

Research for Action on Climate Change and Health in the Caribbean: **A Public, Private, People's and Planetary Agenda**

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Suggested citation: Allen CF, West RM, Gordon-Strachan G, Hassan S, McFarlane S, Polson-Edwards K, Thomas A, Hospedales CJ, Dubrow R. Research for Action on Climate Change and Health in the Caribbean: A Public, Private, People's and Planetary Agenda. Research for Action on Climate Change and Health in the Caribbean Project, 2024.

18. GOVERNMENT ENGAGEMENT IN HEALTH AND CLIMATE CHANGE

18.1. WHAT IS HAPPENING?

Leadership and governance constitute one of the 10 building blocks of the World Health Organization (WHO)'s Operational Framework for Building Climate Resilient Health Systems. Addressing the impact of climate change on health takes political will and leadership, and requires collaboration across the entire health system, including health policy and health finance; training of health professionals; facilities management and services delivery; health information systems; water, sanitation and hygiene; vector control and procurement of medicines and diagnostics. Leadership and governance also involve the assessment, monitoring, regulation and management of climate-related health risks in non-health sectors such as urban planning, public and private works, water supply, food and agriculture, energy, transport and disaster management. It is critical that political leaders and decision-makers ensure adequate coordination and access to the necessary funding if health risks due to climate change are to be minimised (CARPHA, 2018; Hassan, 2021; Shumake-Guillemot et al., 2015; see also Chapter 17, "Funding streams").

In this chapter, we analyse the international and regional context in which governments must take action to address climate change and health.

Global policies and frameworks

Climate change and Small Island Developing States

Global strategies and agreements on climate change mention specific vulnerabilities of Small Island Developing States (SIDS) and recommend capacity-building, financial and technical assistance, and transfer of technological innovations. In 1992, at the Rio Earth Summit, SIDS were recognised as having particular social, economic and environmental vulnerabilities. These were acknowledged in formulating Agenda 21, the non-binding action plan for sustainable development that was a result of the Rio Earth Summit (United Nations Sustainable Development, 1992). In 1994, with the Barbados Programme of Action (BPOA), specific actions were agreed upon to enable SIDS to achieve sustainable development, and in 2005 the Mauritius Strategy sought to address gaps in the BPOA. In September 2014, the SAMOA (SIDS Accelerated Modalities of Action) Pathway, prescribed at the Third International Conference on Small Island Developing States held in Apia, Samoa, recognised and addressed the challenges presented to SIDS by climate change, including issues related to economic development, sea level rise (SLR) and food management (CARPHA, 2018 UNGA, 1994, 2014; UN-OHRLLS, 2015).

Climate change and health in small island developing states

In 2015, three global initiatives were developed to provide guidance and support on how to develop the world in a sustainable way, taking into consideration health implications of global warming and climate change. These were the United Nations Sustainable Development Goals (SDGs) (UNDP, 2015), the Paris Agreement on Climate Change (UNFCCC, 2019) and the Sendai Framework for Disaster Risk Reduction 2015–2030 (UNGA, 2015).

The SDGs include four goals specifically, yet separately, relating to health and the environment (UNDP, 2015):

- SDG 2: "End hunger, achieve food security and improved nutrition and promote sustainable agriculture";
- SDG 3: "Ensure healthy lives and promote wellbeing for all at all ages";
- SDG 6: "Ensure availability and sustainable management of water and sanitation for all";
- SDG 13: "Take urgent action to combat climate change and its impacts";

- SDG 14: “Conserve and sustainably use the oceans, seas, and marine resources for sustainable development”;
- SDG 15: “Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss”.

To optimise effectiveness in reducing health-related impacts of climate change, these goals, together with the remaining 11 SDGs, must be implemented in totality. This is because action to attain other SDGs, such as reducing poverty (SDG 1) and affordable and clean energy (SDG 7) (among others) are essential components of climate change adaptation and mitigation with positive impacts on health.

The Paris Agreement mentions health only in its preamble, counting it among human rights and equity considerations that should be integrated into action:

Acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity.

UNFCCC (2019)

Thus, it is imperative when implementing this agreement that the health of all populations is protected from climate hazards, that climate action maximises health benefits to all, and that there is equitable treatment of vulnerable populations (*Lancet Countdown on Health, 2022*; see also Chapter 9, “Distribution, equity and justice in climate change and health”).

The Sendai Framework aims to achieve the following:

The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries.

UNGA (2015)

Relative to the Paris agreement on climate change, it makes substantial reference to health, as shown in Box 1.

Box 1: Notable text on health in the Sendai Framework

Article 17

To attain the expected outcome, the following goal must be pursued: Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, **health**, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience.

Article 18

One of the seven global targets is:

(d) Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them **health** and educational facilities, including through developing their resilience by 2030.

Article 19

Two of the guiding principles are:

(c) Managing the risk of disasters is aimed at protecting persons and their property, **health**, livelihoods and productive assets, as well as cultural and environmental assets, while promoting and protecting all human rights, including the right to development.

and

(h) The development, strengthening and implementation of relevant policies, plans, practices and mechanisms needed to achieve coherence, as appropriate, across sustainable development and growth, food security, **health** and safety, climate change and variability, environmental management and disaster risk reduction agendas. Disaster risk reduction is essential to achieve sustainable development.

Article 24

Priority 1: Understanding disaster risk at national and local levels:

(d) To systematically evaluate, record, share and publicly account for disaster losses and understand the economic, social, **health**, education, environmental and cultural heritage impacts, as appropriate, in the context of event specific hazard-exposure and vulnerability information.

Article 27

Priority 2: Strengthening disaster risk governance to manage disasters at the national and local levels:

(b) To adopt and implement national and local disaster risk reduction strategies and plans, across different timescales, with targets, indicators and time frames, aimed at preventing the creation of risk, the reduction of existing risk and the strengthening of economic, social, **health** and environmental resilience [... and] (d) To encourage the establishment of necessary mechanisms and incentives to ensure high levels of compliance with the existing safety-enhancing provisions of sectoral laws and regulations, including those addressing land use and urban planning, building codes, environmental and resource management and **health** and safety standards, and update them, where needed, to ensure an adequate focus on disaster risk management.

