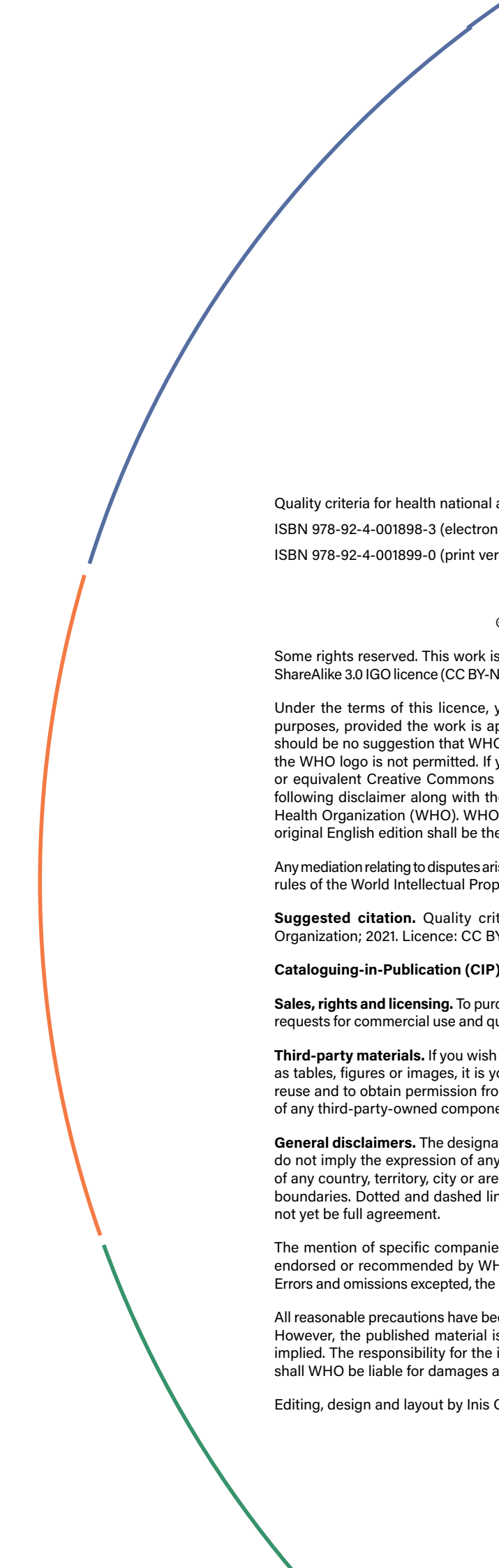


QUALITY CRITERIA FOR HEALTH NATIONAL ADAPTATION PLANS



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Quality criteria for health national adaptation plans
ISBN 978-92-4-001898-3 (electronic version)
ISBN 978-92-4-001899-0 (print version)

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Cataloguing-in-Publication (CIP) data. CIP data are available at <http://apps.who.int/iris>.

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Editing, design and layout by Inis Communication

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ACKNOWLEDGEMENTS



This guidance document on quality criteria for health adaptation planning represents the work and contributions from various experts within and outside the World Health Organization (WHO), as well as lessons learnt while supporting countries in their efforts to develop health components of national adaptation plans. WHO extends its gratitude to Health Canada, Norway and the United Kingdom Department for International Development for their financial and technical support to develop this guidance.

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WHO appreciates inputs from the following contributing authors and reviewers, who made invaluable contributions to the current document: Itsnaeni Abbas (WHO Indonesia), Julie Amoroso-Garbin (UNFCCC), Borko Bajic (Institute of Public Health, Montenegro), Hamed Bakir (WHO Regional Office for the Eastern Mediterranean), Peter Berry (Health Canada), Mina Brajovic (WHO Montenegro), Kristie Ebi (University of Washington), Jonathan Drewry (Pan American Health Organization (PAHO)), Nasir Hassan (WHO Regional Office for the Western Pacific), Inge Heim (Croatian Academy of Medical Sciences), Antoinette Kaic-Rak (WHO Croatia), Vladimir Kendrovski (WHO Regional Office for Europe), Saori Kitabatake (WHO Fiji), Waltaji Terfa Kutane (WHO Mozambique), Kelera Oli (WHO Fiji), Guy Mbayo (WHO Regional Office for Africa), Maylin Meincke (Independent Consultant), Raja Ram Pote Shrestha (WHO Nepal), Deryck Ramkhelawan (Ministry of Health Grenada), Malala Ranarison (WHO Madagascar).

ACRONYMS AND ABBREVIATIONS

COP	Conference of the Parties
CSHRs	climate-sensitive health risks
GCF	Green Climate Fund
GEF	Global Environment Facility
GHG	global greenhouse gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
HNAP	Health National Adaptation Plan
LDCs	least developed countries
LEG	LDC expert group
LGBTQI	lesbian, gay, bisexual, transgender, queer and intersex
M,E&R	monitoring, evaluation and reporting
MoE	Ministry of Environment
MoH	Ministry of Health
NAP	National Adaptation Plan
NAPA	National Adaptation Programme of Action
NDCs	Nationally Determined Contributions
SDGs	Sustainable Development Goals
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
V&A	climate change and health vulnerability and adaptation assessment
WASH	water, sanitation and hygiene
WHO	World Health Organization

EXECUTIVE SUMMARY



The Paris Climate Agreement, signed at the 21st session of the Conference of the Parties (COP21) in 2015, builds on the United Nations Framework Convention on Climate Change (UNFCCC), and if effectively implemented could be considered a global safeguard for human health. The Agreement emphasizes mitigation in efforts to prevent a global temperature rise of over two degrees Celsius (possibly even 1.5 degrees Celsius); and adaptation to support countries that are vulnerable to the impacts of anthropogenic climate change despite many having contributed very little to global emissions (1).

Ongoing initiatives of the UNFCCC to support countries in addressing the challenges of climate change include the process to formulate and implement national adaptation plans (NAPs) and climate financing mechanisms. Article 7 of the Paris Agreement obliges States to take action on adaptation positioning NAPs as central to meeting the goals of the Paris Agreement. Paragraph 9 states that “Each Party shall, as appropriate, engage in adaptation planning processes and the implementation of actions, including the development or enhancement of relevant plans, policies and/or contributions” (2). The process to formulate and implement NAPs is intended to provide support for the 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 (3).

A Health National Adaptation Plan (HNAP) is defined by the World Health Organization (WHO) as a plan developed by a country’s Ministry of Health as part of the NAP process. HNAP development is critical for: ensuring prioritization of action to address the health impacts of climate change at all levels of planning; linking the health sector to national and international climate change agendas, including an increased emphasis on health cobenefits of mitigation and adaptation actions in other sectors; promoting and facilitating coordinated and inclusive climate change and health planning among health stakeholders at different levels of government and across health-determining sectors; and enhancing health sector access to climate funding. The HNAP outlines actions to build climate-resilient health and climate-resilient health systems that can anticipate, absorb and transform in a changing climate to protect population health while improving the management of other health threats.

The WHO has published a guidance for developing the HNAP (4) describing the principles and fundamental concepts of the national health adaptation planning process, critical elements of health adaptation to climate change, and steps in developing the plan. The WHO HNAP guidance aligns with the technical guidelines to formulate and implement NAPs developed by the LDC expert group (LEG) (5). Additionally, the WHO developed the *Operational framework for building climate resilient health systems* (6), which guides countries in developing a systematic and comprehensive approach to addressing the health impacts of climate change. A flexible and context-specific approach that is country-driven and -owned is encouraged. The HNAP should be based on the best available evidence and be comprehensive in its coverage of relevant climate-sensitive health risks and of the proposed actions to strengthen health resilience (6). It should include a feasible implementation plan with specific timeframes, roles and responsibilities for each adaptation action, and a monitoring and evaluation plan that incorporates opportunities for regular HNAP revisions and updates. The process and final plan should also maximize synergies across sectors, particularly health-determining sectors, and promote cross-sectoral collaboration and cooperation for health.

Countries often face challenges in the design, development and implementation of HNAPs. This document should be used alongside the HNAP guidance as additional support in designing and developing a quality HNAP adaptable to specific country contexts.

The criteria included in this document reflect the lessons learned by the WHO in its support to countries in developing HNAPs as part of the process to formulate and implement NAPs since 2012. A review of existing HNAPs, other relevant documentation and key expert consultations highlighted some of the key elements of developing a quality HNAP, around which these quality criteria are proposed.

