



Caribbean Action Plan on Health and Climate Change



Pan American
Health
Organization



World Health
Organization
REGIONAL OFFICE FOR THE Americas

Caribbean Action Plan on Health and Climate Change

This Action Plan is an outcome of the WHO Third Global Conference on Health and Climate Change, convened to develop the Caribbean Action Plan for the WHO Special Initiative on Climate Change and Health in Small Island Developing States, held in St. George's, Grenada, 16-17 October 2018.



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Foreword

There can be no question that the populations and economies of the Caribbean have been negatively impacted by the repeated experience of extreme weather and climate events (including hurricanes, floods, droughts, and storms) – taking lives, harming health, livelihoods and ecosystems, and retarding development. The Caribbean and other Small Island Developing States (SIDS) around the world, despite having made minor contributions to global emissions of greenhouse gases, suffer disproportionately major impacts from climate change. Those nations are already experiencing climate-related impacts on food, water and nutrition security, as well as an increased number of cases of vector-, food-, water-borne and noncommunicable diseases. Projections indicate that climate-related threats to SIDS will continue to increase, further affecting the ability of health systems to promote and protect health. Climate change is even threatening the physical existence of some of the islands, due to sea-level rise. The stakes are high, and the need for coordinated action has never been so urgent.

The Pan American Health Organization/World Health Organization (PAHO/WHO) has been supporting regional initiatives and actions on climate change and health. PAHO, jointly with other regional technical agencies, has been providing capacity building and technical support for multi-hazard early warning systems (e.g. to climate-related disasters, heatwaves, climate-sensitive diseases, severe droughts and floods), and for the preparation of Vulnerability Assessments and Health National Adaptation Plans to Climate Change (H-NAPs). Such activities are needed to guide actions and to access international funds to build climate-resilient health systems. With regard to mitigation, PAHO is supporting the health sector to “lead by example”, through the reduction of greenhouse gases by promoting sustainable procurement, and the implementation of “smart” health care facilities aimed at increasing resilience to disasters, while reducing its carbon footprint and environmental impacts.

This Action Plan is part of the WHO Special Initiative on Climate Change and Health in SIDS, launched in collaboration with the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC) and the Government of Fiji, as President of the 23rd Conference of the Parties to the UNFCCC, in 2017. This initiative envisages that by 2030, all health systems in SIDS will be resilient to climate variability and change. With this Action Plan, the Caribbean joins its voice to

SIDS in the Pacific, Africa, and the Indian Ocean, to fight against climate change through actions to protect health, leaving no one behind.

The Caribbean Action Plan on Health and Climate Change was developed in consultation with countries through preparatory meetings and by convening regional health and environment leaders of the Caribbean during the Third Global Conference on Health and Climate Change, held in St. George's, Grenada, on 16-17 October 2018. During this event, while we heard about deleterious climate change effects in the region, we also heard many success stories and realized the energy, passion, and commitment of the participants to turn those challenges into opportunities. Countries clearly recognized that health needs must be incorporated in all efforts of mitigation, adaptation and preparedness to climate change through collaborative work. We know ministers committed to raise the climate change and health agenda to the highest political level possible, to ensure that health is placed at the center of initiatives aimed at combatting the effects of climate change.

This Action Plan is based on the Caribbean's needs and realities and outlines the overall structure and actions that should guide the work at the national and regional levels. The implementation of this plan will ensure that the region is fully engaged in global climate change processes and agreements. It will benefit Caribbean countries and territories by strengthening their technical cooperation methods, and will facilitate the access to human, technical and financial resources necessary to address the effects of climate change on health.

On behalf of WHO and PAHO, we pledge to support the region and the initiatives identified in this plan – every step of the way. Together, we will work to ensure the Member States and their peoples have a sustainable and healthy future.