Article 28

Priority 2: Strengthening disaster risk governance to manage disasters at the global and regional levels:

(b) To foster collaboration across global and regional mechanisms and institutions for the implementation and coherence of instruments and tools relevant to disaster risk reduction, such as

for climate change, biodiversity, sustainable development, poverty eradication, environment, agriculture, **health**, food and nutrition and others, as appropriate.

Article 30

Priority 3: Investing in disaster risk reduction for resilience at the national and local levels:

(i) To enhance the resilience of national **health** systems, including by integrating disaster risk management into primary, secondary and tertiary **health** care, especially at the local level; developing the capacity of **health** workers in understanding disaster risk and applying and implementing disaster risk reduction approaches in **health** work; promoting and enhancing the training capacities in the field of **disaster medicine**; and supporting and training community **health** groups in disaster risk reduction approaches in **health** programmes, in collaboration with other sectors, as well as in the implementation of the International **Health** Regulations (2005) of the World Health Organization; (j) To strengthen the design and implementation of inclusive policies and social safety-net mechanisms, including through community involvement, integrated with livelihood enhancement programmes, and access to basic **health-care services**, including maternal, newborn and child health, sexual and reproductive health, food security and nutrition, housing and education, towards the eradication of poverty, to find durable solutions in the post-disaster phase and to empower and assist people disproportionately affected by disasters; (k) People with **life-threatening and chronic disease**, due to their particular needs, should be included in the *design of policies and plans to manage their risks before, during and after disasters, including having access to life-saving services*.

Article 31

Priority 3: Investing in disaster risk reduction for resilience at the global and regional levels:

(e) To enhance cooperation between **health** authorities and other relevant stakeholders to strengthen country capacity for disaster risk management for **health**, the implementation of the International Health Regulations (2005) and the building of resilient health systems.

Article 33

Priority 4: Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction at national and local levels:

(c) To promote the resilience of new and existing critical infrastructure, including water, transportation and telecommunications infrastructure, educational facilities, **hospitals and other health facilities**, to ensure that they remain safe, effective and operational during and after disasters in order to provide **live-saving** and essential services.

and

(o) To enhance recovery schemes to provide **psychosocial support and mental health** services for all people in need.

Sources: CARPHA (2018); UNGA (2015).

Thus, international agreements provide greater support for the integration of health into disaster preparedness and management than into the management of other environmental determinants of health affected by climate change.

In response to concerns expressed by SIDS' ministers of health to the WHO Director-General on the negative impact of climate change on health, the sustainable development of their countries, and their achievement of the SDGs, WHO launched the Special Initiative on Climate Change and Health in SIDS in November 2017 at the 23rd Session of the Conference of the Parties (COP23) held in Bonn, Germany (PAHO, 2018a).

The vision of the Special Initiative is:

By 2030, all health systems in SIDS are resilient to climate variability and change, and countries around the world are reducing carbon emissions both to protect the most vulnerable from climate risks, and to gain the health co-benefits of mitigation policies.

PAHO (2018a).

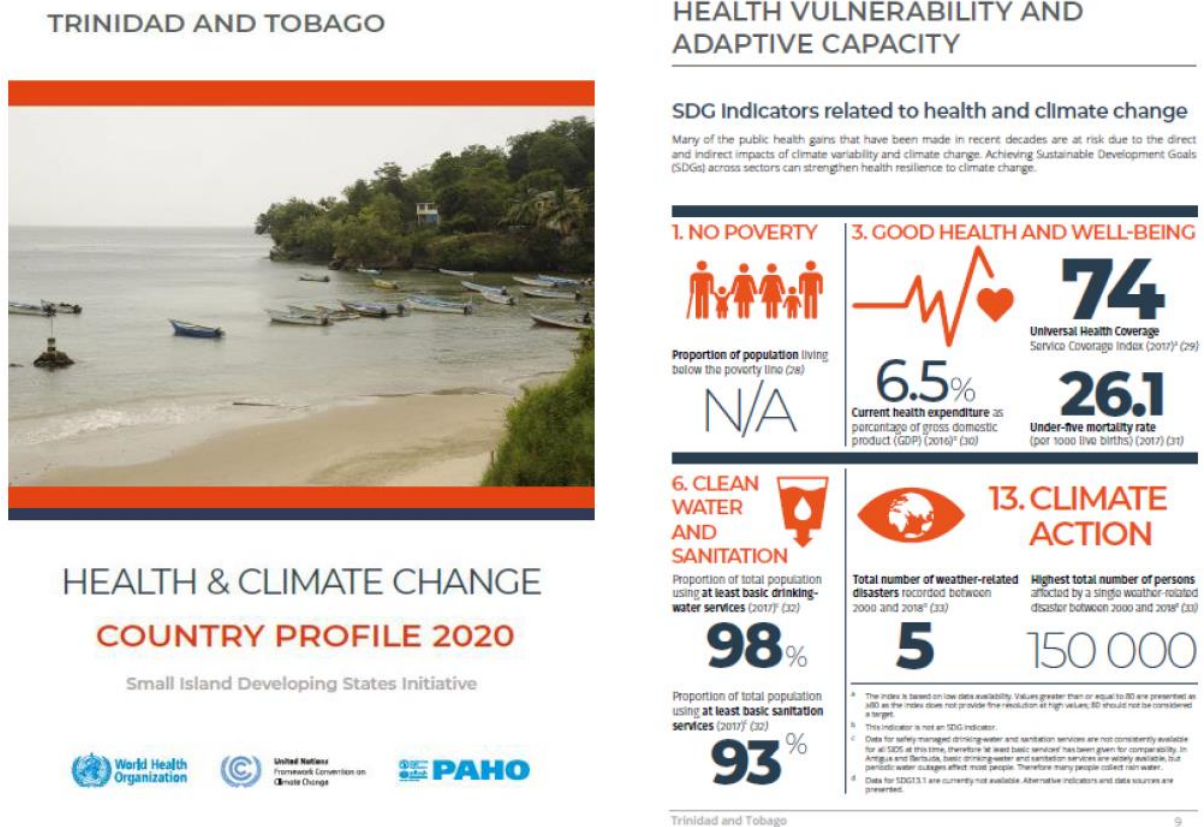
The Initiative includes four interlinked components: empowerment, evidence, implementation and resources.