The quality criteria cover six topic areas:

1. Leadership and enabling environment
2. Cross-sectoral coordination and policy coherence
3. Comprehensive coverage of climate-sensitive health risks
4. Comprehensive coverage of adaptation options and actions
5. Resourcing
6. Monitoring, evaluation and reporting

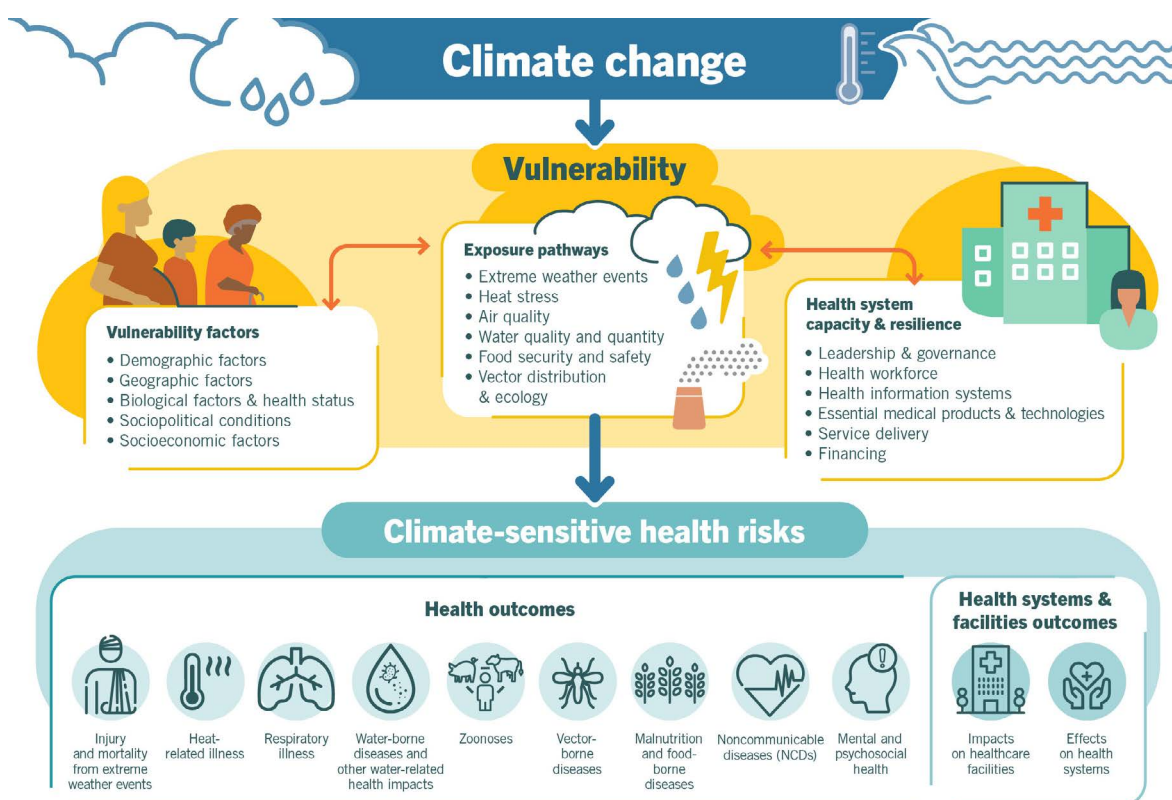
The proposed criteria are not prescriptive and should be adapted to dynamic country contexts, uncertain and changing climatic conditions, and new knowledge and technologies. Country case studies are incorporated throughout the document to demonstrate practical applications of these criteria in specific settings.

INTRODUCTION

BACKGROUND

Climate change impacts health directly (such as injury and death resulting from extreme weather events) and indirectly (such as increased vector-borne disease spread, malnutrition and mental health issues), and undermines the social and environmental determinants of health, including clean air, safe drinking water, food and nutrition security, and safe shelter. Figure 1 describes examples of climate-sensitive health risks, exposure pathways and vulnerability factors. According to very conservative figures by the World Health Organization (WHO), climate change is expected to cause approximately 250 000 additional deaths per year due to malnutrition, malaria, diarrhoea and heat stress alone between 2030 and 2050. The effects of climate change already place an increased burden on health systems, which is particularly problematic for countries and communities with weak health infrastructure. The strain on health systems is expected to further increase as temperatures rise.

Figure 1. Major health risks associated with climate change



Climate change threatens progress made in health and development in recent decades, and inaction multiplies future health risks of climate change. It is likely to halt or even reverse development gains in many countries. Addressing the health impacts of climate change is not only critical to the global development agenda and achievement of the Sustainable Development Goals (SDGs), but gains in achieving these goals will contribute to building health system resilience. SDGs 2 Zero Hunger, 3 Good Health and Well-being, 6 Clean Water and Sanitation, 7 Affordable and Clean Energy, 11 Sustainable Cities and Communities, and 13 Climate action are all directly relevant to climate change and health action. The impacts of climate change on health, however, affect nearly all SDGs in some way. Thus, active engagement of the health sector in the national and international climate change agenda and national adaptation planning is crucial.

In 1992, the United Nations Framework Convention on Climate Change (UNFCCC) was adopted by countries and the UNFCCC Secretariat was established to support the global response to climate change. As part of this response, the process to formulate and implement national adaptation plans (NAPs) was instituted at the 16th session of the Conference of the Parties (COP16; decision 1/CP.16) (7). The process to formulate and implement NAPs facilitates the assessment of climate vulnerabilities and the mainstreaming of climate change in national planning, and advances adaptation, particularly in least developed countries (LDCs) and other developing countries (8).

The two objectives of the process to formulate and implement NAPs are:

“(a) To reduce vulnerability to the impacts of climate change, by building adaptive capacity and resilience;

(b) To facilitate the integration of climate change adaptation, in a coherent manner, into relevant new and existing policies, programmes and activities, in particular, the development of planning processes and strategies, within all relevant sectors and at different levels, as appropriate.” (9).

Several technical and financial support mechanisms for NAP formulation have been established under the UNFCCC (8) including: the LDC expert group (LEG) (10), the Adaptation Committee (11), and several climate financing mechanisms, such as the Global Environment Facility (GEF) (12)¹ and the Green Climate Fund (GCF) (13). In 2012, the LEG developed guidelines for the NAP process, including technical guidance on the development of NAPs (5), to assist Parties and organizations assisting the Parties with regards to adaptation.

¹ Through the Least Developed Countries Fund and the Special Climate Change Fund.

PROCESS OF BUILDING CLIMATE-RESILIENT HEALTH

Box 1. Definitions

In this guidance document, the following three similar and interrelated terms are defined:

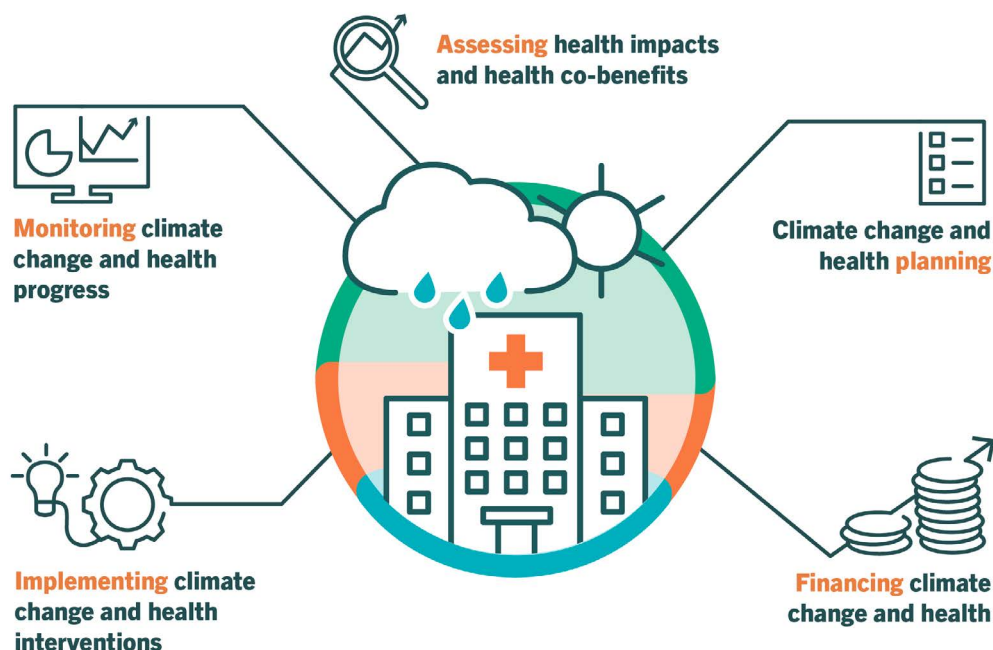
► **Health National Adaptation Plan (HNAP):** is a plan led by the Ministry of Health, as part of the National Adaptation Plan (NAP) process. 'HNAP' refers to the plan/document itself.