Dr. Joy St. John

Assistant Director General

Climate and Other Determinants of Health

World Health Organization

Geneva, Switzerland

Dr. Carissa Etienne

Director

Pan American Health Organization

Washington, D.C., United States

Foreword

In the last few years, climate and weather events have presented real and disastrous impacts in the Caribbean. We have seen hurricanes raging across our region, leaving devastation of catastrophic proportions. We have been experiencing abnormally hot days, floods, and repeated and prolonged droughts. Between 1966 and 2015, 60% of all climate-related disasters in Small Island Developing States (SIDS) occurred in the Caribbean; our region accounted for about 90% of all deaths, 79% of all affected persons, and almost 90% of all damage costs within that period – despite our islands’ small carbon footprint and emissions. Climate change is more than an environmental threat for SIDS, affecting not only the health and well-being of their citizens, but also their livelihoods, culture, and the economies of their countries.

Climate change will continue to affect our oceans, agriculture, food production, and water resources, and the main impacts through all these sectors and pathways are on health. Moreover, climate change acts as a health risk multiplier, increasing the burden of climate-sensitive diseases, which are already high in small islands. What we are seeing with respect to climate change and health is that how we define ourselves as Caribbean people is at stake. However, just as climate change is the main challenge of our time, it can also be said that with timely action, climate change is possibly one of the greatest opportunities for public health that this generation has seen.

The Caribbean meeting of the Third Global Conference on Health and Climate Change, held in St. George’s, Grenada, on October 16-17, 2018, was an opportunity for leaders and experts from the Caribbean to discuss the implementation priorities for the SIDS initiative in this region. The high-level attendance of this meeting – 15 ministers of health and/or environment, several chief medical officers, and the highest ranking technical personnel from Caribbean countries and territories – shows how serious we take this issue. Together, we developed and approved the Caribbean Action Plan on Health and Climate Change, which will be our focus and guidance for investments and actions for the next years.

As SIDS, business as usual is an approach we can no longer afford. For this reason, this Action Plan was developed through a “country-driven process,” based on the region’s priorities and capabilities; addressing advocacy and awareness raising, building partnerships, enhancing scientific

evidence to better understand and address the effects of climate change on health, and strengthening health systems to be prepared and respond to climate threats. The Caribbean Action Plan on Health and Climate Change is a vehicle to transform our climate change issues into opportunities for health, and to seek the support we need to ensure that all health systems in the Caribbean become greener, more sustainable, and more resilient to climate variability and change.

Honourable Nicholas Steele
Minister for Health, Social Security, and
International Business, Grenada

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Abbreviations

CARICOM	Caribbean Community
CARPHA	Caribbean Public Health Agency
CCCCC	Caribbean Community Climate Change Centre
CCH	Caribbean Cooperation in Health Initiative
CIMH	Caribbean Institute for Meteorology and Hydrology
COP	Conference of the Parties
COHSOD	Council for Human and Social Development
ECLAC	Economic Commission for Latin America and the Caribbean
GHG	Greenhouse gas
HIA	Health Impact Assessment
HiAP	Health in All Policies
H-NAP	Health Chapters in National Adaptation Plans
IPCC	Intergovernmental Panel on Climate Change
MOH	Ministry of Health
NAMA	Nationally Appropriate Mitigation Actions
NAPA	National Adaptation Programme of Action
NDC	Nationally Determined Contributions
OECS	Organisation of Eastern Caribbean States
PAHO	Pan American Health Organization
SAMOA	SIDS Accelerated Modalities of Action
SDG	Sustainable Development Goals
SIDS	Small Island Developing States
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
UWI	University of the West Indies
V&A	Vulnerability and Adaptation Assessment
WHO	World Health Organization
WMO	World Meteorological Organization



1 | Introduction

Although it has been recognized that greenhouse gas (GHG) emissions from Small Island Developing States (SIDS) are negligible in relation to global emissions, SIDS are uniquely vulnerable to climate change due to their size, geographical remoteness, frequent exposure to weather and climate events, rising sea levels, and comparatively small populations and limited resources (IPCC, 2014a).

In turn, these conditions pose extra challenges to already saturated SIDS health systems, by increasing morbidity and mortality from extreme and climate weather events and climate-sensitive diseases, including vector-, water- and food-borne infections, and respiratory and noncommunicable diseases (e.g. undernutrition, injuries, and mental health). The World Health Organization (WHO) estimates that worldwide, between 2030 and 2050, an additional 250,000 deaths per year will occur as the result of climate change impacts on nutrition and the increase in malaria, diarrheal, and heat stress cases (WHO, 2014). Those figures would be much higher if they account for increased stress and declining well-being due to property damage, relocation and migration, loss of economic livelihood, damage to food and water resources, reduced provision of ecosystem services, and deterioration in sanitation and hygiene standards.