- 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.

The objective of the Third Global Conference on Health and Climate Change: Special Focus on SIDS was to develop regional action plans to address health and climate change priorities in SIDS, under the four components of the special initiative. To facilitate the participation of the geographically dispersed SIDS, the conference was held in three locations: in Fiji, in March 2018, for SIDS in the Western Pacific and African regions; in Mauritius, in March 2018, for SIDS in the South-East Asia region; and in Grenada, in October 2018, for the Caribbean region. Input and consultation with countries at the Grenada conference led to the Caribbean Action Plan on Health and Climate Change 2019–2030 (see below) (PAHO, 2018b).

As part of the WHO and United Nations Framework Convention on Climate Change (UNFCCC) Health and Climate Change Country Profile Project, nine Caribbean countries have prepared profiles – Antigua and Barbuda, the Bahamas, Dominica, the Dominican Republic, Grenada, Guyana, Jamaica, Saint Lucia and Trinidad and Tobago. These profiles provide country-specific estimates of current and future climate hazards and the expected burden of climate change on human health, identify opportunities for health co-benefits from climate mitigation actions, and track current policy responses at the national level. Figure 1 for a summary of the Trinidad and Tobago Country Profile (PAHO and UNFCCC, n.d.).

Figure 1: WHO and UNFCCC Health and Climate Change Country Profile for Trinidad and Tobago



Source: WHO and UNFCCC (2020), under licence [CC BY-NC-SA 3.0 IGO](https://creativecommons.org/licenses/by-nc-sa/3.0/).

Caribbean government and regional agency responses to climate and health

Caribbean leaders have been extensively involved in highlighting the impacts of climate change on their countries. An important instance was the work of Caribbean leaders and experts in highlighting the importance of the 1.5 °C climate change target that was incorporated into the Paris Agreement (Caribbean Development Bank and CCCCC, 2016).

Caribbean regional agencies (see Box 2) have developed climate and health frameworks and projects using international and regional funding. These agencies all deliver high-level expertise.

**Box 2: Caribbean agencies involved in climate and health mitigation
and adaptation implementation and/or research**

- Association of Caribbean States (ACS): acs-aec.org.
- Caribbean Agricultural Research and Development Institute (CARDI): cardi.org.
- Caribbean Catastrophic Risk Insurance Facility (CCRIF): ccrif.org.
- Caribbean Community Climate Change Centre (CCCC): caribbeanclimate.bz.
- Caribbean Disaster Emergency Management Agency (CDEMA): cdema.org.
- Caribbean Institute for Meteorology and Hydrology (CIMH): cimh.edu.bb.
- Caribbean Meteorological Organization (CMO): cmo.org.tt.
- Caribbean Public Health Agency, Environmental Health and Sustainable Development (CARPHA EHSD): carpha.org.
- Caribbean Regional Climate Centre (CRCC): rcc.cimh.edu.bb.
- Centre for Resource Management and Environmental Studies (CERMES): cavehill.uwi.edu/cermes/home.aspx.
- Implementation Agency for Crime and Security (IMPACS): caricomimpacs.org.
- Organisation of Eastern Caribbean States (OECS): oeecs.org.
- Regional Coordinating Mechanism on Health Security (RCMHS): new.carpha.org.
- University of the West Indies (UWI), including the Climate Studies Group (mona.uwi.edu/physics/climate-studies), the Caribbean Institute for Health Research (uwi.edu/caihr), the Caribbean Institute for Meteorology and Hydrology, the Centre for Marine Sciences (mona.uwi.edu/cms), the Centre for Environmental Management (uwi.edu/cem) and the Center for Resource Management and Environmental Studies (cavehill.uwi.edu/cermes/home.aspx).
- Windward Islands Research and Education Foundation (WINDREF): windref.gd.

Caribbean governments have developed regional frameworks on climate adaptation and mitigation strategies from those relating to SIDS at the global level. These frameworks have assisted Caribbean governments in developing strategic policies and initiatives and obtaining funding to supplement their own in implementing adaptation and mitigation initiatives (CARPHA, 2018), as outlined in the subsections below.

Liliendaal Declaration 2009

The Liliendaal Declaration affirmed the importance of a common Caribbean regional approach to address the threats and challenges of climate change and the roles of Caribbean agencies. It set out the responsibilities of countries outside the Caribbean to mitigate climate change as well as responsibilities of states within the Caribbean region. Declarations made at Liliendaal included (CCCC, 2012, Annex 6):

- That all parties to the UNFCCC should work with an increased sense of urgency and purpose towards long-term stabilisation of atmospheric greenhouse gas (GHG) concentrations at levels which will ensure that global average surface temperature increases will be limited to below 1.5 °C of preindustrial levels and that global GHG emissions should peak by 2015.
- Adaptation and capacity-building must be prioritized, and a formal and well-financed framework must be established within and outside the UNFCCC to address the immediate and urgent, as well as long-term, adaptation needs of vulnerable countries, particularly the SIDS and the least developed countries.
- There is a need for financial support to SIDS to enhance their capacities to respond to the challenges brought on by climate change and to access the technologies that will be required to undertake needed mitigation actions and to adapt to the adverse impacts of climate change.

- The parties recognised the need for energy efficiency and conservation and for increased technical and financial support for the development of renewable energy in the Caribbean.
- The parties pledged their commitment to providing more effective preparedness for response to natural disasters through the development of better risk assessment and material coordination along with the streamlining of risk reduction initiatives.
- Support was expressed for the streamlining of all climate change funding mechanisms, including the recommendation that the Global Environment Facility include the vulnerability index in its formulae in order to better facilitate SIDS' access to financial resources; and for exploring mechanisms to support the Caribbean Community (CARICOM) adaptation programmes.
- The parties resolved to strengthen educational institutions to provide training, education and research and development programmes in climate change and disaster risk management, notably in health.
- The parties resolved to institute a comprehensive programme of public awareness and education to promote a better understanding of climate change, its impacts and adaptation and mitigation measures.

Caribbean Regional Framework for Achieving Development Resilient to Climate Change (2009–2015)

This framework and its associated implementation plan were prepared by the Caribbean Community Climate Change Centre (CCCCC) on behalf of the CARICOM heads of state.