► **HNAP process:** includes activities associated with developing the HNAP (document), including the conduct of climate change and health vulnerability and adaptation assessment, implementing the plan, monitoring and evaluating the outputs, outcomes and impacts, and using these learnings to inform regular updates of the plan.

► **Process of building climate-resilient health:** includes all activities associated with building climate-resilient health, including assessing the health impacts of climate change and health co-benefits of mitigation actions, climate change and health planning, financing, implementation of climate change and health interventions and monitoring progress (Figure 2). These activities may be integrated into the overall national climate change process, such as the Nationally Determined Contributions (NDCs) and the HNAP.

The HNAP process, along with the HNAP, contributes to the overall process of building climate resilience in the health sector.

Figure 2. Process of building climate-resilient health



WHO has been supporting countries in building climate-resilient health, including health adaptation planning, for over 12 years. In 2012, the climate change and health programme was expanded to include specific support to countries in the representation of health in the process to formulate and implement NAPs. WHO supports health ministries in many aspects of the process of building climate-resilient health, including conducting “climate change and health vulnerability and adaptation assessments” (henceforth referred to as “V&A” in this document) and developing a HNAP, as part of the NAP process. Where the health sector is further advanced in adaptation planning than the national process, the HNAP may be developed before the NAP is finalized.

WHO provides ongoing support for the HNAP process through workshops, trainings and other capacity-building activities at global, regional and national levels. This quality criteria for HNAPs will be integrated into the overall package of support to countries for HNAP development.

Objectives of the HNAP include:

- Representation of the health sector in the NAP process;
- Prioritization of the health impacts of climate change at all levels of planning;
- Inclusion of health in national and international climate change agendas;
- Increasing access to climate funding for the health sector;
- Promotion and facilitation of coordinated and inclusive climate change and health planning among health stakeholders at different levels of government and across health-determining sectors; and
- Building of a climate-resilient health system that can anticipate, absorb and transform in a changing climate, to protect population health while at the same time improving the management of other health threats.

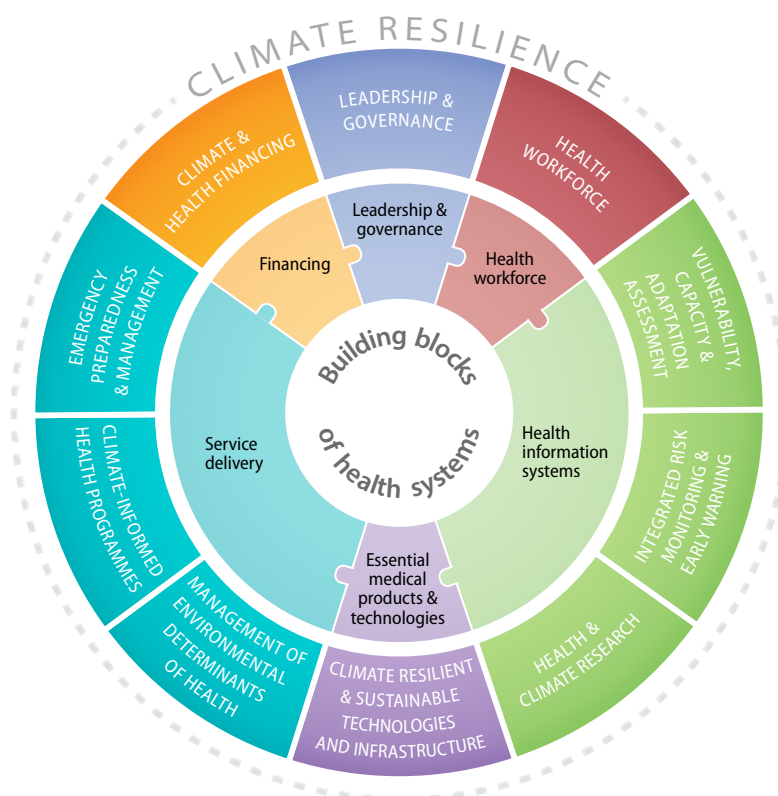
To support countries in the development of a HNAP, WHO has developed technical guidance to protect health from climate change through health adaptation planning (HNAP guidance) (4). The HNAP guidance is consistent with the technical guidelines developed by the LEG (5) to support least developed and developing countries in national adaptation planning. This coherence facilitates efficient and effective incorporation of the HNAP in the NAP. Development of the HNAP is necessarily an ongoing process because of changing conditions, accelerating climate change, and the inherent uncertainties in the process.

Some of the challenges faced by countries in developing and implementing their HNAP include:

- Low awareness and understanding of the health impacts of climate change, both in the Ministry of Health and in other health-determining sectors.
- Lack of representation of the health sector in the overall climate change process, including in relation to adaptation (e.g. NAPA). Therefore, although several countries have developed plans or strategies on climate change and health, in many instances these efforts were not mainstreamed in the national climate change process.
- Lack of ongoing representation of the Ministry of Health in the process to formulate and implement the NAP.
- Lack of evidence-base to inform HNAP development.
- Consideration of only a limited number of climate-sensitive health risks.
- Gaps between priority climate-sensitive health risks and the adaptation actions included in NAPs/HNAPs.
- Lack of a comprehensive range of adaptation actions needed to build a climate-resilient health system.
- Lack of resource planning for HNAP implementation, including a strategy to mobilize required funds.

The key technical content to inform the process of building climate-resilient health is summarized in the WHO *Operational framework for building climate resilient health systems* (referred to as "WHO Operational framework" in the rest of this document) (6) (see Figure 3), and is especially relevant to support the development and implementation of comprehensive and systematic plans for health adaptation (such as HNAPs). While the WHO Operational framework mainly targets the health sector for strengthening resilience, it also includes action in key health determining sectors (such as water, sanitation and hygiene (WASH), agriculture and food security).

Figure 3. Operational framework for building climate resilient health systems



PURPOSE AND TARGET AUDIENCE OF THIS GUIDANCE

This guidance presents examples of good practice in HNAP development, drawing upon experience gained since 2012 through WHO's support to countries in developing and implementing HNAPs, and assistance to countries for overcoming challenges in HNAP development. A review of existing HNAPs, other relevant documentation and key expert consultations highlighted some of the key elements of developing a quality HNAP, around which these quality criteria are proposed. These criteria provide further details on the HNAP process and document, to assist countries in developing a comprehensive, feasible and implementable plan. Experiences from countries that have begun the process, developed a HNAP, and/or started implementation, serve as a base for shared learning. The criteria are also intended to guide countries in setting the foundation for a long-term iterative HNAP process. The proposed criteria are not prescriptive and should be adapted to dynamic country contexts, uncertain and changing climatic conditions, and new knowledge and technologies. Country case studies are incorporated throughout the document to demonstrate various practical applications of the criteria.

The target audience for this guidance are Ministry of Health staff, or an equivalent national department responsible for the development and implementation of the HNAP in a country. Secondary audiences include agencies supporting the HNAP and NAP processes in other sectors, nongovernment agencies, bilateral donors, officers in the WHO, and other UN organizations and technical agencies. These criteria do not aim to be used to evaluate existing HNAPs, but rather intend to guide practitioners to raise the standards and ambition of health adaptation planning.

GUIDING PRINCIPLES

A set of guiding principles informs the elements and steps in the process to formulate and implement a NAP and HNAP, and are described in the UNFCCC LEG technical guidelines (5) and adopted in the HNAP guidance (4). The principles are reiterated below because they underpin the criteria and are intended to be considered in the application of this guidance.

- A **country-driven** process ensures ownership by the countries.
- **Evidence-based planning** ensures that health adaptation planning is based on the best available evidence. Any adaptation plan should aim at strengthening the development and availability of evidence, building the data and reducing knowledge gaps, and inform relevant policies.
- **Strengthening existing efforts** towards health adaptation to climate change, including assessments, development and implementation of policies and programmes at local to national levels.
- **Climate-informed health programming** integrates health adaptation to climate change into national health planning strategies, processes and monitoring systems.
- **Non-prescriptive approach** provides a flexible and context-specific approach to health adaptation to climate change, and avoids duplication of efforts. National circumstances as well as available information and experience on health and climate change will determine the scope, institutional arrangements and resources required to implement the HNAP.
- **Cross-sectoral cooperation and coordination** maximizes synergies across sectors, mainly across those that determine health, such as the food, water, energy and housing sectors. This calls for developing relevant health indicators within the adaptation monitoring systems in these sectors, ensuring that health considerations are integrated into their adaptation planning to avoid maladaptation.
- **Integration with the process to formulate and implement the NAP** ensures that the health adaptation plan feeds into and coordinates with the overall NAP.
- An **iterative learning** approach promotes an iterative process for health adaptation to climate change, with time-bound plans which are periodically reviewed and updated.
- **Knowledge sharing and capacity building** promotes inter-country collaboration and harmonizing of adaptation approaches at sub-regional levels and strengthens national capacity on climate change and health which is central to HNAP development and implementation.
- Maximizing **cross-agenda synergies** with other multilateral such as The Sendai Framework and the SDGs.