Climate change also affects health service delivery and healthcare access in SIDS, as most populations and health care facilities in these islands are near coastal areas prone to tropical cyclones,

floods, storms, and disturbances in water supplies. Damage to infrastructure and essential supplies/amenities affect the capacity of health systems to provide services when they are most needed in emergency situations.

Despite the clear global agenda, the international response remains slower and less ambitious than what is necessary to prevent warming of more than 1.5°C over the preindustrial period (IPCC, 2018). In addition, globally, less than 1.5% of international finance for climate change adaptation is currently allocated to health projects. Few countries are currently taking advantage of the opportunity to improve health at the same time as reducing carbon emissions to safeguard the future of SIDS.

To address the aforementioned issues and to provide support to SIDS, in 2017 WHO launched the *Special Initiative on Climate Change and Health in SIDS*, in collaboration with UNFCCC and the Fijian Presidency of the 23rd UNFCCC Conference of the Parties (WHO, 2017). One of the actions of this SIDS Initiative is the *III Global Conference on Health and Climate Change: Special Focus on SIDS*, which covers three main regions: Pacific Ocean, Indian Ocean, and the Caribbean. The outcomes of the three conferences form the basis of WHO's Global Action Plan on climate change and health.

1.1 Caribbean SIDS, climate change and health

Climate change is already affecting SIDS in the Caribbean. Mean surface temperatures in the Caribbean have increased by ~1°C over preindustrial times. By 2070, projections indicate that temperatures will rise by an average of 2.8°C across this region. Warming is occurring at a rate of ~0.2°C per decade but is expected to accelerate if global GHG emissions are not intensely reduced (IPCC, 2018).

Ocean warming causes glaciers to melt at a faster pace, leading to rising sea levels. The current mean rate of glacial melt is ~3 mm/year and will continue to increase (IPCC, 2013). Some impacts are deemed as inevitable: the predicted sea-level rise of >1 m by 2100 in the Caribbean will challenge those nations by damaging infrastructure, forcing relocation of people, and causing devastating economic losses in tourism, agriculture, and transportation (UNDP, 2010). Freshwater systems and agriculture might be impacted as well due to the salinization of groundwater supplies. Coral reefs, fish stocks, and other crucial ecosystem services to SIDS are also affected by ocean warming and acidification: 70-90% of coral reefs are expected to die or be impacted at 1.5°C of warming, and up to 99% at 2.0°C of warming (IPCC, 2018). Among other marine species, populations of the "conch," a traditional part of the of the Caribbean diet, can also be reduced by those impacts.

Other expected effects of ocean warming are the increased severity of hurricanes as well as associated effects, such as storm surges, increased rainfall, and flooding. A 2°C increase in sea surface temperatures is expected to cause a 1-10% increase in hurricane wind speeds and a 10-15% increase in core rainfall from hurricanes (IPCC, 2013). Between 1966 and 2015, there were 449 occurrences of storms, floods, and drought in the region (EM-DAT, 2018), with devastating consequences to health,



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livelihoods, ecosystems, and socioeconomic development. For example, Dominica's total damages and losses from Hurricane Maria in 2017 have been estimated at \$1.3 billion, about 226% of the country's gross domestic product (GDP). Losses for Anguilla, Bahamas, British Virgin Islands, Sint Maarten, and Turks and Caicos following Hurricanes Irma and Maria have been estimated at US\$5.4 billion (UNCTAD, 2018).

All Caribbean countries are expected to be affected by climate change, but the effects might differ from country to country, depending on specific levels of vulnerabilities. Climate change is expected to increase the number of persons affected by extreme events and heat-related morbidity and mortality, including increases in the incidence of vector-borne diseases, such as malaria and dengue; water-borne diseases, such as leptospirosis and gastroenteritis; and impacts on cardiovascular and respiratory conditions (PAHO, 2017a; ECLAC, 2011).