The vision of this framework was to achieve a “regional society and economy that is resilient to a changing climate” (CCCCC, 2009). It includes five strategies to support the development of climate change mitigation and adaptation projects across the region. Health is specifically acknowledged as one of the major climate-sensitive sectors (the last strategy, below). The strategies are (CCCCC, 2009):

- Promoting actions to reduce GHG emissions through energy reduction and conservation, and switching to renewable and cleaner sources of energy;
- Promoting actions to minimise the effects of GHG emissions through initiatives and measures designed to reduce the vulnerability of natural and human systems to the effects of climate change (e.g. flood defences, and changing land use patterns);
- Promoting the development and implementation of educational and public awareness programmes as well as public access to information and citizen participation across the Caribbean region;
- Building the CCCCC's organisational capacity to manage adaptation to climate change, through training of scientific, technical and managerial personnel; institutional strengthening; providing systematic long-term technical assistance; and strengthening information support capacity that allows the CCCCC to effectively support the Member States; and
- Promoting the dissemination of successful adaptation experiences to address the impacts of climate change on (1) water supply; (2) coastal and marine ecosystems; (3) tourism; (4) coastal infrastructure; and (5) health, which combined represent the largest threats to the well-being of the CARICOM countries.

In 2012, an implementation plan was developed for this framework: *Delivering Transformational Change 2011–2021*. The plan involved establishing how regional and national bodies would work together; securing investment to support the action plan; proposing a monitoring and evaluation system; and obtaining buy-in from governments and funders across the region (CCCCC, 2012).

Caribbean Cooperation in Health IV, 2016–2025

The **Caribbean Cooperation in Health IV (CCH IV)** builds on a history of cooperation within the Caribbean and its predecessor plans, CCH I (1986–1995), CCH II (1997–2005) and CCH III (2007–2015). CCH IV provides a

framework for CARICOM Member States to address common regional health and development issues, through cooperation, collaboration and collective action. The focus of CCH IV is that of a multisectoral approach and production of Regional Public Goods (RPGs) which will address the health and development challenges of the Caribbean countries. The mission of CCH IV is, “to build the capacity of countries to improve the conditions for health for all, especially among vulnerable groups, and to develop and maintain cost-effective and efficient health systems” (CARICOM, 2016, p. 12). CCH IV has five strategic priority areas (CARICOM, 2016):

- Health systems for universal access to health and universal health coverage;
- Safe, resilient, health-promoting environments;
- Health and well-being of Caribbean people throughout the life course;
- Data and evidence for decision-making and accountability;
- Partnership and resource mobilisation for health.

Strategic priority area 2 and its strategic outcome is the area most closely aligned with climate and health. However, addressing the other areas and outcomes will also assist in reducing climate-related health impacts.

Caribbean Action Plan on Health and Climate Change 2019–2023

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. It corresponds to the Caribbean part of the WHO Special Initiative on Climate Change and Health in Small Island Developing States.

According to the 2017 PAHO Country Survey on Health and Climate Change, which informed the Caribbean Action Plan, ministries of health raised the following priority actions that should be addressed to best tackle climate change and health challenges:

- Prioritise health issues in the climate change agenda, and in the preparation of reports, plans and other national documents.
- Increase the number of staff trained in and dedicated to health and climate change issues.
- Increase national and health sector budget allocations for climate change actions and programmes.
- Receive support for navigating the complex processes to access international and bilateral funds.
- Increase and improve data generation and results sharing, to support national and regional evidence-based interventions.

For each strategic line of action of the SIDS Initiative (Empowerment, Evidence, Implementation and Resources – see above), 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.

Caribbean Public Health Law Forum

The Caribbean Public Health Law Forum was established in 2021 by the Pan American Health Organization (PAHO) and the Caribbean Court of Justice Academy for Law. This is a virtual network which brings together Caribbean professionals from health and law from ministries responsible for both health and legal affairs in nine CARICOM Member States and all five of the CARICOM Associate Member States. The purpose is to consider effective use of law to address shared public health concerns in the Caribbean, e.g. noncommunicable diseases and their risk factors (Anderson, 2021; PAHO, 2021).

Health National Adaptation Plans

The 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 (warning, for example, of climate-related disasters, heatwaves, climate-sensitive diseases, severe droughts and floods), the Smart Health Facilities Initiative (see Chapter 16, “Smart health facilities”), and for the preparation of vulnerability assessments and Health National Adaptation Plans (H-NAPs) (CARPHA, 2018; PAHO, 2019).

H-NAPs help ensure the safety and health of the population pre and post disaster. Ministries responsible for health will need to collaborate closely with other ministries and agencies to address a wide range of issues relevant to climate and health, including but not restricted to public utilities, works, transport, security and education. To assist with the implementation of the Caribbean Action Plan on Health and Climate Change, the EU/CARIFORUM project Strengthening Climate Resilient Health Systems, launched in 2020, has as one of its core outputs the development of H-NAPs (Drewry, 2021; Drewry and Oura, 2022). H-NAPs are to provide an analysis of health systems vulnerabilities and opportunities for action to address the health impacts of climate change, as part of the national adaptation process. These plans can be used by the Green Climate Fund (GCF) and other donors, to demonstrate priorities for investments and as part of the country investment programming (Buss, 2022). PAHO/WHO has prepared guidelines to assist countries in preparing their H-NAPs and related documents such as the Country Profile (see above). As part of the development of H-NAPs, research is being undertaken on climate and health that can provide information to engage policymakers as advocates. (R4ACCHC, 2023a). As of November 2022, Cuba had completed an H-NAP; Grenada had prepared a draft; the Bahamas, Belize, Haiti and Jamaica were in the midst of writing drafts; and Barbados, the Dominican Republic, Guyana, and Saint Vincent and the Grenadines had initiated the process of writing a draft (Buss, 2022). See Box 3 for examples of the contents of the Cuban H-NAP.

Often, there is a bifurcation at the international level regarding treaties on the environment and those on health. In the Caribbean there is a similar pattern, with the Liliendaal Declaration and the **Caribbean Regional Framework for Achieving Development Resilient to Climate Change** referring mainly to climate mitigation and adaptation strategies. CCH IV does address climate and health and the Caribbean Action Plan on Health and Climate Change is fully focused on the issue.

