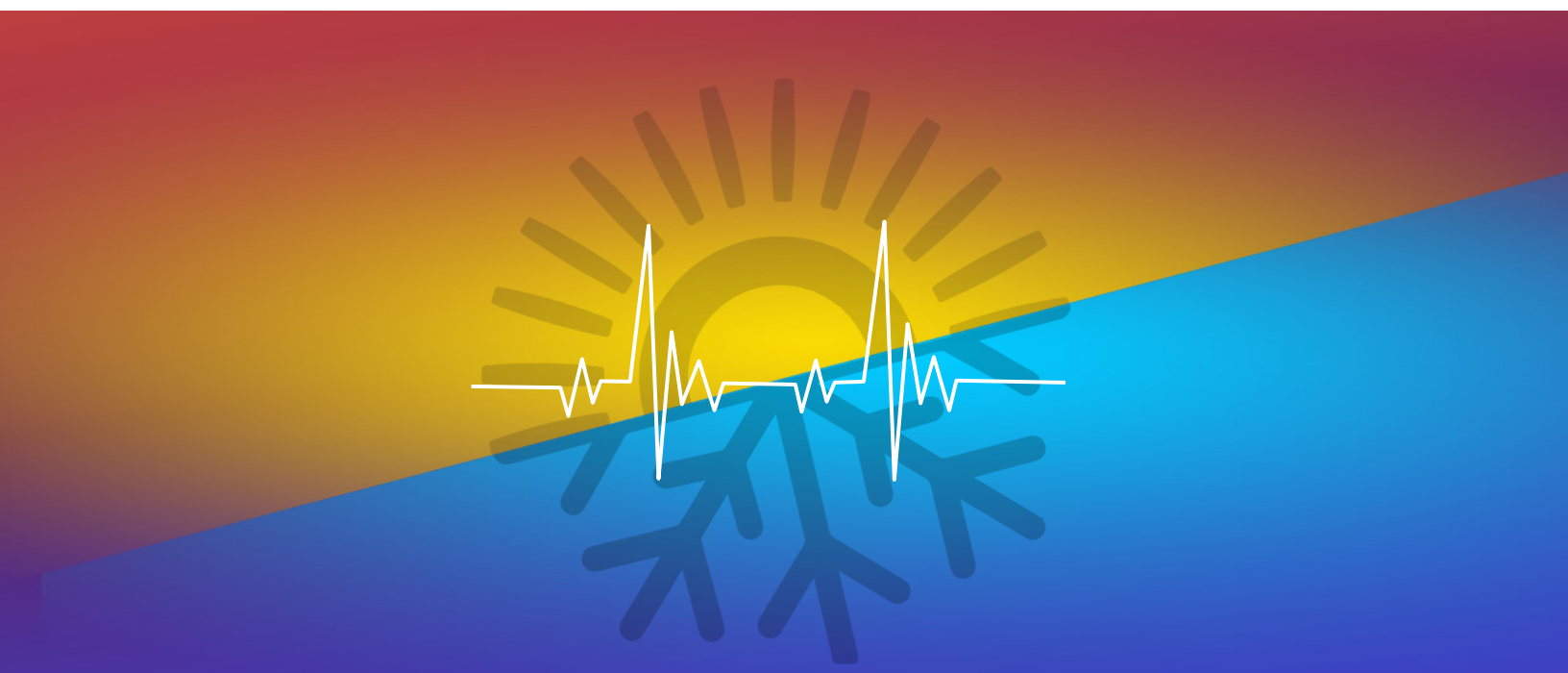
### **Enable health workers and communities to protect health from climate impacts and to promote healthy and environmentally responsible lifestyles**

- ☐ Assess the educational capacity of the country and establish recommendations to improve curricula.
- ☐ Include climate change and health education in public school curricula.
- ☐ Use targeted training and communication campaigns to enable ministries, communities, and health workers to address the health impacts of climate change.

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