1.2 Milestones of action on climate change and health in the Caribbean

The Caribbean has a rich history of addressing health impacts and responding to climate change effects. The first international climate change and health conference in SIDS was convened by the Pan American Health Organization (PAHO) in 2002, in Barbados, with the theme "Climate Variability and Change and their Health Effects in the Caribbean." This conference included representatives from the health, climate, and environmental sectors of the Caribbean, and country representatives from other regions (PAHO, 2003).

In 2004, the Caribbean Community Climate Change Centre (CCCCC) was established in Belize. Its aim is to address the impact of climate variability and change on all aspects of economic development, through the provision of forecasts and analyses of potentially hazardous impacts of climate change, as well as the development of special programs.

In 2013, PAHO, CCCCC, the Caribbean Public Health Agency (CARPHA), and the University of the West Indies (UWI) organized the "Caribbean Climate Change and Human Health" Workshop, where a roadmap for advancing Climate Change and Health actions in the Caribbean was developed.

In 2015, CARPHA and PAHO organized the Caribbean Environmental Health Conference. During the conference, countries reviewed the results of the Caribbean Cooperation in Health Initiative, phase III (CCH III), and planned the CCH phase IV (CCH IV). Climate change was identified as one of the environmental health programmatic priority areas for CCH IV, and PAHO's Smart Hospitals

Initiative was identified as one of the main advancements in regional environmental health cooperation (PAHO, 2015). The Smart Hospitals initiative aims to ensure that health care facilities continue operations during disasters, focusing on improving hospitals' resilience, strengthening structural and operational aspects, and providing green technologies to reduce energy consumption, waste generation, and their carbon footprint (PAHO, 2017b).

Another relevant recent effort is the Caribbean Health Climatic Bulletin, jointly prepared by CARPHA, PAHO and the Caribbean Institute for Meteorology and Hydrology (CIMH). Since 2017, this quarterly bulletin has been published, providing guidance to health professionals that manage health systems, to identify and prepare for upcoming climate conditions (CARPHA, PAHO and CIMH; 2017).

At the global level, in 2014 the United Nations General Assembly adopted the SIDS Accelerated Modalities of Action (SAMOA) Pathway (UN, 2014), to drive actions of SIDS towards a sustainable development. In 2015, three global initiatives were launched to provide guidance and support on how to develop the world in a sustainable way, taking into consideration the health implications of global warming and its related climate changes: United Nations Sustainable Development Goals (UNGA, 2015), the United Nations Framework Convention on Climate Change (UNFCCC) Paris Agreement on Climate Change (UNFCCC, 2015), and the Sendai Framework for Disaster Risk Reduction (UNISDR, 2015). These global agreements provided additional frameworks for action.

1.3 Special initiative for climate change and health in SIDS

Since the establishment of the United Nations Framework Convention on Climate Change (UNFCCC) in 1992, protecting "human health and welfare" has been recognized as a priority in responding to climate change. The 2015 UNFCCC Paris Agreement marked the beginning of a new era in the global response to climate change, placing the "right to health" front and center and presenting the opportunity to implement the Agreement as a public health treaty. Additionally, the Paris Agreement calls for all institutions under the Agreement to ensure efficient access to financial resources for the least-developed countries and SIDS.

WHO and the Government of France convened the II Global Conference on Health and Climate, in July 2016, to support the implementation of the Paris Climate Agreement. This brought together Ministers of Health and Environment, senior Government officials, technical experts and civil society from around the world, resulting in a comprehensive Global Health Action Agenda.

In 2017, at the 23rd Conference of the Parties (COP-23) of the UNFCCC in Bonn, WHO launched the Special Initiative on Climate Change and Health in Small Island Developing States, in collaboration with UNFCCC and the Fijian Presidency of the COP-23. The Initiative responds to SIDS' requests and recognizes SIDS' unique vulnerabilities to climate change.



Photo: PAHO/WHO

The implementation of the SIDS Initiative started with the III Global Conference on Health and Climate Change: Special Focus on SIDS, in 2018. Taking an innovative geographically dispersed approach to maximize the participation of SIDS government representatives, the conference was held in the Pacific (Nadi, Fiji; 15-16 March), the Indian Ocean (Port Louis, Mauritius; 21-22 March), and the Caribbean (St. George's, Grenada; 16-17 October).