Box 3: Case study: Cuba’s Health National Adaptation Plan

Some of the work proposed in the Cuba’s H-NAP includes the following:

- Continue developing the baseline in health, with particular reference to those diseases and disease-causing agents that are linked to climate variability and change.
- Establish the current distribution and burden of diseases and disease-causing agents that are linked to climate variability and change and determine recent trends in disease incidence and virus abundance, including other viruses (e.g. SARS-CoV-2).
- Develop information systems that allow environmental health diagnoses to be established.
- Develop public health action plans based on early warning systems that allow the identification of risk situations before they occur.
- Develop specific surveillance and control programmes for disease-causing agents and diseases related to climate variability and change.

Source: Duran (2021).

International treaty implementation at the national level

In the Caribbean, there has been excellent uptake of international health and climate change agreements and treaties in terms of countries signing up to them. However there has been an implementation deficit. The process of transposing international treaties into domestic law in the Caribbean is often difficult; it is rare to have dedicated climate change legislation in the region. The treaties, even though ratified, do not have the

weight of law. To have legal force they must be transposed into domestic law by an act of parliament, but the number of Caribbean countries that have done so is much lower than the number that have signed up to such treaties. In addition, many Caribbean states lack the management, administrative and human resources necessary to enforce such a law (Anderson, 2021).

As seen above, the more prominent international climate change conventions¹ make little or no specific mention of health; they are focused on the environment and, in particular, climate change. Since Caribbean countries are responsible for developing their own regional policies from international ones, it is argued that they can use the “right to health” and human rights² arguments to develop their own policies and frameworks. Notably, the British Virgin Islands, the Cayman Islands, Guyana and Jamaica have recently made some progress in terms of provision for health and the environment in their constitutions. This makes it easier for countries to develop laws on what is required to ensure that there is support between a healthy environment and the right to health (see Box 4) (Anderson, 2021; Brathwaite and Mendoza, 2021).

Box 4: Examples of constitutional provisions on health and the environment

Guyana (1980), Article 149J (1): “Everyone has the right to an environment that is not harmful to his health or wellbeing”.

Jamaica (1962) (Charter of Rights, 2013), s 13 (3) (1): “the right to enjoy a healthy and productive environment free from threat of injury...”

Cayman Islands (2009), S 18 (1): “Government shall ... foster and protect an environment that is not harmful to the health or well-being of present and future generations...”

British Virgin Islands (2007), Article 29: “Every person has the right to an environment that is generally not harmful to his or her health or well-being...”

Source: Anderson (2021).

There has also been recent judicial decision-making, with the courts increasingly recognising the linkages between climate change and health. In 2021, the United Nations Environmental Programme noted a doubling of climate litigation between 2017, when there were 884 cases in 24 countries, and 2020, when there were 1550 cases from 38 countries. In most cases, the complaint was violation of climate rights, with the justification being that climate change compromises fundamental human rights including the right to life, health, food and water. In Trinidad and Tobago, there have been two cases of note: *Soodeen v Attorney General of Trinidad and Tobago* (1997) and *Fishermen & Friends of the Sea v EMA & Atlantic LNG* (2004) (Anderson, 2021).

The Commonwealth Secretariat

The Commonwealth includes 12 Caribbean countries.³ In February 2022, the Commonwealth Secretariat and the WHO signed a memorandum of understanding in which they agreed to work together to strengthen the exchange of information on seven priority areas (WHO, 2022):

- Promoting universal health coverage and primary health care;

¹All 15 CARICOM Member States have accepted the UN Convention on Climate Change (1992), the UNFCCC Kyoto Protocol (1997) and the Paris Declaration (2015) (Anderson, 2021).

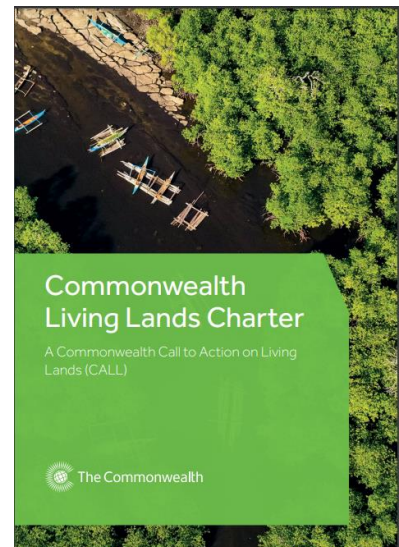
²All 15 CARICOM member states have accepted the Universal Declaration of Human Rights (1948), the International Covenant on Civil and Political Rights (1966) and the International Covenant on Economic, Social and Cultural Rights (1966); all except Montserrat have accepted the San Salvador Protocol (1988), which focuses on human rights rather than the environment (Anderson, 2021).

³Antigua and Barbuda, the Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, Saint Lucia, Saint Kitts and Nevis, Saint Vincent and the Grenadines, and Trinidad and Tobago.

- Strengthening global health security;
- Promoting healthy environments;
- Promoting the health of vulnerable groups;
- Transforming lifelong learning for health impact;
- Building a data partnership;
- Creating space for innovation and exchange of knowledge.

The Commonwealth Secretariat, as part of its plan for a green recovery after COVID-19, is working to encourage greater use of off-grid clean energy as a more sustainable solution for the cold chains needed to store vital drugs and vaccines (Scotland, 2021). The *Commonwealth Living Lands Charter: A Commonwealth Call to Action on Living Lands (CALL)* (see Figure 2) was officially adopted at the Commonwealth Heads of Government Meeting in Kigali, Rwanda, in June 2022. It is an agreement by all 56 Commonwealth countries to safeguard global land resources; take coordinated action to address climate change, biodiversity loss and land degradation or desertification; and promote climate-resilient and sustainable land management. It is important that national action plans take account of such linkages if land systems are to adapt to climate risks (Commonwealth Secretariat, 2022; Scotland, 2021). By ensuring land systems adaption, agriculture can be protected, thus reducing food insecurity (see Chapter 12, “Agriculture and food safety and security”).

Figure 2: The Commonwealth Living Lands Charter: A Commonwealth Call to Action on Living Lands (CALL)



Source: Commonwealth Secretariat (2022).

