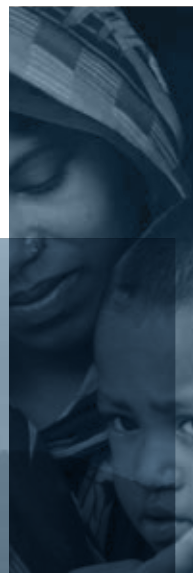


WHO HEALTH AND CLIMATE CHANGE SURVEY REPORT

TRACKING GLOBAL PROGRESS



WHO/CED/PHE/EPE/19.11

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Introduction

This report presents global findings from the 2017/2018 WHO Health and Climate Change Survey completed by national health services. Regular updates on key health and climate change indicators empower policy makers to make more informed choices to: assess the implementation of policies and plans, identify gaps in evidence, and better understand the barriers to achieving health adaptation and mitigation priorities. This report provides a vital snapshot of the overall progress that governments have made in the field of health and climate change to date, as well as insight into what work remains in order to protect their populations from the most devastating health impacts of climate change.

The findings presented cover three key areas:



LEADERSHIP AND
GOVERNANCE



EVIDENCE



INTERNATIONAL
CLIMATE FINANCE

In 2015, the first WHO Health and Climate Change Survey was conducted with just over 40 country participants¹. In this second iteration, coverage had more than doubled with 101 country and territory respondents¹.

In addition to this global report, data from the 2017/2018 WHO Health and Climate Change Survey are used to prepare the WHO United Nations Framework Convention on Climate Change (UNFCCC) Health and Climate Change Country Profiles.

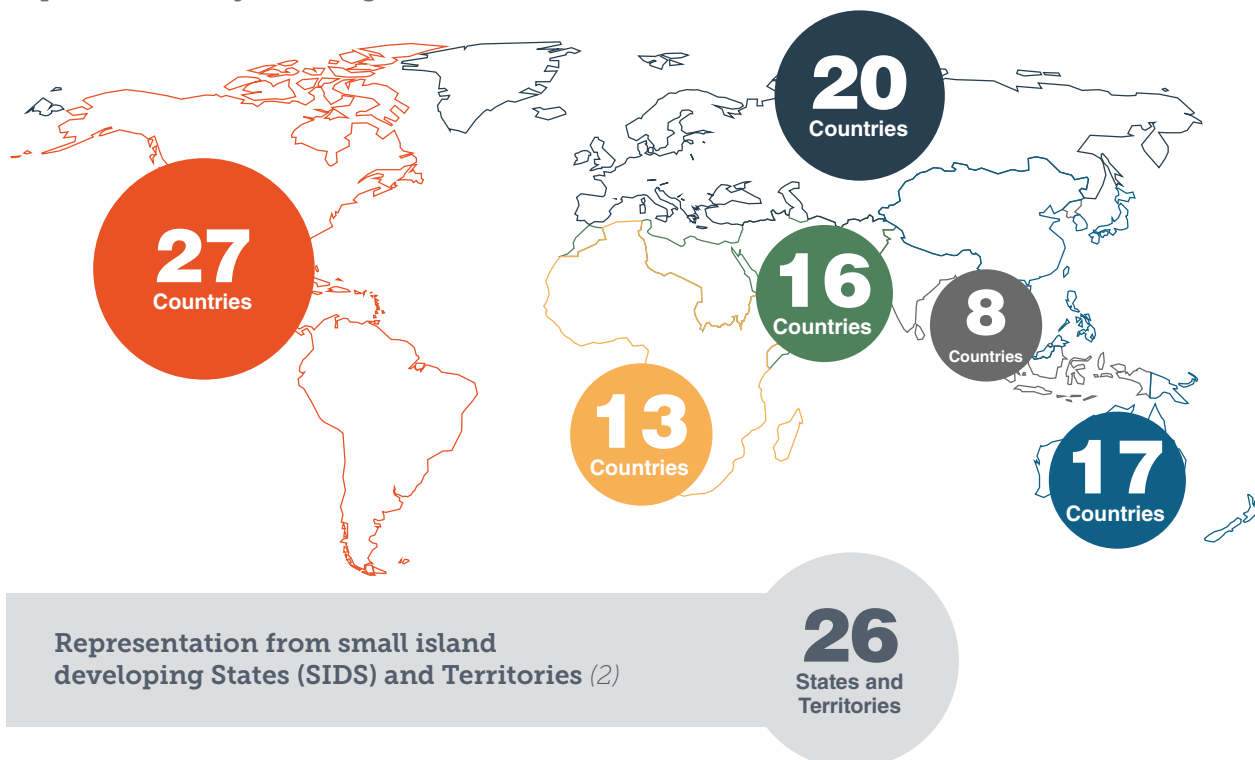
The WHO UNFCCC Health and Climate Change Country Profiles, developed in collaboration with national health services, are data-driven snapshots of the climate hazards and expected health impacts of climate change facing countries. They highlight opportunities for health co-benefits from climate mitigation actions and track current policy responses at national level. The aim of the profiles is to raise awareness of health and climate linkages and to promote actions that improve health and strengthen the climate-resilience of health systems while reducing carbon emissions (see Annex 2)(1).

¹ Country respondents/participants were the national health services of countries.

2017/2018 WHO Health and Climate Change Country Survey participation

101 TOTAL NUMBER OF COUNTRY² PARTICIPANTS³

Representation by WHO region



- African Region
- South-East Asia Region
- Region of the Americas
- European Region
- Western Pacific Region
- Eastern Mediterranean Region

This map presents WHO regions; the boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Representation by income category (3)



² Although 'country' is used in this report, it should be noted that of the 101 participants three submissions were from territories.

³ Country respondents/participants were the national health services of countries.

Main findings

1 National Planning on Health and Climate Change is Advancing but there is a Need to Strengthen the Comprehensiveness of Strategies and Plans.

About 50% of countries surveyed (51 out of 101) reported having a national health and climate change strategy or plan yet a qualitative analysis of the plans indicated that the content and scope of these strategies and plans varied widely. Most of the plans (25 out of 36) were approved or updated in the past five years indicating a recognition of the urgency to protect population health from climate variability and climate change and the need to build climate-resilient health systems.

2 Implementing Action on Key Health and Climate Change Priorities Remains Challenging for Countries.

A majority of countries reported only moderate or low levels of implementation of their national health and climate change strategies or plans with financing being cited as the most common barrier to implementation (24 out of 43 respondents).

3 Findings from Vulnerability and Adaptation Assessments for Health are Influencing Policy Prioritization.

Forty-eight countries (48 out of 101) reported having conducted a vulnerability and adaptation assessment for health. Almost two-thirds of these countries indicated that the results of the assessments are being used for national health policy and planning. However, the results are having a more limited impact on financial and human resource allocation.

4 Barriers to Accessing International Climate Finance for Health Adaptation and Mitigation Persist.

Of the 46 countries that reported on challenges faced in accessing international climate finance for health, the top three challenges were cited as: a lack of information on opportunities, a lack of connection by health actors to climate change processes and a lack of capacity to prepare country proposals.

5 Multisectoral Collaboration on Health and Climate Change Policy is Evident yet Progress in this Area Seems Uneven across Sectors.

Collaboration on health and climate policy was greatest between the health sector and the water, sanitation and wastewater sector (45 out of 101 respondents), followed by agriculture (31 out of 101 respondents) and social services (26 out of 101 respondents). A quarter or less of countries reported having an agreement in place between the health sector and the transportation, electricity generation or household energy sectors.