The SIDS Initiative aims to protect the health of SIDS populations from the adverse effects of climate variability and change; to increase awareness and mainstream funding opportunities to support countries in the development of resilient health systems to climate-related impacts; and to focus on mitigation actions by the health sector and through intersectoral actions.

The vision of the Initiative is to ensure that by 2030 all SIDS health systems are resilient to climate variability and change. Meanwhile, all other countries around the world must reduce carbon emissions to protect the most vulnerable from climate risks and to benefit from the positive health gains of mitigation policies.

The SIDS Initiative has four strategic lines of action:

- **Empowerment:** Supporting health leadership in SIDS to engage nationally and internationally.
- **Evidence:** Building the business case for investment.
- **Implementation:** Preparedness for climate risks and health-promoting mitigation policies.
- **Resources:** Facilitating access to climate and health finance.

According to the 2017 PAHO Country Survey on Health and Climate Change, Ministries of Health raised the following priority actions that should be addressed to best tackle climate change and health challenges: 1) prioritize health issues in the climate change agenda, and in the preparation of reports, plans, and other national documents; 2) increase the number of trained and dedicated staff for health and climate change issues; 3) increase national and health sector budget allocations for climate change actions and programs; 4) receive support for navigating the complex processes to access international and bilateral funds; and 5) increase and improve data generation and results sharing, to support national and regional evidence-based interventions. The SIDS Initiative, and particularly the Caribbean Action Plan, aims to address these priorities.



2 | Action Plan 2019-2023

In 2018, the PAHO Secretariat conducted a series of consultations with representatives from Ministries of Health and Environment of Caribbean Member States and territories. This process culminated with the approval of the Caribbean Action Plan on Health and Climate Change, during the Third Global Conference on Health and Climate Change, held in St. George's, Grenada, on 16-17 October 2018.

Participants of this process included ministers and delegates representing Ministries of Health and Environment/Climate Change of Caribbean countries and territories. Additional participants included ministers and delegates from Maldives and Seychelles, who shared the main outcomes of two similar meetings previously held by other WHO Regional Offices (in Fiji, for the Western Pacific Region; and in Mauritius, for the African and South-East Asian WHO Regions); and relevant regional and international agencies.

The Caribbean Action Plan aims to protect the health of Caribbean SIDS populations from the adverse effects of climate variability by developing climate-resilient health systems, by increasing awareness and mainstreaming funding opportunities to support countries, and by promoting intersectoral mitigation actions in the health sector. The plan will be implemented for the period of 2019-2023 and corresponds to the Caribbean part of the WHO Special Initiative on Climate Change and Health in Small Developing Island States.



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For each strategic line of action of the SIDS Initiative (Empowerment, Evidence, Implementation and Resources), this Action Plan proposes actions to be taken at national/local and regional/global levels, and indicators to monitor implementation in Caribbean countries and territories.

2.1 Strategic Line of Action 1: Empowerment - Supporting health leadership in the Caribbean to engage nationally and internationally

Proposed actions and indicators to measure progress*

Guiding Actions	National/Local Actions	Regional/Global Actions	Indicators of Progress
Empower health leadership and strengthen institutional structures on climate change and health	N.1.1 Ensure membership of Ministry of Health officials in national inter-ministerial committees on climate change		I.1.1 Number of countries including Ministry of Health officials in national inter-ministerial committees on climate change
	N.1.2 Designate a national focal point for climate change and health		I.1.2 Number of countries with a national focal point for climate change and health
	N.1.3 Establish an interprogrammatic and multi-stakeholder Taskforce in the Ministry of Health to prepare Health's and intersectoral plans and actions	R.1.1 Strengthen regional agencies that provide technical support to address climate change and health issues, and build regional partnerships, including civil society	I.1.3 Number of countries with an interprogrammatic and multi-stakeholder Taskforce on health and climate change, established by the Ministry of Health
	N.1.4 Strengthen national partnerships, and work in cooperation with civil society on climate change and health		
Promote health issues in intersectoral climate change agenda	N.1.5 Increase the engagement of the Ministry of Health and the inclusion of health issues in national positions to the UNFCCC, and other relevant forums	R.1.2 Adopt a priority agenda item on health and climate change in the COHSOD agenda	I.1.4 Number of countries with health issues included in national climate change reports to the UNFCCC and other relevant forums
	N.1.6 Ensure the integration of health in national policies and strategic development plans on climate change, through a Health in All Policies approach, with the participation of civil society		
	N.1.7 Incorporate climate change and health issues in national health reports, or equivalent documents		I.1.5 Number of countries with climate change and health included in national health reports, or equivalent documents