Local government associations

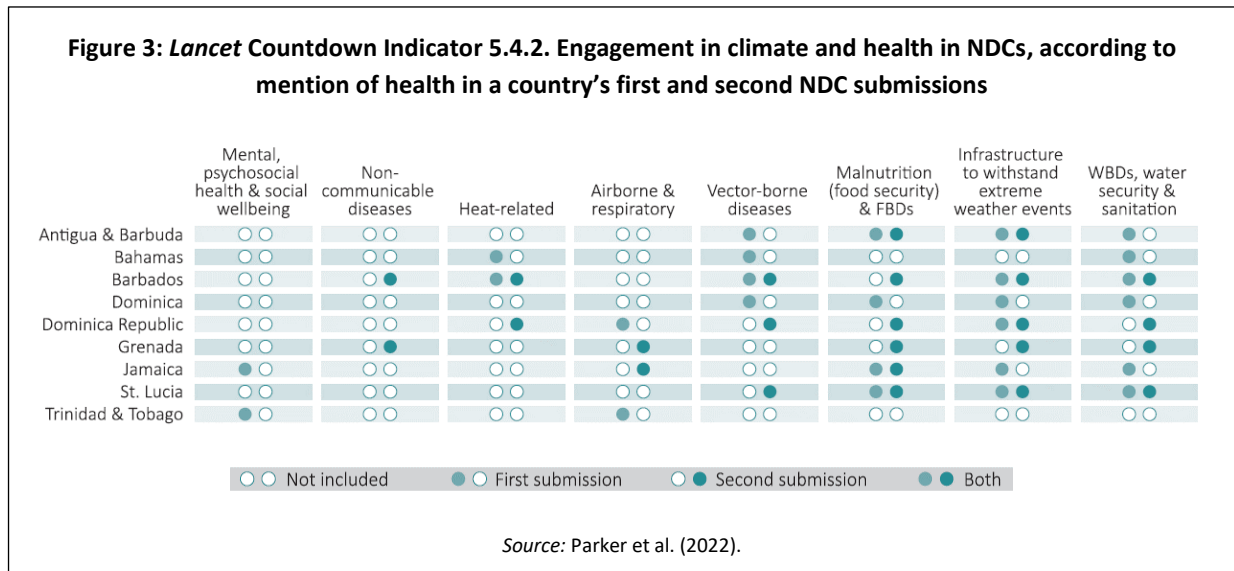
Climate change is a huge issue facing local governments. Regional groups are often the first responders to climate disasters and events. The Caribbean Association of Local Government Authorities (CALGA) has members from most of the Caribbean countries. Under initiatives introduced by the Global Covenant of Mayors on Climate Change and/or the Commonwealth Local Government Forum, national members of CALGA are developing plans for climate change; however, these plans do not include health. The Trinidad Association of Local Government Authorities has nearly completed its plan for climate change and believes that the time is now right to incorporate health considerations (R4ACCHC, 2022a).

Research

There is very little research on Caribbean governments’ work to address health and climate change. Globally, the *Lancet* Countdown on Health and Climate Change monitors government engagement in health and climate change (indicator 5.4). This indicator tracks statements made by national leaders at the United Nations General Debate (UNGD) and the United Nations General Assembly and mentions of health and climate change in nationally determined contributions (NDCs).⁴ According to a 2022 report, the proportion of UN member

⁴The Paris Agreement requests that each signatory country outlines and communicate its post-2020 climate action plans. These are known as nationally determined contributions (NDCs). NDCs are key to the Paris Agreement to keep global warming to well below 2 °C. They set out each country’s climate action plan to reduce emissions and adapt to climate impacts. Each country decides its own NDC and communicates it to the UNFCCC every 5 years. NDCs typically include energy, agriculture, forestry, transport, industry, and water. NDCs help to realise many benefits, e.g. economic, health, social justice, and biodiversity. NDCs contain targets, policies, and resources needed, e.g. financing, technology, capacity building. Collectively, these climate actions will determine whether or not the world achieves the long-term goals of the Paris Agreement (UNFCCC, n.d.).

countries referring to the association between health and climate change had increased from 47% in 2020 to 60% in 2021. Among SIDS, 76% discussed the association between health and climate change in the 2021 UNGD (Romanello et al., 2022). Nine Caribbean SIDS made reference to health in their first or second NDC, with a focus on the health impacts of climate change and the urgent need for health adaptation (see Figure 3).



18.2. WHAT SHOULD BE DONE?

Individual and community actions and how to support them

Build awareness of climate change impacts on health among policymakers

Policymakers are generally aware of climate change issues, but few appreciate the linkages with health. Therefore, further advocacy and awareness building is needed (Allen et al., 2021; R4ACCHC, 2023b):

For me, the most serious problem, I don't think the leaders appreciate the health impact. So, for me the bigger problem is the awareness of the health impact. I think they're aware of climate change, and I think they're aware of it from all the extreme events that we've had and the repercussions from that. But – there's not enough data either – but there's not a full appreciation of the linkages between climate and health.

Interviewee from Caribbean Institute for Health Research, University of the West Indies,
in Allen et al. (2021)

Awareness can be raised by nongovernmental organisations (NGOs) or professional bodies such as the Caribbean Alliance of National Psychological Associations (CANPA). Awareness-raising can also be taken a step further, to allow policymakers to understand how communities cope with the impacts of disasters. Since Hurricane Dorian affected the Bahamas (2019), CANPA has been discussing the possibility of assisting political leaders to build their knowledge concerning how members of their community can balance health goals with other needs during such crises (R4ACCHC, 2022b). In Guyana, a bottom-up approach is apparent, with healthcare workers and communities advocating for change (R4ACCHC, 2023b).

Data must be packaged in a way that enable them to be understood by policymakers, for instance in policy briefs, targeted specifically at policymakers, using language and infographics that speak to the “head, heart and pocket”, as was done with HIV and noncommunicable diseases (R4ACCHC, 2023b). In the case of climate change, such policy briefs should include data demonstrating the impact of climate change and related disasters on the population's health, health systems and other sectors that affect health. Examples of information that would be helpful to include are economic costs to the government from damage to infrastructure including healthcare facilities and agricultural infrastructure, and labour productivity lost through death and illness (R4ACCHC, 2022c,d).