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Leadership and governance

- Fifty-one (out of 101) countries reported having a national health and climate change strategy/plan, which is a key tool in promoting leadership and guiding countries towards a climate-resilient health system (see page 3). In this report, a national health and climate change strategy/plan was broadly defined as a strategy/plan in which sections or the entire document are developed or overseen by the ministry of health or national health authority⁴.
- A qualitative analysis of 41 national health and climate change strategies/plans collected as part of the survey process indicated that the comprehensiveness and scope of the national health and climate strategies/plans varied widely, indicating an opportunity for strengthening the consistency and content of plans. Only a small number of these plans were identified as 'health components of National Adaptation Plans' (HNAPs, see Annex 3) developed as part of the NAP process (4) under the UNFCCC.
- Implementation of national health and climate change strategies/plans remains challenging with less than 20% of countries (8 out of 45) reporting a high level of implementation⁵ (see page 3).
- Financing was cited as the most common barrier to implementation of strategies/plans (24 out of 43 respondents). Other key barriers included: (i) human resource constraints, as well as (ii) lack of prioritization, multisectoral collaboration, technical capacity and evidence and tools⁶ (see page 4).
- Less than 40% of countries (17 out of 45) indicated that their current health budget either fully or partially covered the estimated costs of implementing the main priorities outlined in their national health and climate change strategy/plan (see page 5).
- Multisectoral collaboration⁷ on health and climate change policy was most common between the health sector and the water and sanitation sector (45 out of 101 countries). A quarter or less of all countries reported to have a formal collaboration between the health sector and the transportation, electricity generation or household energy sectors.
- Almost 40% of countries (39 out of 101) indicated that a national curriculum on health and climate change for health professionals is approved or under development (see page 6).

4 Data presented in this report refer to health and climate change strategies/plans for the health sector, or broader national climate change plans that included health content.

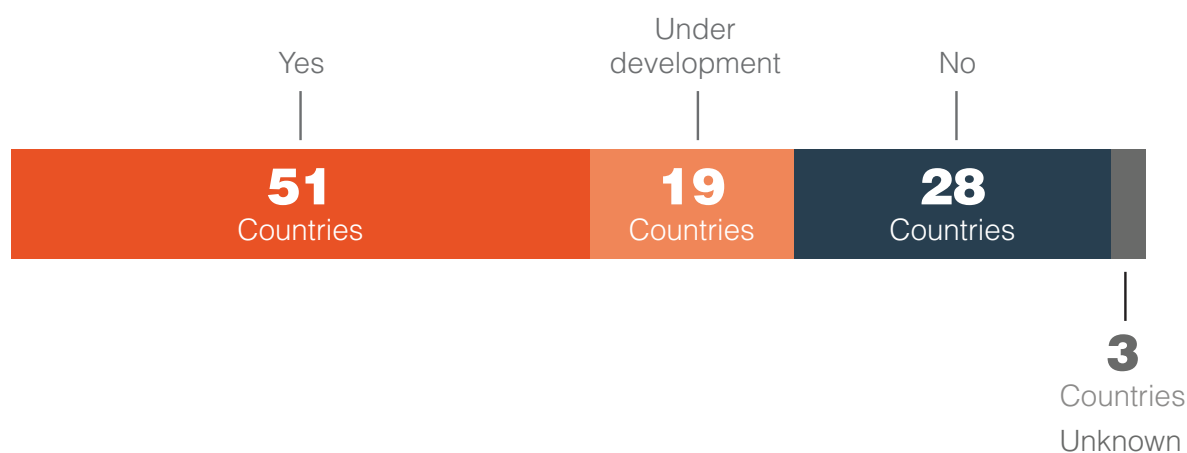
5 **Implementation** in the survey questionnaire was defined as 'describing the action which is currently being taken to achieve the specific objectives and priorities outlined in the national health and climate strategy/plan'. The response categories were elaborated as: high (action is being taken on most or all key priorities); moderate (action is being taken on some of the key priorities); low (limited action is being taken); planning phase (no action is being taken but action is planned within the next 12 months); none (no action is being taken or is planned within the next 12 months); unknown.

6 Responses provided were open-ended and were coded as: **financing** (lack of funding, conflicting priorities, or unspecified); **leadership and governance** (lack of multisectoral collaboration, prioritization/high-level support); health workforce (human resource constraints; lack of technical capacity such as knowledge or training); **evidence, methodology and tools** (lack of early-warning systems, research, monitoring and evaluation, technologies and infrastructure, climate-informed health programmes); **currently in planning phase/unknown** (developing an implementation or action plan or not yet having identified challenges to implementation as they are still in the planning phase).

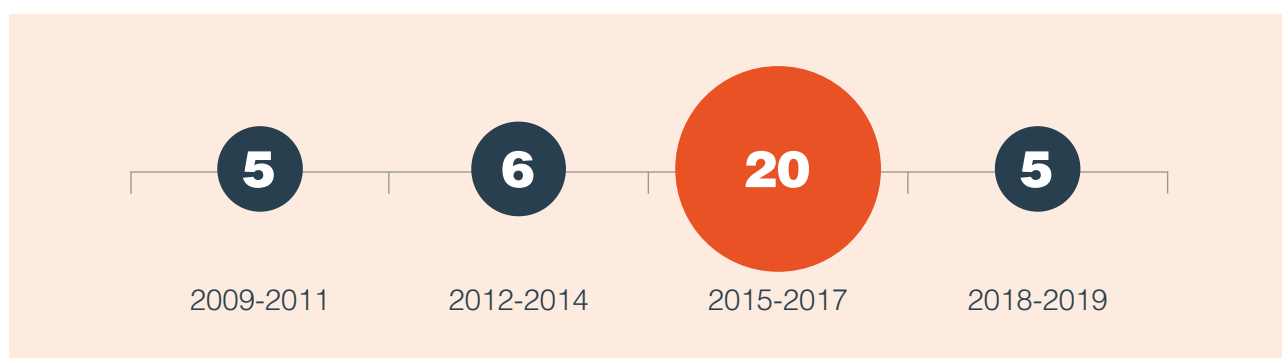
7 A positive response on **multisectoral collaboration** indicates that a memorandum of understanding or an agreement is in place between the specified sector and the health sector which outlines specific roles and responsibilities in relation to health and climate change policy.

National planning

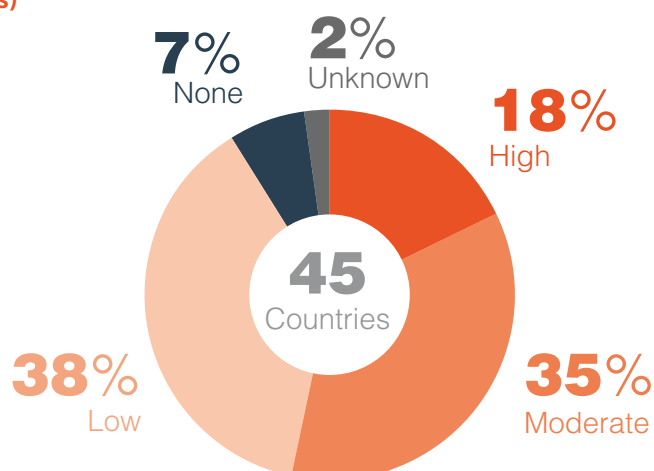
Number of countries with a national health and climate change strategy/plan
(101 country respondents)



Number of national health and climate change strategies/plans approved by time period
(year corresponds to the year of the most recent version of the strategy or plan, if it has been updated) (36 country respondents)⁸



Level of implementation of national health and climate change strategies/plans
(45 country respondents)