QUALITY CRITERIA FOR HEALTH NATIONAL ADAPTATION PLANS

The HNAP quality criteria cover six topic areas:

1. Leadership and enabling environment
2. Cross-sectoral coordination and policy coherence
3. Comprehensive coverage of climate-sensitive health risks
4. Comprehensive coverage of adaptation options and actions
5. Resourcing
6. Monitoring, evaluation and reporting.

Table 1. Summary of HNAP quality criteria

Criteria

SECTION 1: LEADERSHIP AND ENABLING ENVIRONMENT

- 1.1 Ministry of Health leads HNAP development
- 1.2 Government endorsement/approval
- 1.3 Active engagement of the health sector in the process to formulate and implement the NAP
- 1.4 Climate-informed health planning and programming

SECTION 2: CROSS-SECTORAL COORDINATION AND POLICY COHERENCE

- 2.1 Coordination and synergy with health-determining sectors

SECTION 3: COMPREHENSIVE COVERAGE OF CLIMATE-SENSITIVE HEALTH RISKS

- 3.1 Evidence-based HNAP
- 3.2 Comprehensive coverage of context-specific climate-sensitive health risks
- 3.3 Prioritization of climate-sensitive health risks

SECTION 4: COMPREHENSIVE COVERAGE OF ADAPTATION OPTIONS AND ACTIONS

- 4.1 Comprehensive adaptation options to address climate-sensitive health risks
- 4.2 Consideration of vulnerability factors to design and target adaptation actions
- 4.3 Prioritization of health adaptation actions

SECTION 5: RESOURCING

- 5.1 Estimation of the required resources for HNAP implementation
- 5.2 Resource mobilization strategy

SECTION 6: MONITORING, EVALUATION AND REPORTING

- 6.1 HNAP monitoring, evaluation and reporting plan
- 6.2 Mechanism for periodic HNAP iterations

1 LEADERSHIP AND ENABLING ENVIRONMENT

1.1 MINISTRY OF HEALTH LEADS HNAP DEVELOPMENT

Ministry of Health (or country-equivalent ministry or department) leadership in the recognition and prioritization of climate change as a critical health issue is crucial to the HNAP process, development of the plan, and ongoing implementation. A clear ministerial mandate for HNAP development, coordination, implementation, and monitoring and evaluation, which includes assigned roles and responsibilities and allocation of adequate human and financial resources, provides a strong foundation for effective health adaptation planning. For example, a climate change and health unit or focal point may be designated within the ministry to lead the ongoing HNAP process, including stakeholder coordination, assessment of the health impacts of climate change, development of the document, implementation of the plan, monitoring and reporting, and regular updates to the plan.

Ministry of Health leadership not only provides the necessary sector-specific expertise to inform HNAP actions but also ensures that any climate change and health responses are effectively embedded in and owned by the health sector. Health sector leadership and commitment is critical to ensure effective implementation of the HNAP. Leadership can be demonstrated by the integration or mainstreaming of climate change into periodic health sector development plans and health programming. The leadership role also includes coordination with the national climate change team and ongoing involvement in the NAP coordination arrangements. It also includes working with health-determining sectors to ensure that health is duly protected and promoted by relevant programmes (such as urban health, WASH, food, energy). This may take the form of a cross-sectoral NAP coordination mechanism, such as a NAP sectoral working group or technical advisory group.

The Ministry of Health's commitment to climate change and health is not limited to HNAP development and implementation. In fact, the HNAP process can act as a catalyst in some countries and provide a robust foundation for the broader climate-resilience building process. It is recommended that ongoing involvement and commitment of the Ministry of Health is maintained to ensure continued prioritization of the health sector in the national climate change agenda and for effective implementation of the HNAP.

Box 2. Ministry of Health leadership in Nepal

Nepal does not contribute significantly to global greenhouse gas (GHG) emissions, with only 0.027% of global GHG emissions and 0.4% of the world's population (74). Nepal has diverse ecological zones, ranging from the low-lying Terai region to the highest peaks in the world, which makes it particularly vulnerable to the effects of climate change. Nepal experiences climate-induced disasters (such as floods and landslides, melting of glaciers, depletion of water sources, among others) that impact on public health both directly and indirectly. Vectors of malaria, kala-azar, dengue and Japanese encephalitis, that were previously limited to low lying regions, are now observed in the mountain regions – above 2000 m due to climate change. Considering this, the Government of Nepal developed the NAPA in 2010 and subsequently the Climate Change Policy, 2011. However, health issues were not well addressed in the Climate Change Policy. While climate change-related issues were reflected in some health policy documents, a systematic approach was required to address this emerging issue comprehensively.

The Nepal Ministry of Health (MoH) was proactive in acknowledging the importance of health adaptation to climate change at the national level. The Ministry of Environment (MoE), as the focal ministry for climate change, was engaged in the preparatory work for the formulation of the NAP. The MoH recognized the importance of the development of the health component of the NAP for addressing the health impacts of climate change and took the initiative to begin HNAP development before the process to formulate and implement the NAP was initiated. Close coordination with the MoE was ensured by forming a multisectoral technical working group. The recommended HNAP implementation timeframe is five years to ease integration within the process to formulate and implement the NAP.

Following the UNFCCC's guiding principles, the health adaptation planning process started with collecting best available evidence and conducting a V&A. The technical working group under the MoH provided overall guidance and ensured inputs from a range of sectors with membership consisting of representatives from various health agencies and other stakeholders such as environment, water supply, meteorology, energy, academia and many others.

The Nepal MoH approved the HNAP (2017–2021) on 23 December 2016. A dedicated unit was created within the MoH to manage overall coordination for HNAP implementation and its integration in the process to formulate and implement the NAP. The associated roles and responsibilities were reflected in the action plan. The strong leadership of the MoH, with support from WHO, and active consultation with the MoE and other stakeholders, enabled the development of the HNAP. The HNAP is under implementation, and the process is underway to ensure integration into the NAP. The MoE is advancing NAP development with the health sector's continued support. The HNAP development process has enhanced the enabling environment in Nepal to provide the foundation for ensuring the prioritization of the impacts of climate change on health at the national level.

1.2 GOVERNMENT ENDORSEMENT/APPROVAL

Formalized endorsement of the HNAP at the ministerial level is also important to signify commitment to addressing the health impacts of climate change at the national level. In some cases, the Ministry of Health leads the HNAP development politically. However, as the HNAP document is sometimes formulated by an external party, it is important that it is formally endorsed by the Ministry of Health and also by the agency leading the NAP process, to ensure ownership and effective implementation.

Box 3. From the development of a national climate change and health plan to integration in the NAP: Experience and lessons learned from Fiji

Fiji, a Small Island Developing State located in the South Pacific Ocean with a population of approximately 900 000, is vulnerable to the effects of climate change. The health sector in Fiji identified health risks as a critical priority before the process to formulate and implement the NAP was established. A climate change and health strategic “action plan” was developed in 2016 to support the health sector’s vision of a “healthy population in Fiji” in the face of uncertainties due to climate change. The action plan indicates adaptation measures to prevent and overcome existing and future health risks posed by climate change. The climate change and health steering committee, chaired by the Permanent Secretary for the Ministry of Health and Medical Services (MoHMS), also highlighted the need for an exit plan for the global project in Fiji (15), implemented from 2010 to 2014, to ensure sustainability of efforts to build climate-resilient health systems in Fiji.

The development of the action plan was endorsed by the National Health Executive Committee of the MoHMS. It involved various stakeholders: government organizations (such as the climate change division at the Ministry of Foreign Affairs (this moved to Ministry of Economy in 2017), Ministry of Education, Department of Environment and Fiji Meteorological Services), as well as universities, national nongovernmental organizations and regional organizations. The action plan supports the enhancement of the Ministry of Health’s mission and vision building on the six building blocks of health systems and the 10 components of the WHO Operational framework, and is based on Fiji’s international commitments (such as the Paris Agreement and 2030 Agenda for Sustainable Development (16)). As Fiji’s vulnerability to extreme weather events, such as floods and tropical cyclones is high, the plan also supports the application of the national health emergency and disaster management action plan.