* Indicator descriptions are available at the PAHO Climate Change and Health webpage and may be updated periodically to reflect a change in the status of the indicator or newly developed measures.

2.2 Strategic Line of Action 2: Evidence – Understanding the impacts on health, preparing health systems and building the health argument for investments

Proposed actions and indicators to measure progress*

Guiding Actions	National/Local Actions	Regional/Global Actions	Indicators of progress
Strengthen educational capacities on climate change and health	N.2.1 Strengthen education institutional capacities and include climate change and health in all levels of national educational curricula		I.2.1 Number of countries including education on climate change and its connection to human health in national educational curricula of primary, secondary, and tertiary education
	N.2.2 Increase national technical capacities to address climate change and health issues		I.2.2 Number of Ministries of Health with representatives trained on climate change and health
Strengthen research capacities on climate change and health	N.2.3 Strengthen national research institutions and collaboration among them, and increase the research capacity of the Ministry of Health	R.2.1 Support research institutions of the Caribbean to become PAHO/WHO Collaborating Centers to implement the research agenda on climate change and health	<i>Supporting actions to indicators I.3.2 and I.3.3</i>
		R.2.2 Create or strengthen national and regional networks of experts to build the evidence on climate change and health	
	N.2.4 Develop research, surveillance, and policies at the national level to understand the impacts of climate variability on climate change on health	R.2.3 Strengthen web-based platforms for data collection, analysis and sharing of “best-practices” on climate change and health	<i>Supporting actions to indicator I.3.3</i>
Build and use evidence for planning and decision-making	N.2.5 Prepare health systems’ Vulnerability and Adaptation Assessments (V&A), health chapters in National Adaptation Plans to Climate Change (H-NAP), or equivalent documents		I.2.3 Number of countries that developed Health chapters in National Adaptation Plans, or equivalent documents
Build and use evidence for planning, decision-making and policy assessment	N.2.6 Use the Health Impact Assessment Framework to evaluate policies and interventions	R.2.4 Strengthen the capacity of institutions at the national level and in the Caribbean Region to monitor and analyze climate change and health data	I.2.4 Number of countries with climate change and health country profiles developed
	N.2.7 Apply tools to assess the health co-benefits of climate mitigation interventions		I.2.5 Number of countries using the Caribbean Health Climatic Bulletin to guide health operational decisions
			I.2.6 Number of countries using tools to measure the health co-benefits of mitigation actions
Improve communications	N.2.8 Implement public health campaigns on climate change and health issues	R.2.5 Develop a regional communication strategy and apply it at the national level, as applicable, for public awareness, and outreach	I.2.7 Number of countries implementing public health campaigns on climate change and health

*Indicator descriptions are available at the PAHO Climate Change and Health webpage and may be updated periodically to reflect a change in the status of the indicator or newly developed measures.

2.3 Strategic Line of Action 3: Implementation – Preparedness for climate risks, building climate-resilient health systems and health-promoting mitigation policies