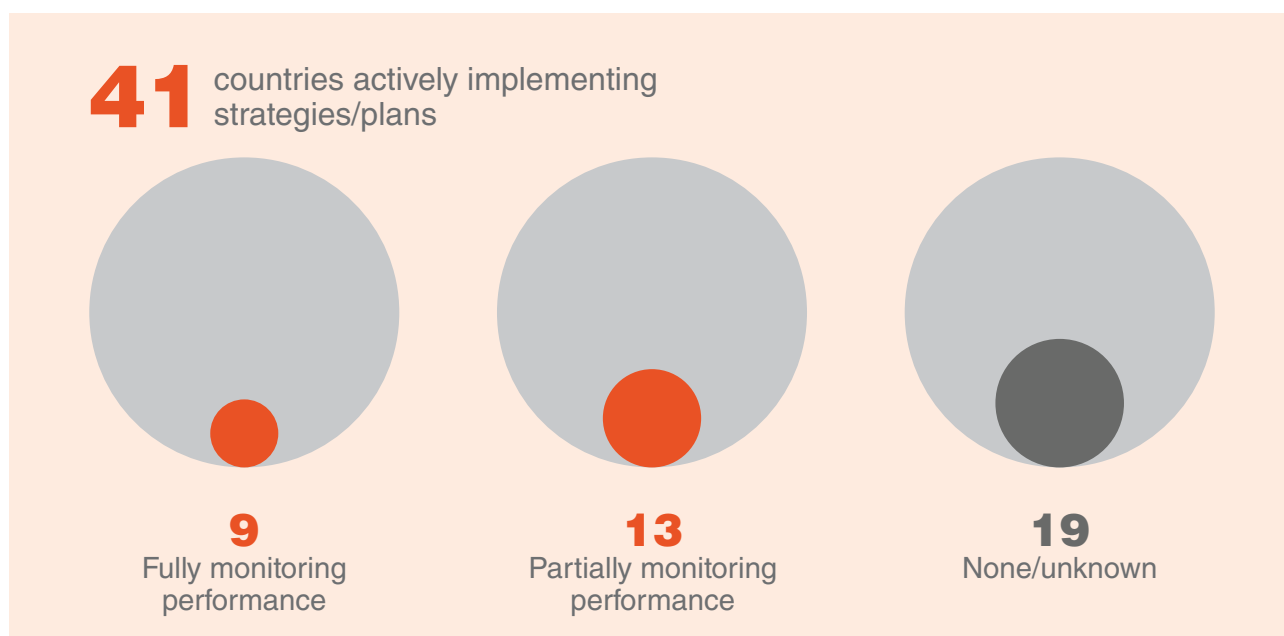


⁸ Although 51 countries reported that a national health strategy/plan had been completed, the approval process by the national health service was ongoing for 10 countries. Three countries had no formal approval by the national health service, and therefore the year of approval was not reported for these countries. One document in this analysis was published in early 2019, and is considered an exception as most documents were collected during the 2017/2018 period of the survey.

Main challenges in implementing national health and climate change strategies/plans
 (43 country respondents, multiple responses possible)

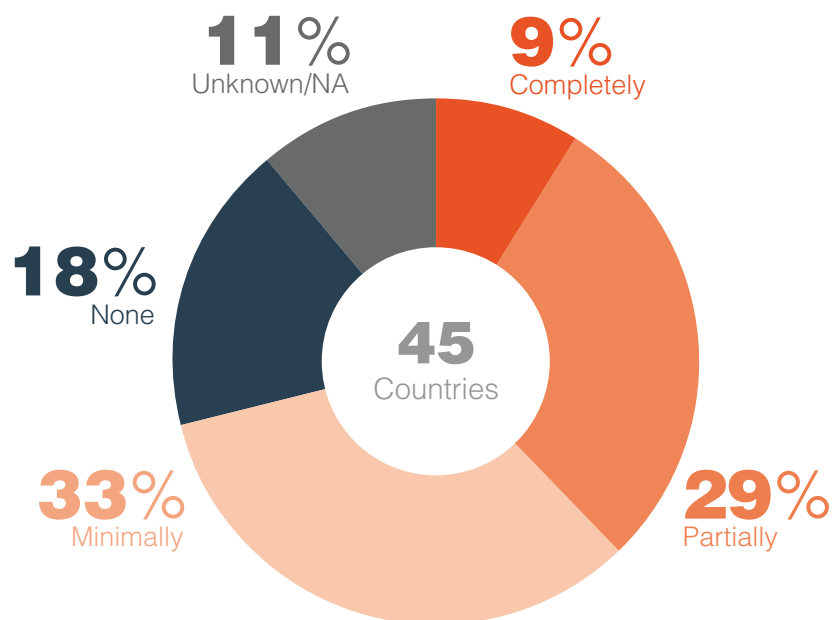


Number of countries that have identified performance indicators and are monitoring the implementation of their strategies/plans.



National financing

Proportion of estimated costs to implement the national health and climate change strategy/plan that is currently covered by the national health budget
Reported as percentage of country responses per category (45 country respondents)



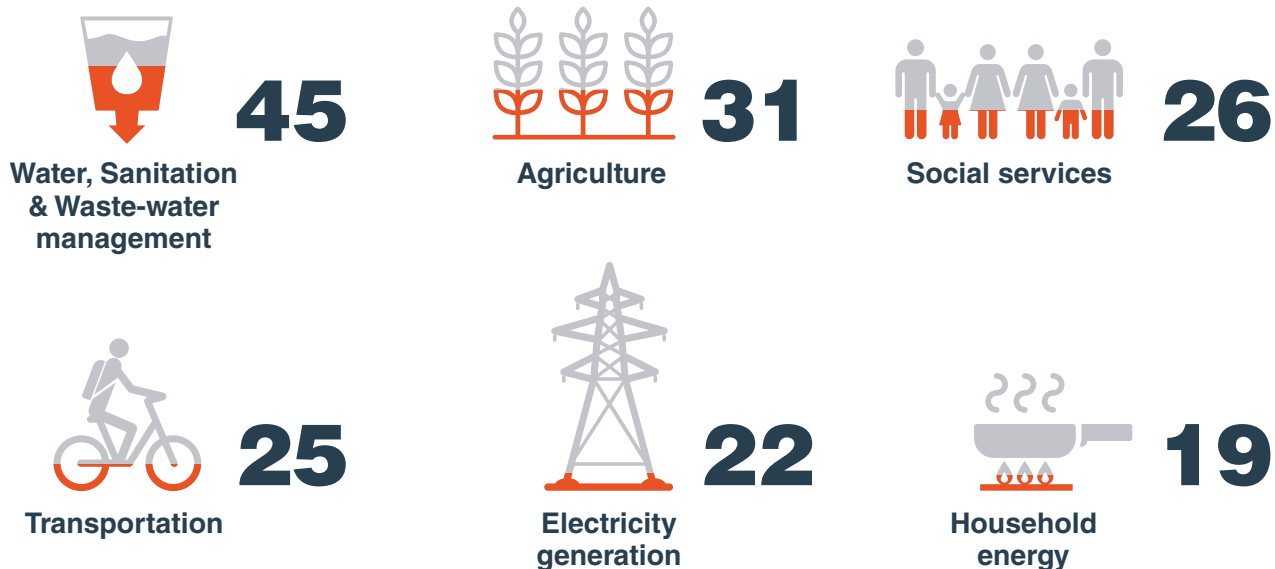
Main priorities in the national health and climate change strategy/plan that are currently unfunded (43 country respondents, multiple responses possible)⁹



⁹ Responses provided were open-ended and coded into the above categories. Six countries responded 'most priorities are currently unfunded', and were not counted in individual categories; two countries responded 'all priorities are funded'; 16 countries responded 'unknown or budget not yet decided/approved'. Responses for vulnerability and adaptation assessments for health frequently specified the need for further investigation at a subnational level or for assessments to include vulnerable population groups.