Fiji’s process to formulate and implement the NAP began in 2017 with the development of Fiji’s NAP framework. Subsequently, “Fiji NAP: a pathway towards climate resilience” was developed in 2018 by an inter-ministerial coordinated Climate Change and International Cooperation Division of the Ministry of Economy. The process to formulate and implement the NAP included a series of national-level multistakeholder consultation workshops and key informant interviews with experts, regional organizations and national civil society. As the health action plan was developed before the process to formulate and implement the NAP commenced, the health sector had a strong base for engagement. Health was one of the 14 multistakeholder technical working groups formulated for NAP development. Each section conducted a comprehensive stocktake of existing policy in their respective sector and a prioritization exercise. For the health section, many of the adaptation measures were merged from the existing action plan and other relevant documents, such as the Climate Vulnerability Assessment prepared by the World Bank, were also used. In the NAP, there is a health section in sectoral priorities for adaptation along with health references to other sectors such as food and nutrition security and infrastructure (Figure 4). The extensive work by the health sector on climate change and health provided a solid foundation for its meaningful contribution to the overall NAP.

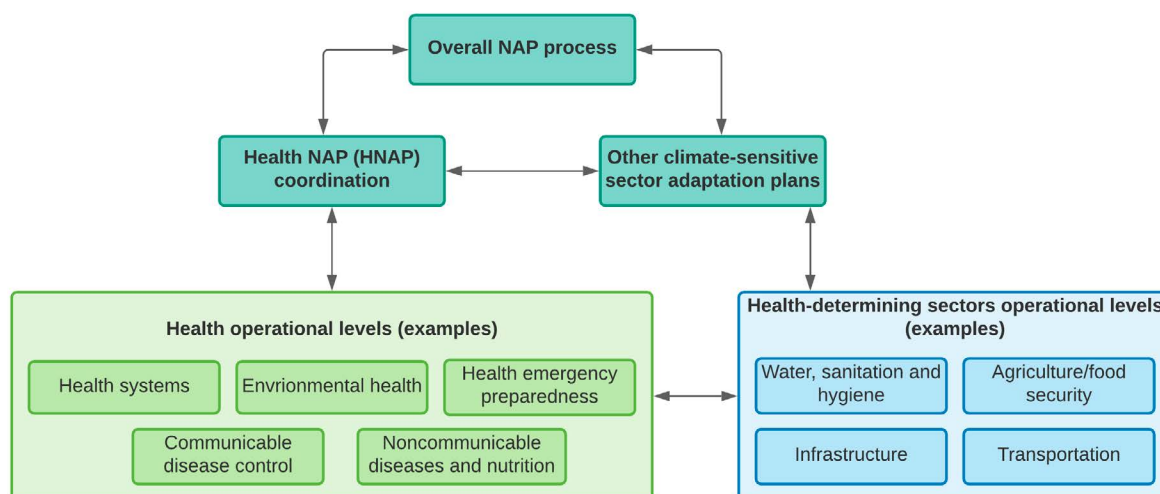
Figure 4. Fiji HNAP: Sector focus areas – particular sectors for adaptation for addressing environmental and climate risk

Sectoral component	Description	Outcome
Food and nutrition security	Improves capacity to anticipate and reduce environmental and climate risks and ensure sustainable food production.	Transformed and re-orientated agricultural system to support food production without degrading resources.
Health	Improves systems and infrastructure to manage the negative impacts caused by future climate variability and change.	Resilient health and medical services that can withstand future environmental and climate events.
Human settlements	Reduces vulnerability to major assets, infrastructure and population centres, providing the ingredients for growth.	Resilient population centres providing a firm basis for sustainable investments and continued economic prosperity.
Infrastructure	Helps to ensure full life span of investments are reached by reducing environmental and climate risks.	Resilient infrastructure which can operate under future conditions and meet future needs.
Biodiversity and the natural environment	Supports maintenance of biodiversity and the natural environment and the services it provides.	Supports efforts to protect, maintain, and restore natural capital that underpins society and economic growth.

1.3 ACTIVE ENGAGEMENT OF THE HEALTH SECTOR IN THE PROCESS TO FORMULATE AND IMPLEMENT THE NAP

Active engagement of the health sector with the national climate change agenda, including in the process to formulate and implement the NAP, is critical to: prioritize health and climate change at the national level, promote cross-sectoral synergies, and increase opportunities to access climate financing for health (Figure 5). The HNAP is not a stand-alone document; it contributes as the health component of the NAP (5). Capacity building of policymakers on climate change and health may be useful depending on the country context to ensure that the health sector can advocate for health in the climate change agenda. If the health sector is ahead of the process to formulate and implement the NAP, it is suggested that national climate change representatives be included in the HNAP process as a way to promote the effective inclusion of the HNAP in the final NAP. Such a circumstance offers opportunities for the health sector to take a leading role to drive the momentum for adaptation planning in other sectors and nationally.

Figure 5. Integration of HNAP coordination into the process to formulate and implement the NAP and existing health planning



Source: (4)

Box 4. Promoting an enabling environment for HNAP development in Indonesia

Indonesia is among the most vulnerable countries in the world to the effects of climate change, and climate change and variability continue to impact on public health in Indonesia. Regional climate changes show increases in air temperature of up to 1.25°C. Climate variability and change are exacerbating health risks and outcomes, including vector-borne diseases (such as malaria and dengue) and water-borne and -related diseases (such as cholera and diarrhoeal diseases). For the less direct climate-sensitive health risks (such as food and nutrition security and noncommunicable diseases), country-level monitoring and assessment to determine the projected impact of climate variability and change requires improvement.

The Indonesian government has demonstrated strong political will in responding to global climate change. Since the 1990s, the country has actively contributed to global efforts for combating climate change, such as the ratification of the Paris Agreement through Law No. 16/2016. At the national level, Indonesia promoted the need for adaptation efforts through the development of the National Action Plan on Climate Change Adaptation in 2014.

The Indonesian government, through the Ministry of Environment and Forestry (MoEF), developed the Nationally Determined Contributions (NDCs) in 2016, which are currently being updated for 2020–2030.



The development and update of the NDC involved multistakeholders led by the MoEF and was synchronized into the Rencana Pembangunan Jangka Menengah Nasional/Medium-Term National Development Plan (RPJMN) 2020–2024. In response to the NDC mandate, which includes health adaptation, the HNAP aims to increase awareness of the health risks due to climate change. There are 10 strategies in the HNAP: (i) advocating for health sector adaptation actions at the national level and a direction for implementing adaptation actions at provincial and district/city levels; (ii) mapping of vulnerable populations and regions; (iii) building partnerships in health resilience; (iv) building an early warning system for climate change and health; (v) promoting community-based health adaptation; (vi) integrating climate change in the national disease prevention and control programme; (vii) improving the surveillance and monitoring system; (viii) building the capacity of the health care workforce; (ix) climate-proofing health care facilities and infrastructure; and (x) strengthening the policy framework on climate change and health adaptation.

HNAP development involved multisectoral collaboration, including the MoEF; Ministry of National Development Planning, Republic of Indonesia; Indonesian National Board for Disaster Management, Meteorological, Climatological, and Geophysical Agency, academia and climate change experts. Active involvement of the Ministry of National Development Planning in HNAP development ensured synchronization of the HNAP and the NAP. The NAP is also being updated to align with the RPJMN 2020–2024 and NDC 2020–2030. These strategies will guide Indonesia over the next 10 years and assist the health sector in adapting to climate change and promoting population health into the future.

1.4 CLIMATE-INFORMED HEALTH PLANNING AND PROGRAMMING

Climate change considerations when embedded within current national health planning, rather than as an independent process (see Figure 5 on page 12), are more likely to lead to higher uptake and sustainability of actions. Climate variability and change will exacerbate existing burdens of climate-sensitive diseases and other public health conditions that already affect countries. In most cases, national public health programmes (such as for malaria control, maternal and child health, nutrition, water and sanitation) are already in place to reduce the burden of aforesaid diseases and conditions, and can be enhanced with the integration and mainstreaming of climate variability and change considerations.

Additionally, climate change including extreme weather events, poses risks to health systems as well as operations and physical infrastructure, such as health care facilities. The climate resilience and environmental sustainability of health care facilities can be integrated into health planning processes and programmes. The WHO Operational framework (6) and the WHO Guidance for climate resilient and environmentally sustainable health care facilities (17) are useful tools for enhancing the resilience of health systems and the operations of health care facilities in the face of climate change.

In the initial stages, the HNAP is a useful tool for mainstreaming climate change into health until all health programming is climate informed. Every country will have to define its process to integrate climate change adaptation and potential mitigation measures in specific public health programmes and health sector development plans. Implementation of strategies and actions to build resilience and overall environmental sustainability through these programmes will occur at various operational levels depending on country context and institutional arrangements.