Proposed actions and indicators to measure progress*

Guiding Actions	National/Local Actions	Regional/Global Actions	Indicators of Progress
Implement early warning systems for weather and climate-related diseases and conditions	N.3.1 Strengthen the existing and develop and test new early warning systems for extreme weather and climate events and climate-sensitive diseases and conditions	R.3.1 Develop regional early warning systems for selected climate-sensitive diseases and conditions	I.3.1 Number of countries using multi-hazard early warning systems for extreme weather and climate events
Develop and provide climate-informed health services	N.3.2 Include climate variability and climate change in health and health-determining programs	R.3.2 Develop global and regional standards and guidelines on health and climate change	I.3.2 Number of countries including climate variability and climate change information in health and health-determining programs
	N.3.3 Strengthen current surveillance systems for climate-sensitive diseases and risks by including climate/weather indicators	R.3.3 Incorporate climate-sensitive diseases and conditions into regional health surveillance systems	I.3.3 Number of countries including climate variability and climate change indicators in surveillance systems of climate-sensitive diseases and conditions
Incorporate health in weather and climate-related disaster preparedness, response and recovery plans	N.3.4 Strengthen health sector's capacity and prepare plans and procedures for weather and climate-related disaster preparedness, response, and recovery	R.3.4 Update regularly and implement regional plans for disaster risk reduction and recovery	I.3.4 Number of countries with plans and procedures for weather and climate-related disaster preparedness, response and recovery
Promote safe and green infrastructure	N.3.5 Improve the climate resilience of health care facilities by implementing PAHO's Smart Hospitals toolkit		I.3.5 Number of health care facilities meeting safety and green standards, according to PAHO's Hospital Safety Index and Green Checklist
	N.3.6 Revise building codes to address climate change impacts to infrastructure	R.3.5 Set regional building standards, considering the impacts of climate change to infrastructure, and aiming to increase resilience and energy efficiency	I.3.6 Proportion of healthcare facilities implementing energy efficiency measures I.3.7 Number of countries revising building codes to address climate change impacts to infrastructure

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2.4 Strategic Line of Action 4: Resources – Facilitating access to climate and health finance

Proposed actions and indicators to measure progress*

Guiding Actions	National/Local Actions	Regional/Global Actions	Indicators of Progress
Strengthen capacities and coordination to access resources	N.4.1 Strengthen national technical capacities for collection, analysis and reporting of relevant data and preparation of climate change and health project proposals	R.4.1 Strengthen regional technical capacities and coordination mechanisms for the preparation, management and implementation of multi-country projects on climate change and health	I.4.1 Number of countries with personnel responsible for climate change fund and project management in the Ministry of Health
	N.4.2 Create and/or support fund and project management functions for climate change projects and programs in the Ministry of Health, considering national administrative arrangements		I.4.2 Number of countries with projects approved on climate change and health with funds from main international funding mechanisms on climate change and development partners
	N.4.3 Increase national budgets for health and climate change policies and actions		I.4.3 Proportion of national budget allocated for climate change and health personnel, programs, and actions
Advocacy for prioritizing health issues in climate funding	N.4.4 Strengthen national capacities to negotiate for health and climate change financing	R.4.2 Advocate for changes in the current system for SIDS to access funds after disasters, towards a more equitable system, based on vulnerabilities instead of GDP	<i>Supporting actions to indicator I.4.2</i>
		R.4.3 Support the accreditation of health technical agencies to the Green Climate Fund	
	N.4.5 Engage, coordinate, and collaborate with other sectors and development partners for resources to address health and climate change		<i>Supporting actions to indicator I.4.2</i>

* Indicator descriptions are available at the PAHO Climate Change and Health webpage and may be updated periodically to reflect a change in the status of the indicator or newly developed measures.



3 | Glossary of Terms

Adaptation

Adjustment in natural or human systems to a new or changing environment. Adaptation to climate change refers to adjustment in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities. Various types of adaptation can be distinguished, including anticipatory and reactive adaptation, public and private adaptation, and autonomous and planned adaptation.

Adaptive capacity

All capabilities, resources, and institutions of a country or region to implement effective adaptation measures.

Climate

In a narrow sense, climate is defined as the average weather, or more rigorously, as the statistical description in terms of the mean and variability of relevant quantities over a period

of time ranging from months to thousands of years; 30 years is the classical period defined by the World Meteorological Organization (WMO). These quantities are most often surface variables such as temperature, precipitation, and wind. Climate in a wider sense is the state, including a statistical description, of the climate system.

Climate change

Climate change refers to any change in climate over time, whether due to natural variability or as a result of human activity, and that persists for an extended period, typically decades or longer.