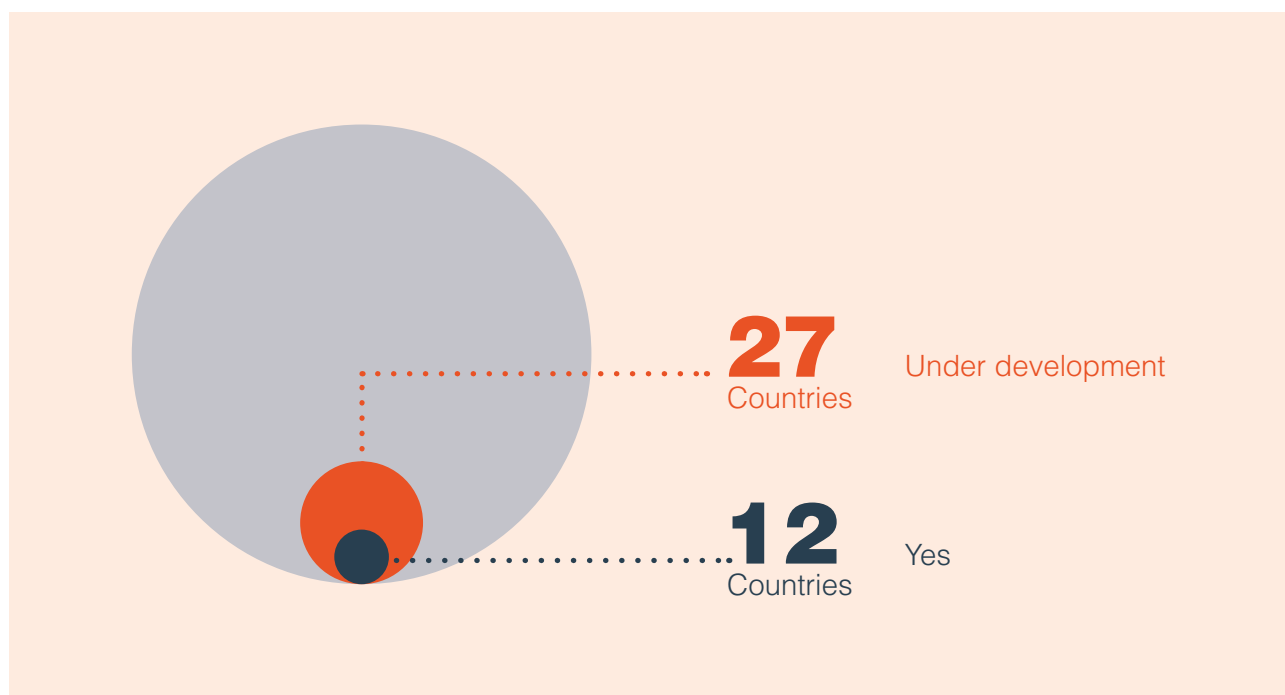
Multisectoral collaboration

Number of countries that reported a memorandum of understanding or an agreement in place with the health sector outlining specific roles and responsibilities in relation to health and climate change policy (101 country respondents)



Health workforce

Number of countries that have developed a national curriculum to train health personnel on the health impacts of climate change (101 country respondents)







A critical step in building climate-resilient health systems and developing an HNAP is establishing the evidence base to support decision-making. One key aspect of this is undertaking a vulnerability and adaptation assessment for health to: analyse current and future burden of climate-sensitive diseases due to climate change, assess geographical and population vulnerability, as well as identify, appraise and prioritize adaptation options for the health sector (5). Ideally, a vulnerability and adaptation assessment for health is conducted before the development of the HNAP and periodically in the future to inform upcoming iterations.

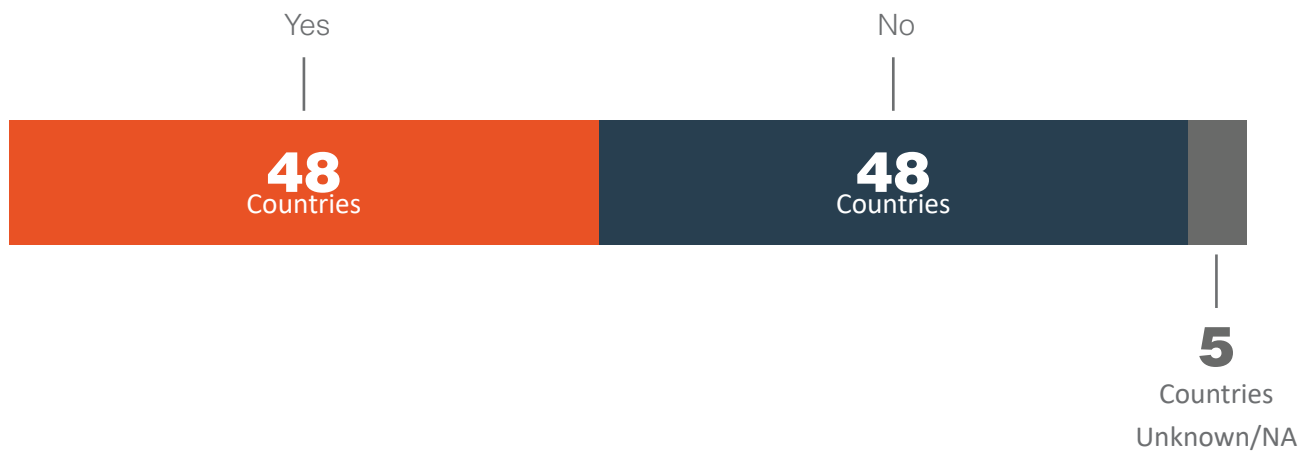
- Forty-eight (out of 101) countries reported to have conducted a vulnerability and adaptation assessment for health (see page 9).
- Nearly two-thirds of countries (31 out of 48) indicated that assessment findings had strongly or somewhat influenced policy prioritization. In contrast, only about 40% of countries (20 out of 48) indicated that assessment findings strongly or somewhat influenced the allocation of human and financial resources (see page 10).
- A qualitative analysis of 31 vulnerability and adaptation assessments for health collected as part of the survey process indicated that the comprehensiveness and scope of the assessments varied widely. Approximately half of the documents reviewed were developed by the national health services and focused specifically on the health risks of and adaptation to climate change. A majority of the remaining documents were climate change vulnerability and adaptation assessments that included a chapter or section on health or all-hazard risk assessments (see page 11 for more details).
- A range of climate-sensitive diseases were identified in the vulnerability and adaptation assessments for health with the most-prioritized being vector-, water- and food-borne diseases (nearly three-quarters of 31 documents assessed), followed by direct injuries/deaths and heat-related illnesses (approximately two-thirds of 31 documents assessed). Mental health was the least referenced climate-sensitive disease with only six documents highlighting mental health as a priority⁸ (see page 11).
- Countries provided varying level of detail regarding adaptation priorities with over a third of assessments concentrating on general adaptation options⁹ mostly focused on health systems resilience. Almost a quarter of the assessments focused on covering both general adaptation options and activities targeting specific climate-sensitive diseases.

8 Other health risks mentioned included occupational health, skin diseases and health impacts of migration or displacement exacerbated by climate change.

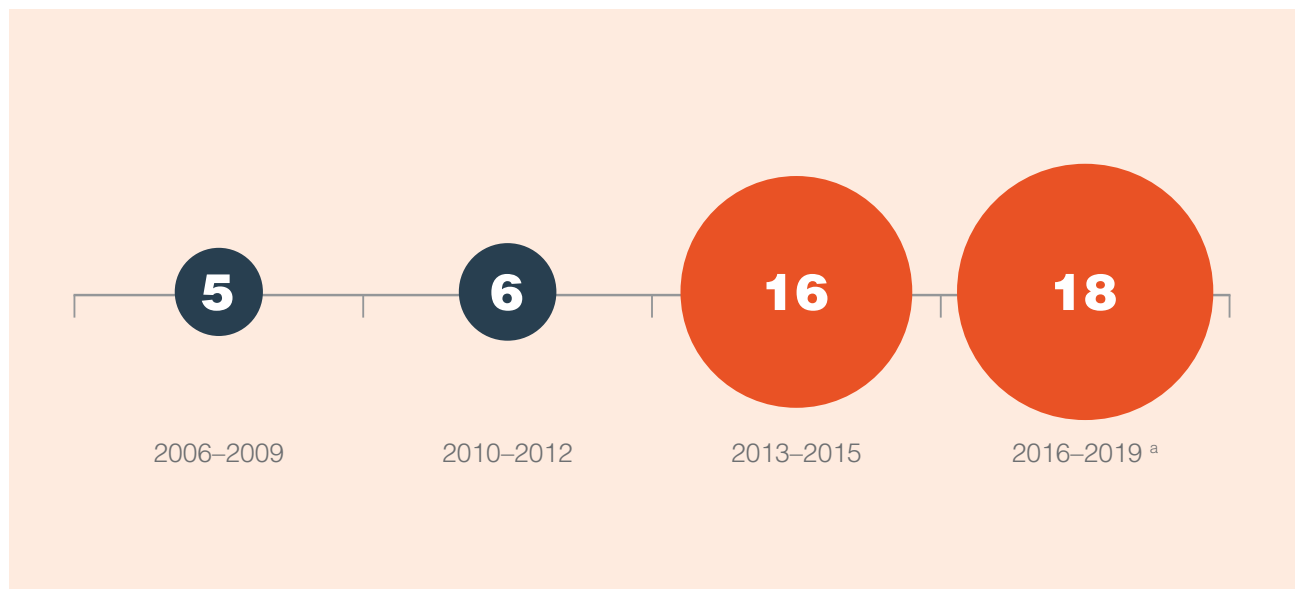
9 Key themes of the general adaptation options included: health information systems; policy/governance; integrated risk surveillance; health promotion; human and financial resources; and coordination.