Box 5. Climate-informed health programming in Jordan

Jordan's climate is Mediterranean with hot and dry summers, and cool and wet winters. As a result of climate change, temperatures are expected to rise with a possible increase in the incidence of heat waves and droughts. The scarcity of water resources could also be exacerbated by climate change, leading to a significant impact on the availability of fresh water for municipal and agricultural sectors. Sand storms and dust storms are increasing in frequency, duration and intensity. Climate-related health risks include respiratory diseases, water- and food-borne diseases, vector-borne diseases, nutrition and occupational health problems.

A high-level steering committee chaired by the deputy minister of health oversaw the development of the National Climate Change Health Adaptation Strategy and Action Plan (NCCHAS&AP) between 2012 and 2014. The steering committee also managed the integration of the NCCHAS&AP into the national health strategy and action plan.

Early involvement of stakeholders was key to good national ownership of achievements/results. It also contributed to effective implementation and a better potential for long-term impact and sustainability. Six technical teams developed the NCCHAS&AP, corresponding to the following six priority climate-sensitive health outcomes: (i) heat waves, (ii) nutrition, (iii) water-/food-borne diseases, (iv) vector-borne diseases, (v) occupational health, and (vi) air-borne/respiratory diseases. Each team was headed by the responsible director in the Ministry of Health and included Ministry of Health staff, researchers and representatives from other pertinent sectors.

Each team assessed the vulnerability of their corresponding programme to climate change, assessed the preparedness of the existing programme, screened and identified response strategies, and developed the adaptation action plan. Furthermore, each team developed four funding requests covering top priority action areas. A common priority actionable area identified by the six teams was the development of an early warning system through enhancing disease surveillance links to climate and environmental change.

The NCCHAS&AP presents a strong case and related tangible actions for climate-informed health programming.

2 CROSS-SECTORAL COORDINATION AND POLICY COHERENCE

2.1 COORDINATION AND SYNERGY WITH HEALTH-DETERMINING SECTORS

It is crucial that health is protected and promoted not only by the health sector, but also by other health-determining sectors such as food and agriculture, energy, urban planning, water, sanitation and hygiene. A participatory approach is recommended for HNAP development to promote inputs from a wide range of stakeholders at different levels, across sectors and the local community. This process will strengthen leadership in promoting health from other sectors. A sustainable consultation process will assist actors at all levels to effectively implement adaptation action outlined in the HNAP and support the development of future iterations of the plan. Stakeholder mapping is a useful tool for identifying relevant stakeholders to inform an engagement strategy and plan.

The active involvement of these sectors in HNAP development and implementation is likely to contribute to a more effective HNAP. The most relevant health-determining sectors will depend on the country context and could include water and sanitation, agriculture and food security, disaster management, infrastructure, urban development, rural development, coastal management, land management, biodiversity and ecosystems, among others. These sectors are ideally involved in all stages of HNAP development, including the V&A and identification and prioritization of adaptation actions. In addition, the HNAP could describe the cross-sectoral institutional arrangements in place and identify additional measures to be implemented as part of the plan to ensure coordination and synergy with health-determining sectors.

Box 6. Cross-sectoral cooperation and coordination for health adaptation in Croatia

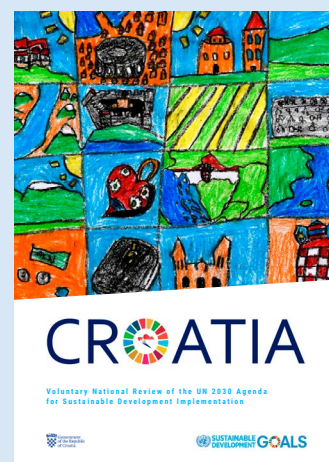
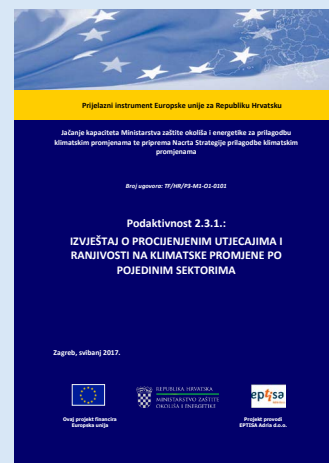
The vision of Croatia's NAP is being resilient to climate change, with a focus on vulnerable natural systems and socioeconomically important health-determining sectors.

The team preparing the NAP organized a workshop with invited representatives of all sectors considered necessary for climate change adaptation (such as water, energy, agriculture, health, tourism). Each of the representatives provided a summary of existing activities. This allowed the cross-sectoral team to become aware of the problems, gaps and needs in various sectors. The resulting good synergy between sectors was crucial for the development of a comprehensive NAP.

Health-related NAP measures emphasize a multidisciplinary approach and primarily address capacity building; early warning surveillance and preparedness systems for extreme weather events and climate-sensitive disease outbreaks; environmental monitoring based research; and development of innovative tools for risk assessment.

The NAP addresses climate change adaptation and development priorities contributing to the achievement of SDGs. The NAP is documented in the voluntary national review of the UN 2030 Agenda for Sustainable Development (16).

Furthermore, based on the NAP, the Croatian Ministry of Health (MoH) developed a portfolio of activities specific to the health sector that address climate change and health. The MoH also established a multidisciplinary Working Group on Climate Change and Health, demonstrating effective coordination among different sectors for health adaptation. The Working Group meets regularly to discuss and address various topics such as the heat-health action plan, plan for protection from cold, heat and COVID-19, among others.



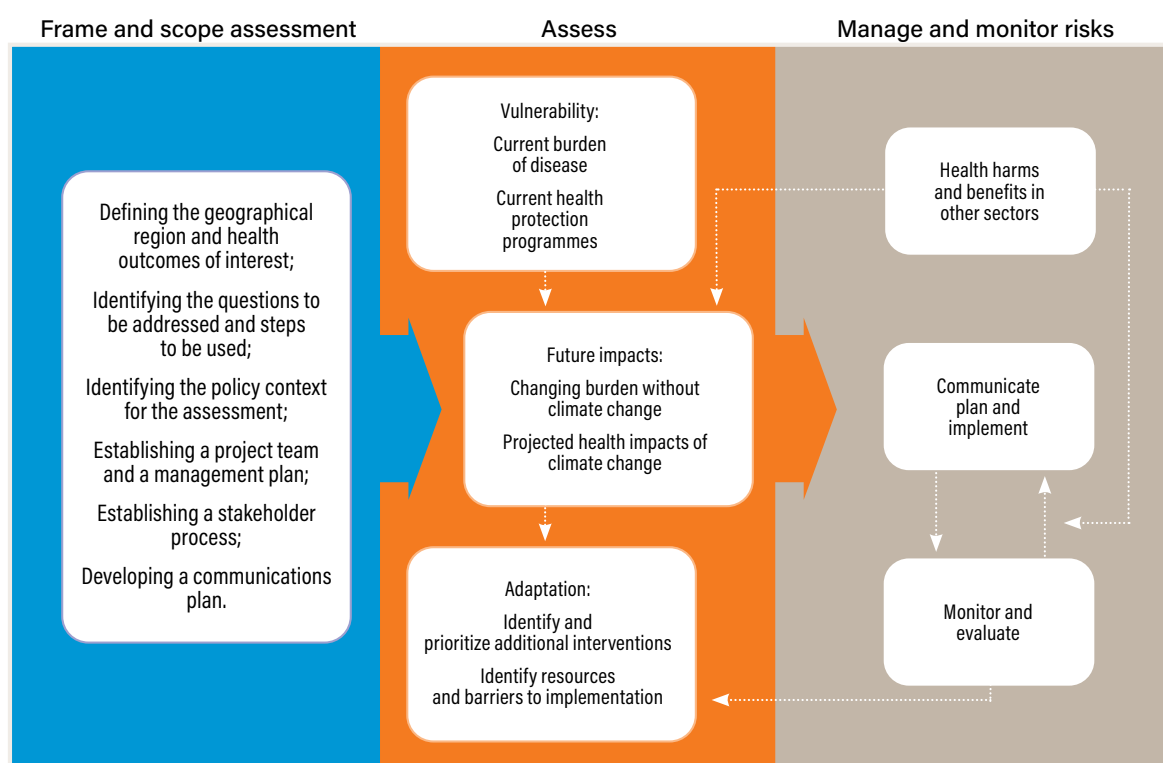
3 COMPREHENSIVE COVERAGE OF CLIMATE-SENSITIVE HEALTH RISKS

3.1 EVIDENCE-BASED HNAP

One of the steps in the NAP process is assessing climate vulnerabilities and identifying adaptation options at the sector, subnational, national and other appropriate levels (5). A comprehensive V&A is thus critical for ensuring that the HNAP is evidence based. A V&A evaluates current and future vulnerability (i.e. the susceptibility of a population or region to harm) to health risks of climate change, and policies and programmes that could increase resilience, taking into account the multiple determinants of climate-sensitive health outcomes. The evaluation provides information for decision-makers on the extent and magnitude of likely health risks attributable to climate change, and priority policies and programmes to prevent and reduce the severity of future impacts. Figure 6 below outlines the key steps for conducting a V&A.