Climate projection

A projection of the response of the climate system to emission or concentration scenarios of greenhouse gases and aerosols or radiative forcing scenarios, often based upon simulations by climate models.

Climate variability

Refers to variations in the mean state and other statistics (e.g. standard deviations, the occurrence of extremes, etc.) of the climate on all spatial and temporal scales beyond that of individual weather events. Variability may be due to natural internal processes within the climate system (internal variability), or to variations in natural or anthropogenic external forcing (external variability).

Co-benefit

A climate change adaptation or mitigation strategy that has additional, positive effects on health or other areas (e.g. reducing air pollution).

Conference of the Parties (COP)

The supreme body of the UNFCCC, comprising countries with the right to vote that have ratified or acceded to the Convention.

Early warning system

The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities, and organizations threatened by a hazard to prepare to act promptly and appropriately to reduce the possibility of harm or loss.

Extreme weather event

An event that is rare within its statistical reference distribution at a particular place. By definition, the characteristics of what is called “extreme weather” may vary from place to place.

Food security

A state that prevails when people have secure access to sufficient amounts of safe and nutritious food for normal growth, development, and an active and healthy life.

Global warming

A gradual increase, observed, or projected, in global surface temperature, as one of the consequences of radiative forcing caused by anthropogenic emissions.

Greenhouse gases (GHG)

Greenhouse gases are those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation and specific wavelengths within the spectrum of thermal infrared radiation emitted by the Earth’s surface, the atmosphere itself, and by clouds. This property causes the greenhouse effect.

Hazard

The potential occurrence of a natural or human-induced physical event or trend, or physical impact that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, and environmental resources.

Health Impact Assessment (HIA)

A systematic process to assess the actual or potential, and direct or indirect, effects on the health of individuals, groups, or communities arising from policies, objectives, programs, plans, or activities.

Health in All Policies (HiAP)

Health in All Policies is an approach to public policies across sectors that systematically takes into account the health implications of decisions, seeks synergies, and avoids harmful health impacts in order to improve population health and health equity. It improves accountability of policymakers for health impacts at all levels of policy-making. It includes an emphasis on the consequences of public policies on health systems, determinants of health and well-being.

Impacts

Consequences of climate change on natural systems and human health.

Mitigation

The process of reducing the impact of climate change by reducing the driving forces thereof (i.e. reducing greenhouse gas emissions).



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National Adaptation Plans (NAP)

The National Adaptation Plan process was established under the Cancun Adaptation Framework. It enables Parties to formulate and implement national adaptation plans as a means of identifying medium- and long-term adaptation needs and developing and implementing strategies and programs to address those needs. It is a continuous, progressive and iterative process which follows a country-driven, gender-sensitive, participatory and fully transparent approach.

Regional agencies

Referred in the Action Plan as regional technical institutions (e.g. CARPHA, CCCCC, CIMH).

Resilience

The capacity of a social–ecological system to cope with a hazardous event or disturbance, responding or reorganizing in ways that maintain its essential function, identity, and structure, while also maintaining the capacity for adaptation, learning, and transformation.

Risk

The probability that, in a certain time frame, an adverse outcome will occur in a person, group of people, plants, animals and/or the ecology of a specified area that is exposed to a particular hazardous agent.

Sea-level rise

An increase in the mean level of the ocean.

Sustainable Development Goals

Adopted by all United Nations Member States in 2015, the 17 Sustainable Development Goals (SDGs) are an urgent call for action by all countries – poor, rich and middle-income, to promote prosperity while protecting the environment. They recognize that ending poverty must go hand-in-hand with strategies that build economic growth and address a range of social needs including education, health, equality and job opportunities, while tackling climate change and working to preserve our oceans and forests.

United Nations Framework Convention on Climate Change (UNFCCC)

The Convention was adopted and signed in 1992 by more than 150 countries and the European Community and entered into force in 1994. Its ultimate goal is the “stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.” It contains commitments for all Parties.

Vector-borne disease

Disease that is transmitted between hosts by a vector organism (such as a mosquito or tick).

Vulnerability

The degree to which a system is susceptible to, or unable to cope with, the adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate variation to which a system is exposed, its sensitivity, and its adaptive capacity.



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