Vulnerability and adaptation assessments for health

Number of countries that have conducted a vulnerability and adaptation assessment for health in relation to climate change (101 country respondents)¹²



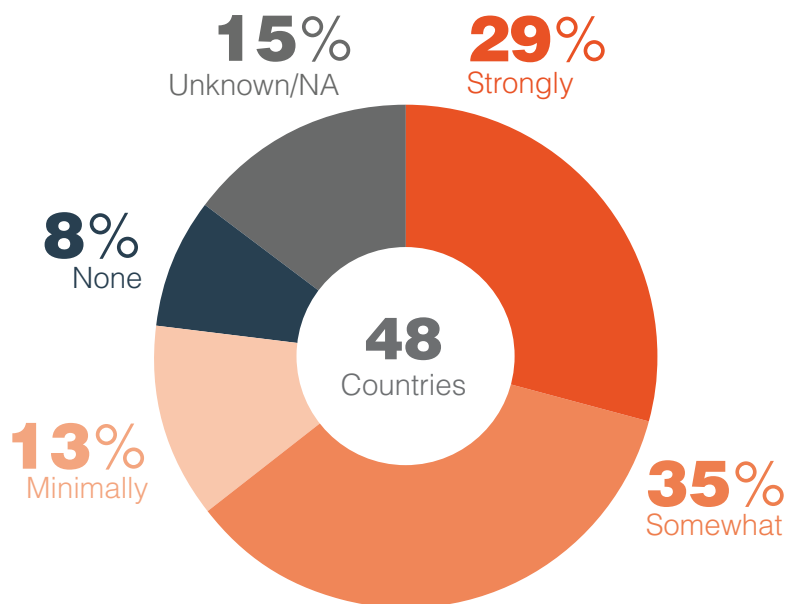
Year of completion of vulnerability and adaptation assessments for health (45 country respondents)¹³



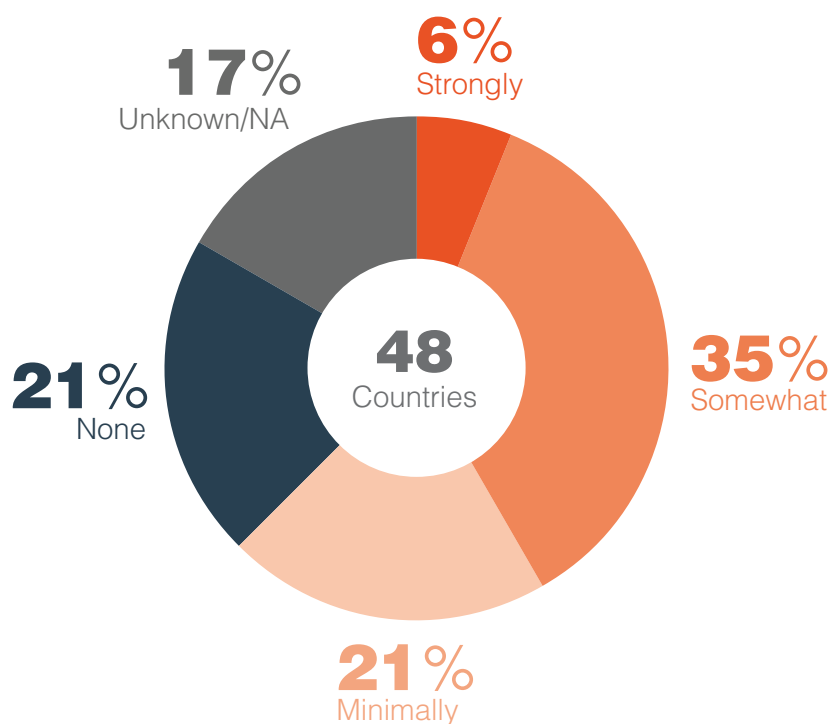
¹² One document in this analysis was published in early 2019, and is considered an exception as most documents were collected during the 2017/2018 period of the survey.

¹³ Respondents may have provided the year of completion or the year of publication of the assessment.

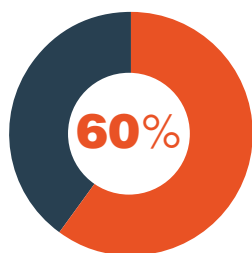
Influence of findings of vulnerability and adaptation assessments for health on policy prioritization as reported by national health services (48 country respondents)



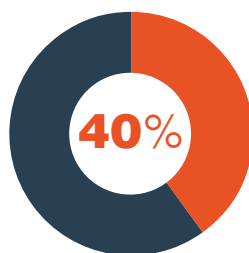
Influence of findings of vulnerability and adaptation assessments for health delete on human and financial resource allocation prioritization as reported by national health services (48 country respondents)



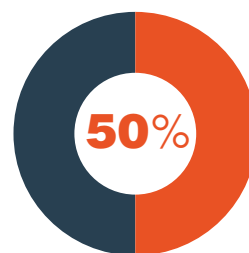
Based on a qualitative analysis of 31 documents collected (14,15)



Included subnational element(s)



Applied mix of both qualitative and quantitative methods of analysis



Mentioned climate-resilient health infrastructure¹⁶

Main climate sensitive diseases identified in the vulnerability and adaptation assessments for health (based on a qualitative analysis of 31 documents collected)¹⁷



23
Countries

Vector-borne diseases



23
Countries

Water- and food-borne diseases



21
Countries

Direct injuries/deaths



21
Countries

Heat-related illnesses



6
Countries

Mental health issues

14 Although a basic evaluation tool was developed to assess documents, the review process included documents with: varying levels of detail, some constraints due to translation and some subjective decision-making; therefore these findings were considered indicative values.

15 Subnational in this context included any example of an assessment at a regional, state or city level, even if for only one city.

16 The level of detail on climate resilient health infrastructure varied but was mostly discussed in terms of impacts of extreme weather events and often extended beyond health infrastructure to include Water, Sanitation and Hygiene (WASH) infrastructure and facilities in broad terms.

17 Other responses that were mentioned included: child health, occupational health, skin diseases, health impacts of climate change induced migration or displacement and impacts on the health system (infrastructure).

Emergency preparedness and planning

Number of countries for which an early warning system exists for the specified climate hazard AND a health sector response plan is in place (101 country respondents)