Ideally, a comprehensive V&A is conducted before drafting the HNAP. However, if this is not feasible, then a desk review of all currently available evidence can inform the development of the HNAP. A comprehensive V&A may then be included as an activity in the HNAP to inform future planning and HNAP iterations. V&A updates are then periodically conducted to allow for the uncertainty inherent in climate predictions and adaptation planning, and other changes in relevant circumstances. Technical guidance from the WHO (17), is available to support the conduct of a V&A.

Figure 6. Vulnerability and adaptation assessment process



Depending on the country context it may be useful to conduct V&As for specific climate-sensitive health risks for an in-depth understanding of how particular health outcomes are influenced by climate and weather as well as further exacerbated by climate change, and to develop more appropriate and effective adaptation strategies. The WHO has developed a series of technical guidance documents to assist in conducting a V&A for specific health outcomes, including for undernutrition (18) and diarrhoeal diseases (forthcoming).

Box 7. Vulnerability and adaptation assessment: focusing climate change and health efforts in Ethiopia

The Ethiopian Ministry of Health (MoH) conducted the first V&A in 2015. The assessment used secondary data on exposure, sensitivity and adaptive capacity obtained from the National Meteorology Agency, Central Statistical Agency, MoH, Ethiopian Public Health Institute and other published literature.

The V&A found that Ethiopia has become warmer over the past century. Human-induced climate change would cause further warming over the next century at unprecedented rates, and climate-related extreme events (such as floods and droughts) are a continued threat. Key climate-sensitive health outcomes and risks identified in the assessment included diarrhoea, malaria, yellow fever and dengue, and adaptation actions to manage these health risks were recommended.

Through the V&A and HNAP development processes, the health sector identified some key lessons.

- Climate change affects vulnerable populations disproportionately due to a lack of adaptive capacity and appropriate coping mechanisms.
- The health workforce was often unaware of the impacts of climate change on health and capacity building, and knowledge management is crucial.
- The V&A reduced confusion regarding the health risks of climate change and provided a clear direction and foundation for the development of an evidence-based HNAP.
- Efforts should be directed to preventative actions to protect the population against climate-sensitive diseases and health risks.
- The V&A and HNAP processes contributed to the creation of multisectoral and multidisciplinary expertise including knowledge transfer to universities in the country.
- The evidence generated from the V&A can be used to establish an early warning and surveillance system for climate sensitive-diseases, which has been piloted in 11 health facilities in Ethiopia over the past four years.

Source: (19)

3.2 COMPREHENSIVE COVERAGE OF CONTEXT-SPECIFIC CLIMATE-SENSITIVE HEALTH RISKS

It is recommended that countries are ambitious in the coverage of climate-sensitive health risks (CSHRs) and identify medium- and long-term priorities and adaptation actions to address these risks. Building on the outcomes of V&As (when available), all country-specific climate-sensitive health risks and vulnerabilities are identified before a prioritization exercise is conducted. The extended list is important to identify potential adaptation options, establish synergies within the health sector and cross-sectorally, and to inform future planning. For each climate-sensitive health risk, it is also crucial to incorporate information related to vulnerable populations as determined by biological, geographical, social and other factors. Understanding vulnerability will allow the development and implementation of targeted interventions to specific vulnerable groups. Vulnerability may vary depending on the health risk of interest. Climate-sensitive health risks include climate-sensitive diseases and health outcomes, as well as risks to the health system and health care facilities, such as surge capacity of the health workforce following an extreme weather event, the ability of the health surveillance system to monitor or predict disease outbreaks, and

the availability of critical environmental services such as WASH and energy at the facility level. Therefore, a broad health systems approach is also useful in the assessment. Table 2 outlines a range of climate-sensitive health risks for consideration.

Table 2. Climate-sensitive health risks

Health impacts	Examples
Health impacts of extreme weather events	Injury or death
Heat-related illnesses	Heat stroke, heat rash, heat cramps, heat exhaustion
Respiratory illnesses	Infections, obstructive airways disease (such as asthma) and the pulmonary effects of heat and air pollution
Water-borne diseases and other water-related health impacts	Cholera, schistosomiasis, diarrhoeal illnesses, harmful algal blooms, leptospirosis
Zoonoses	Rabies
Vector-borne diseases	Malaria, dengue fever, zika virus, chikungunya, lyme disease
Malnutrition and food-borne diseases	Underweight, wasting, stunting micronutrient deficiencies, food-borne diseases causing diarrhoeal illness, ciguatera
Noncommunicable diseases	Circulatory diseases (such as cardiovascular disease, cerebrovascular disease, hypertension), endocrine disorders (such as diabetes), cancers
Mental and psychosocial health	Depression, anxiety, post-traumatic stress disorder
Impacts on health care facilities	Destruction of infrastructure, disruption of supply chains, impaired water access and availability, disruption or discontinuation of health services
Effects on health systems	Compromised access to health services, additional strains on scarce resources

Sources: (20–22)

3.3 PRIORITIZATION OF CLIMATE-SENSITIVE HEALTH RISKS

Following the identification of a comprehensive list of country-specific climate-sensitive health risks, a prioritization exercise may be conducted to identify priority action areas for the current iteration of the HNAP.

Predetermined criteria for prioritization are dependent on country-context and could include:

- magnitude of risk
- size of the affected population
- level of vulnerability
- available resources
- funding.

Climate-sensitive health risks that are not specifically addressed may still be captured in actions that aim to build health systems resilience. Additionally, it is recommended that these risks continue to be considered in periodic V&As to monitor any changes in priority.

4 COMPREHENSIVE COVERAGE OF ADAPTATION OPTIONS AND ACTIONS

4.1 COMPREHENSIVE ADAPTATION OPTIONS TO ADDRESS CLIMATE-SENSITIVE HEALTH RISKS

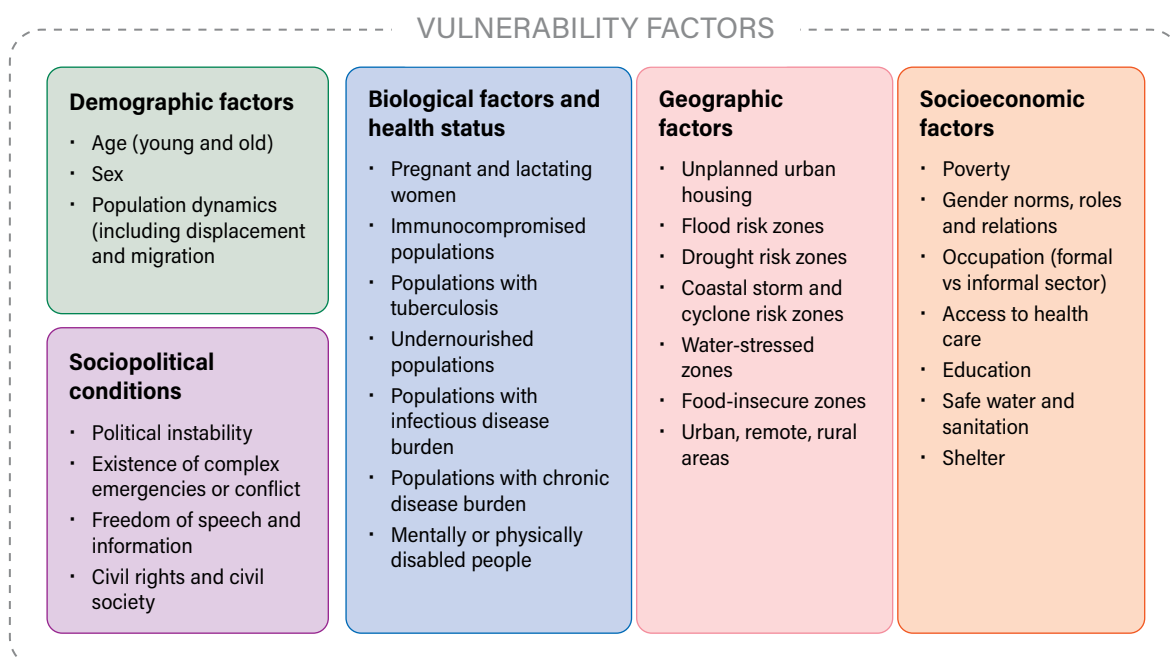
As the HNAP is a part of long-term process of adaptation planning, a comprehensive range of adaptation options for medium- and long-term timeframes is recommended. A systematic approach to addressing climate change in the health sector that considers climate-sensitive health risks, along with building a climate-resilient health system is recommended. Optimally, the HNAP includes a comprehensive range of adaptation options for each of the climate-sensitive health risks prioritized in the V&A with the aim to strengthen the resilience of health systems. The components and examples included in the WHO Operational framework can help in developing comprehensive plans in terms of options and actions and identifying potential gaps in building health system resilience.