Structural/governmental and private sector actions

Given the complexity of climate change and health interactions and the limited resources available in Caribbean SIDS, government collaboration with other sectors is critical. There is also a need for collaboration across ministries in an “all of government” approach. General issues of collaboration are considered in Chapter 10, “Collaboration between agencies”.

Establish public–private partnerships

The private sector can be a key player in climate change and health given its economic and social influence on determinants of health. Private–public partnerships can be formed between government and private providers of health insurance (Tewari, 2021), transportation, energy (Faria, 2021) and telecommunications services, as well other businesses, for example in the hotel and tourism industry (Madden-Greig, 2021). Private sector funding is important for the implementation of mitigation and adaptation strategies. For example, the Republic Bank has pledged USD 200 million in finance to governments and businesses for the development of climate-friendly products and services (R4ACCHC, 2022e).

Enhance government support for civil society climate and health projects

Civil society organisations (CSOs) play an important role as champions of the environment by being catalysts for development and betterment, and by fostering cooperation among key players in an effort to achieve equitable, sustainable and inclusive development goals. CSOs have the potential to negotiate and persuade all institutions and stakeholders to be more sensitive to citizens' and environmental needs and rights, thus making them valuable watchdogs and caretakers. CSOs are often first responders to emergencies and community needs. Government needs to support civil society and CSOs. It is recommended that governments:

- Build capacity among CSOs to implement programmes and support community needs (R4ACCHC, 2023b).
- Review and improve access by CSOs to funding, grants and subventions, removing red tape.
- Make more effort to ensure that community and outreach components of state policies are met.
- Create civil society and NGO-driven policies that take a bottom-up approach to address environmental and community issues and ensure that the responsibility for care of the environment is shared (Jaramogi, 2021).

The Caribbean Climate Justice Project seeks to educate and inform on the threats posed to lives and livelihoods in the Caribbean by climate change and to catalyse action on the necessary responses at the community, national and regional levels; it helps to give voice to the vulnerable populations including children and young adults. The Health Action Group of the Climate Justice Project seeks to draw attention to the health impacts of climate change, and through strategic partnerships with existing organisations, to influence policy changes to ensure that the health profiles of Caribbean citizens are not further damaged by climate change (Caribbean Climate Justice, nd; R4ACCHC, 2022d).

Prioritise policies and projects that provide climate change mitigation actions and health co-benefits

There are many types of initiatives that governments can support to achieve climate change mitigation, with health co-benefits. For example, they should support the development of blue–green infrastructure, increasing water features, plant and tree coverage to reduce heat, air pollution and GHG emissions (Mycoo, 2021; Sarjeant, 2021). Moving from fossil fuel-burning vehicles to hybrid and electric vehicles can mitigate GHG emissions and reduce air pollution (R4ACCHC, 2023c; see also Chapter 5, “Air quality”). Electric cars are now seen more frequently in the Caribbean, but their use could be increased further by offering incentives. Although duties on electric vehicles have been reduced relative to those on nonelectric vehicles, more needs to be done, for example by reducing purchasing costs and increasing the availability of charging ports. Caribbean governments need to provide further support for the use of solar energy and wind power and implement national initiatives that encourage households to be off-grid (R4ACCHC, 2022f). The promotion of active transport and alternative modes of transport such as cycling and walking can be encouraged by better urban planning, such as creating more pavements and cycle lanes with shade provided by trees and covered pathways (Rocke, 2022). New policies and legislation are needed, supported by planning and enforcement (Gordon-Strachan, 2021). Government action to reduce oceanic pollution and to protect coastal zones is also needed (see Chapter 14, “Marine resources and health”, and Chapter 15, “Climate-friendly health-promoting infrastructure”).

Protect Caribbean people from the health impacts of climate change through a strong and active legislative and enforcement agenda

Caribbean governments must protect the health of their citizens from the impacts of climate change through laws and regulations, supported by increased enforcement capabilities and action. Such laws and regulations must address the environmental and social determinants of health that moderate the health impact of climate drivers. Areas that would benefit from strengthened legislation or enforcement of existing policy include:

- Building codes to improve climate resilience, especially of health and drainage infrastructure;
- Provision of climate-resilient housing to low-income households;
- Prosecution of individuals and companies contributing to land and sea pollution;
- Universal provision of high-quality water and sanitation services (R4ACCHC, 2023d);
- Air quality standards and prosecution of those who infringe them (R4ACCHC, 2023c);
- Food quality standards and support of strategies to maintain them following severe weather events;
- Control of the nutritional quality of imported food products (R4ACCHC, 2023e);
- Environmental and social impact assessments, including community participation, of new infrastructural and industrial projects;
- Strengthening and enforcing equal opportunities legislation, leaving no one behind.

Integrate health into Caribbean legal frameworks addressing climate change and other environmental determinants of health

As shown earlier (see Section 18.1, “What is happening?”), health is generally addressed in only a minor way in international climate change agreements. International treaties on the environment tend to be separate from those on health. Caribbean countries have accepted both types of agreements. Their abilities to legislate on climate and health issues is further strengthened by their ratification of human rights instruments. For instance, all CARICOM governments have ratified the Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights (Anderson, 2021).

However, there is a deficit in implementation of the international treaties at local level. For treaties to have legal force in most Caribbean countries, they must be transposed into national law. In Caribbean constitutions, there are references to the right to environmental conditions that are not harmful to health. Human rights principles enshrined in Caribbean law can be used to create policy, to protect health security and to encourage community participation (Brathwaite and Mendoza, 2021). To establish a legal framework for integrated climate change and health policies and strategies, the following are recommended (Brathwaite and Mendoza, 2021):

- Integration of health into climate change laws and policies with reference to human rights – this can occur through building of partnerships between CSOs and legal professionals;
- Recognising that climate change adaptation and disaster risk reduction laws and policies are a critical element;
- Awareness that, within disaster management, relief efforts must be subject to global and local health standards and documented by the various ministries responsible for health, food and agriculture.

At present, there are few examples of dedicated climate change legislation. An exception is Dominica’s Climate Resilience Act 2018. More common are frameworks of regulations, such as Antigua and Barbuda’s Environment and Natural Resources Management Act 2019. These are important in regulating action on environmental determinants of health but should be supplemented by legislation that explicitly addresses impacts on health. A further useful approach is to refer to an international treaty within a piece of national legislation, noting that the national legislation accords with the stipulations of the treaty. This approach has been adopted in the Environmental Protection Act in Saint Kitts and Nevis (Anderson, 2021).