Early warning system and health sector response plan in place

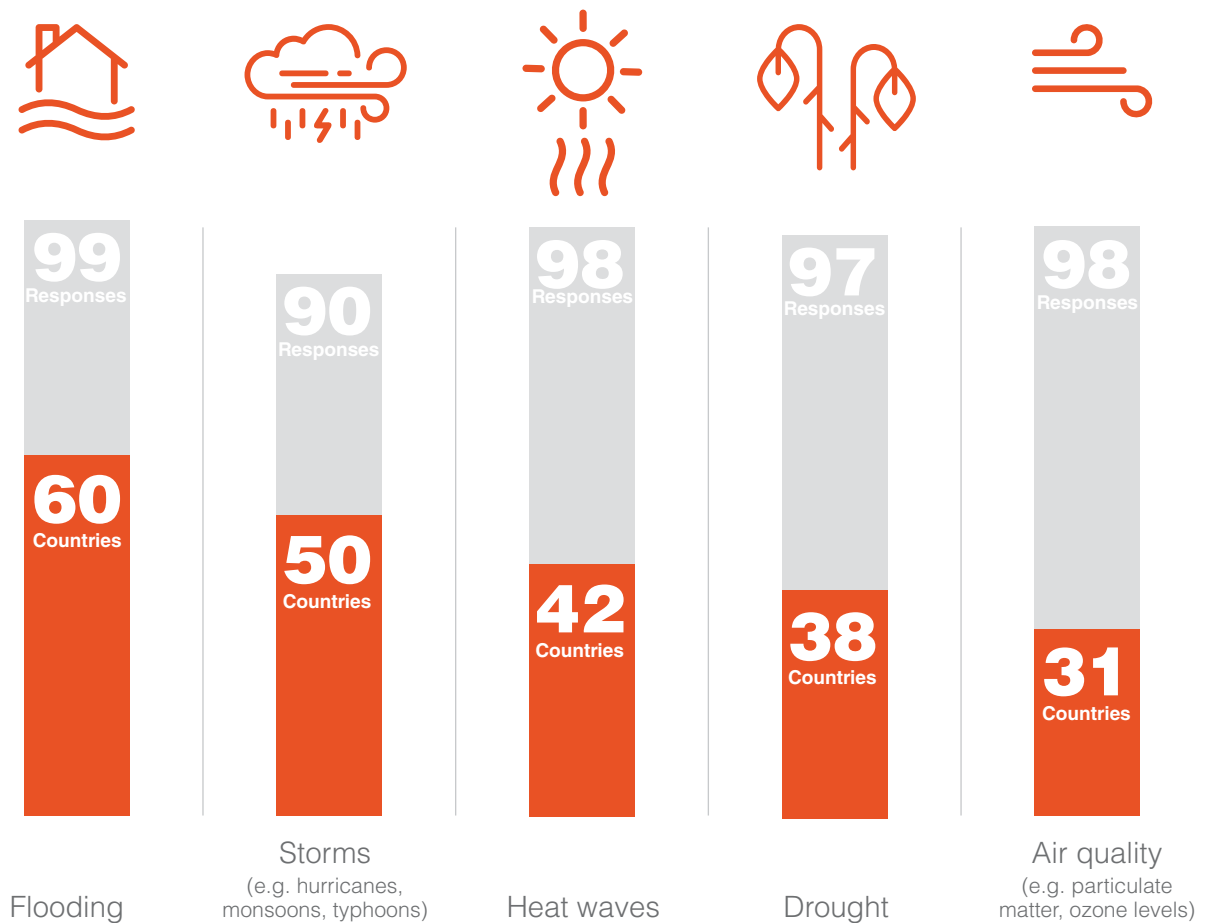




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International climate finance

Developing countries that have limited capacity to allocate national budgetary resources to the development and implementation of their NAP are most vulnerable to the effects of climate change.

Thus, several financial support mechanisms have been established under the UNFCCC for supporting climate change planning and assessment processes (such as NAP development) as well as for implementation of relevant adaptation and mitigation programmes (such as the Global Environment Facility, the Adaptation Fund and the Green Climate Fund (GCF) (6). Other organizations, such as bilateral donors, multilateral agencies and philanthropic organizations, also provide opportunities for accessing climate financing.

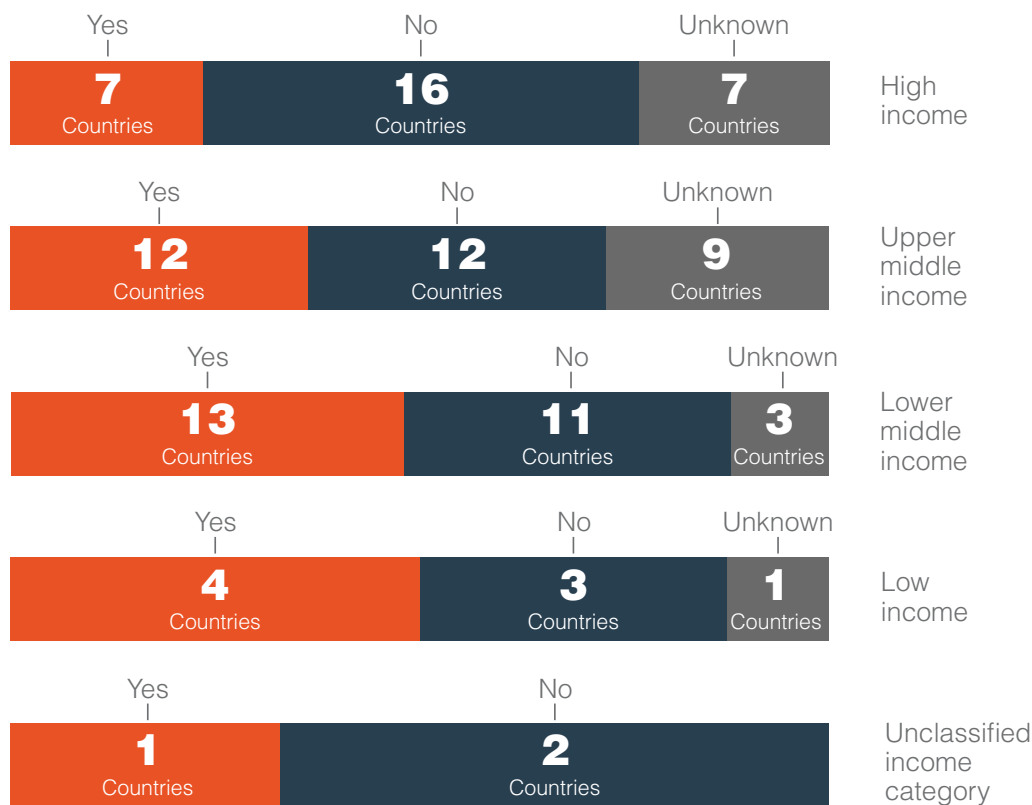
- Thirty-seven (out of 101) countries reported accessing international climate finance for health adaptation (see page 15).
- The three most common challenges in accessing international climate financing were cited as (46 country respondents):
 - Lack of information on opportunities (35 out of 46 countries)
 - Lack of connection of health actors to international climate change processes (28 out of 46 countries)
 - Lack of capacity to prepare country proposals (25 out of 46 countries)

A recent report by the GCF found that although health was mentioned as a priority area in more than 50% of submitted Nationally Determined Contributions (NDCs), only about one-tenth of country programmes/briefs and only five GCF portfolios or pipeline projects included health-related activities. Distribution of climate funds for health-related activities were less than 6% in GCF and other multilateral climate fund portfolios (7).

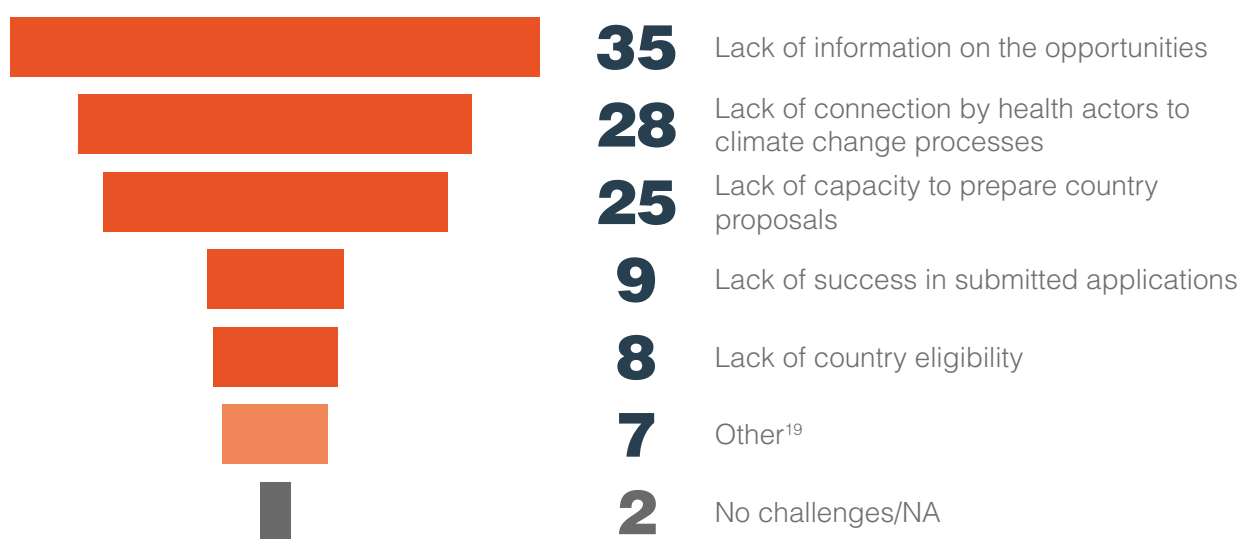
To achieve the goal of “healthy people in healthy communities”, it is crucial that the health sector is suitably represented in relevant climate change processes at the country level (such as NAP, National Communications and NDCs (see Annex 4)) as a way to promote health in other health-determining sectors and identify potential funding opportunities to protect health from climate change.

Number of governments currently accessing international climate finance

37 (out of 101) countries¹⁸ reported that they are currently accessing international climate finance



Major challenges in accessing international funds for climate change and health work (46 country respondents, multiple responses possible)



18 High income and upper middle income countries may include small island developing states or territories.

19 Other (Lack of knowledge/training on climate and health issues, applications completed by other ministries do not fully capture needs of health sector, projects are not focused on health-related activities, lack of co-financing, lack of information sharing between agencies, health sector is not considered a part of the climate change processes, lack of recognition of climate change impacts on health)

Future areas for investigation

This report examined the progress in national health sector response to the risks posed by climate change. However, a number of opportunities for further investigation exist, specific areas for assessment include:

- The inclusion of health in international climate mechanisms in the UNFCCC processes, specifically in the development of HNAPs and the inclusion of health in NDCs;
- The solutions to scaling-up implementation of national health and climate change strategies/ plans and to effectively monitor progress on building climate resilient health systems;
- The inclusion of health cobenefits in national health and climate change strategies/ plans as well as the representation of health in climate policies and plans in health-determining sectors, such as transportation, energy, agriculture, water, sanitation and wastewater management;
- The barriers faced by countries to conduct climate change and health vulnerability and adaptation assessments and defining quality criteria for these assessments;
- The availability, feasibility and limitations of health surveillance systems that effectively integrate climate/weather considerations, including climate-informed health early warning systems to protect populations from climate threats;
- The barriers and solutions to accessing international climate finance for health adaptation and mitigation.

Annexes

Annex 1: Methodology and Validation

This 2018 WHO Health and Climate Change Survey report summarizes data collected from 101 countries and territories. The representation of participating countries by WHO region, World Bank income group and small island developing States and Territories inclusion is illustrated on page iv.

Country survey process

All WHO Member States were invited to participate in the 2017/2018 WHO Health and Climate Change Survey as part of the WHO UNFCCC Health and Climate Change Country Profile Initiative.

Data were collected during 2017/2018 to align with the regional data collection processes. To offset this long timeframe, country participants from the WHO South-East Asia Regional Office and WHO Regional Office for the Eastern Mediterranean who responded in the first half of 2017 were invited (during the first half of 2018) to review and update responses if required. Ten country responses were updated as part of this process.

Four countries that provided responses in the first half of 2019 as part of the WHO UNFCCC Health and Climate Change Country Profile Initiative, were included in the analysis.

While all WHO Member States were invited to participate in the survey, countries that have previously participated in the WHO UNFCCC Health and Climate Change Country Profile project or that currently have WHO supported projects on health and climate change may have been more aware of the initiative and more likely to respond to the survey, possibly resulting in a small response bias. WHO has also launched a Special Initiative on Health and Climate Change in Small Island Developing States (SIDS) with related action to develop health and climate change country profiles for SIDS. This has led to a high representation of SIDS in the 2017/2018 country survey.

Data quality review

Survey responses were reviewed for consistency, completeness and data entry errors. Countries were contacted through their respective WHO regional and country focal points for clarification and follow-up on identified data issues. Data quality review was recorded through a shared tracking document and the global database, and the analyses were updated accordingly.

Collection and review of national documents

As part of their submissions, countries that indicated they had national health and climate strategies/plans or had conducted a vulnerability and adaptation assessment for health were asked to share a link or hard copy of these documents. Additionally, in some cases, documents available publicly or through a WHO-led country project on health and climate change were collected as part of the validation and review process. Forty-one national health and climate change strategies/plans and 31 vulnerability and adaptation assessments for health were reviewed as part of this process.

The first step in the review process was to create a library of documents along with a tracking tool to capture relevant descriptive metadata. Two separate tracking tools were created to collect information on national health and climate change strategies/plans, as well as vulnerability and adaptation assessments for health. Both these tools were reviewed and adjusted to ensure that all relevant data and information were collected, as well as any validation issues between the submitted documents and survey responses were checked. Data and information were extracted from a standardized desk review on the national health and climate change strategies/plans, and vulnerability and adaptation assessments for health using the appropriate tracking tool. Several documents needed further translation into English. However, an initial review was still conducted to gather as much information as possible. Once the matrix was populated, basic analyses were conducted to categorize, describe, visualize and summarize findings. In addition, more in-depth analyses were conducted within the national health and climate change strategies/plans, the vulnerability and adaptation assessments for health, and across documents to further investigate several components.

Comparison with external publications and internal reporting/projects

A review of previous publications on national health and climate change strategies/plans or vulnerability and adaptation assessments for health was undertaken to support the validation exercise. This included a comparison of previous findings from the 2015 WHO UNFCCC Health and Climate Change Country Profiles (1), a review of international progress on health vulnerability and adaptation assessments by Berry et al. (2018)(8), and a review of the 2017 synthesis report – Status of the development of health national adaptation plan for climate change in South-East Asia (9). These publications were valuable resources for the initial data review process.

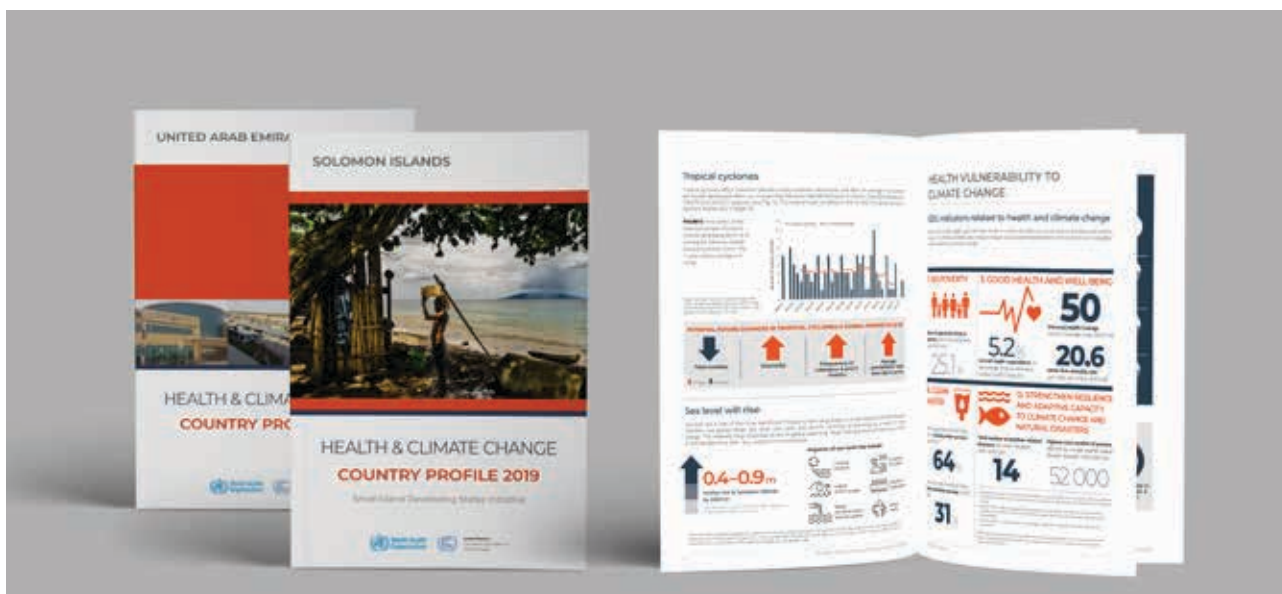
Country participants

Algeria, Anguilla, Antigua And Barbuda, Argentina, Australia, Bahrain, Belarus, Belize, Bhutan, Brazil, British Virgin Islands, Brunei Darussalam, Burundi, Cambodia, Canada, Chile, China, Colombia, Cook Islands, Costa Rica, Côte d'Ivoire, Croatia, Cuba, Cyprus, Czechia, Dominica, Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, Fiji, Finland, Georgia, Germany, Ghana, Grenada, Guatemala, Guyana, Honduras, Hungary, Iceland, Indonesia, Iran (Islamic Republic of), Iraq, Israel, Jamaica, Jordan, Kenya, Lao People's Democratic Republic, Latvia, Lebanon, Lesotho, Libya, Lithuania, Madagascar, Malawi, Malaysia, Maldives, Malta, Mauritius, Mexico, Montserrat, Morocco, Myanmar, Nepal, New Zealand, Niger, Nigeria, Norway, Occupied Palestinian Territories, Oman, Pakistan, Palau, Paraguay, Peru, Philippines, Qatar, Romania, Saint Lucia, Samoa, Sao Tome And Principe, Singapore, Slovakia, Slovenia, Solomon Islands, Sri Lanka, Sudan, Sweden, Syrian Arab Republic, Tajikistan, Thailand, Timor-Leste, Trinidad and Tobago, Tunisia, Tuvalu, Ukraine, United Arab Emirates, Vanuatu, Venezuela (Bolivarian Republic of), Viet Nam.