The Caribbean Public Health Forum, established in 2021, provides a further promising avenue for legislative development. It brings together Caribbean public health professionals and law professionals from the ministries of health and ministries of legal affairs in nine CARICOM Member States and five CARICOM Associate Member States. Its purpose is to consider the effective use of law to consider shared Caribbean public health concerns (Anderson, 2021).

Develop a data-sharing agreement between countries and across regional agencies

Caribbean governments need to collaborate with each other in establishing data-sharing agreements and protocols, so that each country can build on the knowledge and experiences of other countries (R4ACCHC, 2022d). Regional solidarity is very important, given the small size of SIDS and other challenges that limit their research and surveillance capacities (see Chapter 11, “Research and surveillance on climate change and health”).

Advocate for changes to international climate change and health indicators to make them more relevant to Caribbean Small Island Developing States

International indicators for measuring climate change and health developments may not be beneficial or helpful to the SIDS in the Caribbean Sea, the Pacific, Atlantic and Indian Oceans and the Mediterranean and South China Seas. The Caribbean SIDS and other SIDS need to develop indicators appropriate to their contexts (R4ACCHC, 2023f). For example, it has been strongly suggested, by Caribbean regional climate and health agency representatives, that *Lancet* Countdown indicator 5.4 be expanded to include additional measures of government engagement, such as investments and budget allocations, policy and position papers and implementation of National Adaptation Plans. Governments can advocate for these changes (Allen et al., 2021; see also Chapter 10, “Collaboration between agencies”).

Research gaps and how to address them

Identify best practices in developing and implementing national strategies on climate change and health

The Caribbean Action Plan on Health and Climate Change has as one of its national-level actions the preparation of health systems vulnerability and adaptation assessments and H-NAPs. Research is needed to determine how such measures can best be implemented, enabling governments to develop a culture around promoting evidence-based policies is key to ensuring that such research is conducted (R4ACCHC, 2023f). Some questions may include (Hassan, 2021):

- How do we ensure that evidence-based policies are implemented as intended?
- How do we evaluate the impact of policies on both climate and health?
- How do we hold institutions accountable for their performance in implementing the agenda?
- How do we develop a regional roadmap to raise awareness among the public in the Caribbean?

Conduct studies to ascertain how equity should be integrated into the national climate change and health agenda

The differential impact of climate change can worsen health disparities between different communities. Some questions may include:

- What is the status of policymakers’ knowledge, attitudes and practice (KAP) in the area of climate and health equity? How do these influence their decisions on the allocation of resources? Policymakers should include not only responsible ministers, but also permanent secretaries and chief medical officers in the ministries responsible for health and the environment. Other relevant personnel in ministries responsible for the wider determinants of health, for example urban planning, infrastructure, transport and agriculture, should also be included in KAP studies (R4ACCHC, 2023b).
- How do governments fully engage frontline communities/groups in the process of developing, implementing, monitoring and sustaining policies to mitigate climate change and to adapt to its effects on health?

- How do governments work in an equitable and respectful way with indigenous populations, whose health and livelihoods are often more adversely affected by climate change than those of any other group?
- How do governments integrate climate and health equity into all its entities including agriculture?
- How do governments integrate climate and health equity into safe, resilient and equitable housing solutions?
- How important is updating legislative instruments in healthcare and climate change with mechanisms in governance to support linkages in healthcare and climate change adaptation, including equity concerns (Hassan, 2021)?

Determine the effectiveness of actions at the individual, community, structural/government and private sector

It is necessary to evaluate any actions to ensure effectiveness. These may be process, impact, cost–benefit and/or cost-effectiveness evaluations. Determining the barriers to and facilitators of implementation of a suggested action would also be helpful in determining the limitation and challenges and recommendations for the way forward. Research questions could include:

- What new literature has been developed to inform policymakers? How effective have these communication materials been?
- What have been the changes in policymakers’ knowledge about health impacts of climate change?
- What support (e.g. financial, technical) have governments given to climate change and health-focused CSOs/NGOs?
- How many new policies relating to climate change mitigation actions and health co-benefits have the government implemented? What has been their effectiveness?
- Has health been integrated into climate change and disaster risk reduction laws and policies, at both national and regional levels?
- What is the process to develop data-sharing agreements between countries and across regional agencies?
- Has there been any change in indicators used to measure government engagement at the international level?

Surveillance gaps and how to address them

Monitor public statements of regional and national leaders for content pertaining to climate and health

It is important to listen to what leaders are saying and study how this might be used to address the challenges and to support resource mobilisation. Following severe weather events and at other key moments, it would be helpful to monitor the public statements of regional and national leaders (CARPHA, 2018; R4ACCHC, 2023b). These can include statements of policy and intent in regional meetings (e.g. CARICOM); media briefings and statements; political manifestos; statements at community meetings; and policy and position papers (Allen et al., 2021). Such statements can be used as measurements of implementation of international and regional commitments. Interministerial, interagency collaborative mechanisms and engagement with climate and health scientists and use of science in decision-making could also be monitored.

Monitor government adherence to the implementation of action plans and frameworks

By examining government climate change and health-related investments and budget allocations, policy and position papers and implementation of National Adaptation Plans, government adherence to implementation of regional and national action plans and frameworks can be ascertained. To ensure accountability, this

monitoring can be conducted by regional academic institutions (R4ACCHC, 2023b). Government involvement in environmental resource management should be monitored (Allen et al., 2021; R4ACCHC, 2023b).

Research and surveillance capacity-strengthening needs

To address the research and surveillance needs to ensure government engagement, capacity must be built in implementation science and implementation research, impact evaluation and qualitative and mixed-methods research, as well as in advanced statistical methodologies. The following additional specialist expertise is required:

- Strategic planning including logframes;
- Public policy;
- Development of legislation.

There is also a need for enhanced information technology infrastructure and expertise, along with surveillance expertise, to build the databases needed for sharing of information. Statisticians and communications specialists with writing skills are needed to make technical reports accessible to decision-makers.

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