Annex 2: WHO UNFCCC Health and Climate Change Country Profile Initiative

The WHO UNFCCC Health and Climate Change Country Profile Initiative forms the foundation of WHO's monitoring of national progress on health and climate change. Country profiles are prepared in collaboration with ministries of health and other partners, such as ministries of environment and national meteorological services. The aims of the Initiative are to increase awareness of the links between health and climate change, promote strengthening of national evidence for decision-making and measure progress in building climate-resilient health systems.

Country profiles also support ministries of health and other health stakeholders in raising awareness and advocating for health in national and global climate change processes, such as national planning and national reporting to the UNFCCC. Almost 50 country profiles have been published (1), and are revised regularly. Participation is estimated to increase to 100 countries by the end of 2021. As the Initiative regularly updates profiles and works with a growing number of ministries of health and other relevant bodies, it is ideally placed to monitor progress and engage with governments on health and climate change issues.



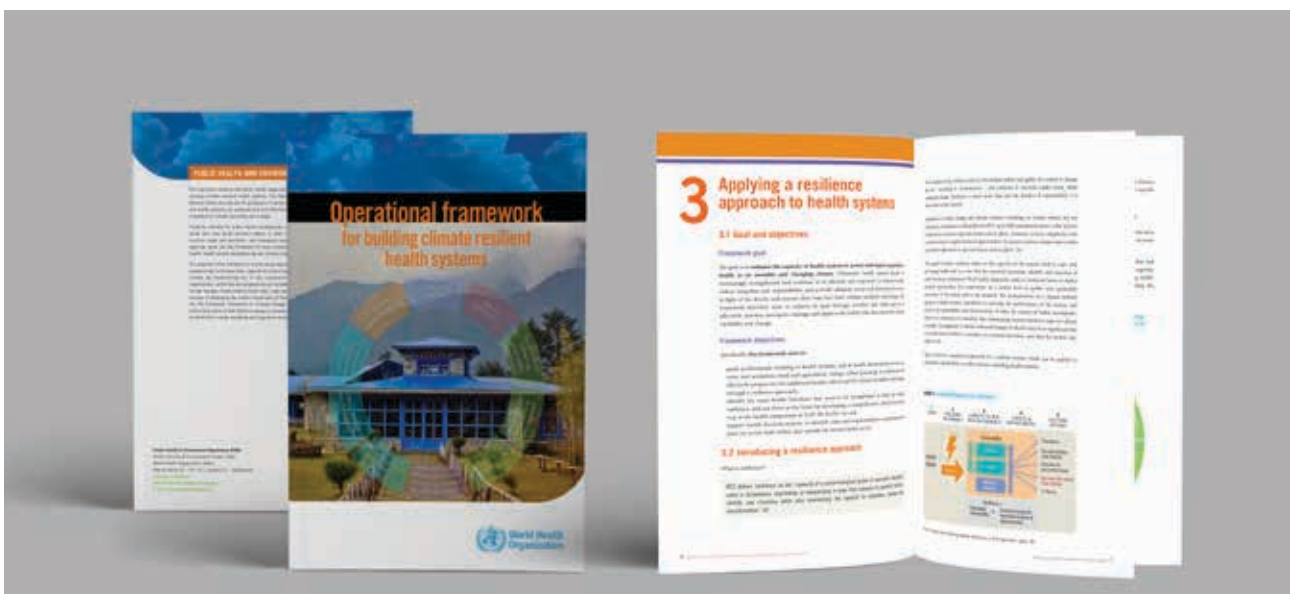
www.who.int/globalchange/resources/countries/en

Annex 3: Health National Adaptation Plan (HNAP)

The Paris Agreement (10), signed at COP21 in 2015 (11), builds on the UNFCCC and is a global safeguard for human health. The Agreement emphasizes mitigation, with the aim to limit global temperature increase to well below 2 degrees Celsius, while pursuing efforts to limit the increase to 1.5 degrees; as well as adaptation; and means of implementation (finance, technology transfer and capacity building), to support countries vulnerable to the impacts of anthropogenic climate change, many of which have contributed very little to global emissions (12). Several initiatives have been established as part of the UNFCCC/Paris Agreement agenda, including the NAP process and related climate financing mechanisms. The NAP process is intended to provide support for medium- and long-term adaptation planning needs in Least Developed Countries (LDCs) and other developing countries to build resilience to climate change across *all* relevant sectors (4).

An HNAP can be defined as *a plan developed by the ministry of health which is included as the health component in the overall NAP*, or if the health sector develops a climate change and health plan before the NAP is finalized, then the HNAP is *discussed and agreed with the NAP team for future inclusion in the NAP*. HNAP development is critical for ensuring that the health impacts of climate change are prioritized at all levels of planning. This includes linking the health sector to national and international climate change agendas and other health-determining sectors while enhancing the identification of opportunities to access climate funding both for building health resilience and promoting health cobenefits for adaptation and mitigation policies and programmes by other sectors.

The WHO has published guidance for the HNAP development process that aligns with the technical guidelines for: the NAP process (13) and the proposed technical content (14). A flexible and context-specific approach that is country-driven and -owned is encouraged. The HNAP should be based on best available evidence and be comprehensive in its coverage of relevant climate-sensitive diseases and health outcomes, as well as the elements of a climate resilient health system (14). It should comprise a feasible implementation plan with specific adaptation options, timeframes, roles and responsibilities as well as a monitoring and evaluation plan that incorporates opportunities for periodic HNAP revisions. The process should also maximize synergies across sectors, particularly health-determining sectors, and promote cross-sectoral collaboration and cooperation.



Annex 4: Health in Nationally Determined Contributions (NDCs)

In anticipation of the COP21 in Paris in 2015 (11) the UNFCCC invited countries to submit long-term climate change mitigation and adaptation goals, i.e. their Intended Nationally Determined Contributions (INDCs), to meet the targets of the Paris Agreement. INDCs, with some changes, became NDCs with formal ratification, agreement, approval or accession of the Agreement (15). 190 Parties, representing 97% of all Parties to the UNFCCC, had submitted an (I)NDC by April 2016 (16). NDCs are communicated every five years and submissions may include new or updated goals.

NDCs present a country's mitigation and adaptation goals across all climate-sensitive sectors, including health; submissions vary widely among countries. An analysis of 184 (I) NDC submissions found that of the 65% that mentioned health, 74.4% included health in the context of adaptation (17). While health is "among the five sectors most often described as vulnerable" to climate change in NDCs (18), tangible adaptation actions for health are still lacking (19). An online tool that maps NDC activities to the Sustainable Development Goals (SDGs) indicates that only 3% of all NDC climate actions are linked to health-related SDG3 (19, 20). Ninety-six percent of these actions were adaptation activities with the majority focused on communicable diseases (20). Health actions or aims were more commonly elaborated in the NDCs of low income (48%) and lower middle income (50%) countries than high income countries (15%), indicating the presence of greater underlying health vulnerabilities in developing countries and the recognized need to address them (18).

While health is well-recognized as a climate-sensitive sector in NDCs of countries, in order to protect human health and well-being and build climate-resilient health systems it will be important to reinforce this recognition with concrete health-related climate actions.

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