4.2 CONSIDERATION OF VULNERABILITY FACTORS TO DESIGN AND TARGET ADAPTATION ACTIONS

The adverse effects of climate change do not impact all populations in the same way, and the most vulnerable populations stand to bear the greatest impacts (22). Differences in health impacts on the population depend on a range of factors including the vulnerability and adaptive capacity of different groups of people. Existing health inequities render some populations more vulnerable to the health impacts of climate change. Environmental, social and public health determinants influence the magnitude and distribution of climate-sensitive health risks (Figure 7). For example, evidence suggests that climate change has different health impacts on women and men resulting from biological and sociocultural factors (including gender norms, roles and relationships) along with differing access to and control over resources. The WHO guide on mainstreaming gender in health adaptation to climate change programmes may be useful in this stage of the process (23).

Consideration of other health inequities (such as people living with a disability, people with underlying chronic illnesses) and vulnerable populations (such as the LGBTQI (lesbian, gay, bisexual, transgender, queer and intersex) community), is also important. The V&As will assist in identifying the most vulnerable people and how this vulnerability may shift in the future. It is recommended that the HNAP considers the different categories of vulnerable populations (such as by geographic location, gender, age, socioeconomic status) in relation to priority climate-sensitive health risks and for planning and prioritizing of adaptation actions. Figure 7 outlines a broad range of vulnerability factors for consideration.

Figure 7. Vulnerability factors for climate change and health



4.3 PRIORITIZATION OF HEALTH ADAPTATION ACTIONS

Following the identification of a comprehensive range of medium- and long-term adaptation options identified in the V&A, and consideration of equity and vulnerable populations, a prioritization exercise is conducted to select the range of priority adaptation actions for implementation.

Criteria for prioritization depend on the country context and could include:

- magnitude of risk
- size of the affected population
- level of vulnerability
- available resources
- funding.

Prioritization of adaptation actions promotes a HNAP that is realistic and feasible, and addresses key climate-sensitive health risks while promoting long-term planning. Adaptation options that are not initially prioritized may be included in future iterations of the HNAP. The final selected range of priority adaptation actions included in the HNAP seeks to: be comprehensive, target vulnerable populations, and address priority CSHRs.

Box 8. Grenada's prioritization of health adaptation measures

Small Island Developing States such as Grenada are disproportionately affected by the negative consequences of climate change. As part of the Grenada HNAP development, a V&A was completed in 2016. The V&A identified direct and indirect climate change-related health risks and served as the basis for future strategic planning as well as a foundation for Grenada's subsequent work in creating a climate-resilient health system. Specifically, it led to the development of the Health and Climate Change Action Plan as well as a National Climate Change and Health Strategy.

Despite the inherent degree of uncertainty of climate predictions and the complexity of the impact on health in Grenada, priority adaptation actions were identified. These actions aimed to contribute to: a reduction in morbidity and mortality from extreme weather events, access to safe water, protection of food security and improved sanitation, and enhanced vector-borne diseases surveillance and control.

A prioritization process was conducted whereby potential adaptation measures were categorized into the health system building blocks and ranked according to priority and affordability. An example of the health system components and their prioritization is presented in Table 3.

Table 3. Prioritization of health adaptation measures**Health workforce:**

Action	Priority	Affordability
Inclusion of climate sensitive diseases in Disaster Risk Management training	2 points	0 points
Training of health care personnel on Disaster Risk Management	3 points	1 point
Establishment of training curriculum on climate sensitive diseases and emergency mechanisms	0 points	2 points
Training of health personnel in communities	2 points	5 points

Health information systems:

Action	Priority	Affordability
Establish a communication system via SMS	0 points	0 points
Research: Prevalence/incidence of priority diseases collated with climatic data for the last 10 years	2 points	2 points
Link health data with climate data	3 points	1 point
Improving vector surveillance; esp. data analysis and usage	2 points	5 points
Research: Evaluation of vector control effectiveness	0 points	0 points

The recommendations of the V&A indicated that Grenada's health information and disease surveillance system needed to be strengthened to be able to track disease outbreaks, and link health datasets with meteorological data in the future. Thus, a critical health adaptation measure identified in the V&A was the integration of climatic and environmental data into the disease surveillance system, to allow for the upgrading and streamlining of the national health information system.

Other prioritized action areas included: (i) integration of “safe hospitals”/“smart hospitals” activities in the health sector strategic plan; (ii) research and evaluation of the existing disaster preparedness of the health system; (iii) improving management of emergency supplies, such as emergency kits; (iv) review of the “Disaster Risk Reduction” training curriculum and inclusion of climate-sensitive diseases and health risks, and emergency mechanisms; (v) conducting adequate training of health care personnel and volunteers in communities (once per year); and (vi) establishment of a communication system (early warning) via SMS.

Key outcomes of the V&A process² thus far include:

- Climate change aspects integrated into new health policies, plans and communication strategy.
- Climate sensitive disease surveillance integrated into Grenada’s National Action Plan as a priority programme of action.
- Health & Climate Change Action Plan 2016–2020 developed.
- Climate-resilient clinical waste management proposal drafted.
- Grenada’s climate and health activities presented at COP21 in Paris, 2015.
- National workshop on linking epidemiological and climate data held in 2015, together with the Caribbean Public Health Agency, Pan American Health Organization and Caribbean Institute for Meteorology and Hydrology.
- Proposal to implement the District Health Information System-2 in Grenada as a new health information and surveillance system.



² Further information about Grenada’s V&A process can be found here: http://health.bmz.de/what_we_do/climate_health/Vulnerability_assessments/20_climate_change_affecting_health_grenada/index.html, accessed 12 November 2020.

5 RESOURCING

5.1 ESTIMATION OF THE REQUIRED RESOURCES FOR HNAP IMPLEMENTATION

HNAP implementation requires human, financial and other resources, and an estimation of these resources is crucial for effective planning and implementation. A budget and a human resource estimation are needed for adaptation actions outlined in the HNAP, which is then used to allocate or mobilize the required resources. In addition, it is essential to consider the national capacity on climate change and health, and capacity building opportunities nationally, regionally and internationally.

5.2 RESOURCE MOBILIZATION STRATEGY

While HNAP development and implementation activities may be included in national budget allocations, many countries are likely to face funding gaps. For this, a resource mobilization strategy can be used to plan for medium- and long-term resourcing requirements, and seek external funding. The HNAP outlines existing funding sources and funding gaps and presents a plan for addressing the gaps and for scaling up adaptation activities into the future. This may include actions to streamline adaptation for health into national budget allocation processes, and planning for access to external funding sources, such as the GCF, GEF or the Adaptation Fund, among others. The WHO is an approved GCF readiness partner and further information on how to develop a readiness proposal for health can be found on the WHO website (24). A robust HNAP is an essential tool for presenting a strong case to donors to support funding proposals. Cost-benefit analyses of action and inaction as well as the return on investment may be useful to assist the investment case.

Box 9. HNAP implementation planning in the Republic of Montenegro

In May 2020, the Republic of Montenegro's HNAP, "Program on climate change adaptation in the health sector in the Republic of Montenegro", along with an Action Plan for implementation was endorsed by the national government. It was developed through an inclusive process and active participation of all relevant institutions in the country. The common vision and the concept of climate resilience in the health system to cope, adapt to climate change, and respond to increased health needs were presented in the agreed road map of the process during several meetings supported by the WHO Regional Office for Europe over the past three years. One of the policy goals was to ensure adequate human and financial resources to protect individuals and communities from the health impacts of climate change.

In pursuit of this goal, the Ministry of Health in the Republic of Montenegro nominated a national working group on climate change and health. This group comprised representatives from various key health institutions and was tasked with developing and finalizing the national policy for action in the area of climate change and health. The members in this group aimed to design the Action Plan and identify appropriate modifications through: an enhanced understanding of what works and why; determining where improvements are needed; and identifying the issues that should be addressed for effective implementation of policies and programmes. There was a strong emphasis on adequate allocation of human and financial resources and approaches to overcome institutional barriers.

The actions in the Program are broad, coherent, coordinated and complementary. Policy needs are based on research and evidence, and intervention measures to strengthen health systems and mainstream health into policies of other sectors are making the best use of public subsidies. A resource mobilization plan was a key element of the Action Plan for the implementation of the Program and was drafted by the Working Group. In the development of the resource mobilization plan, a methodology was used to identify key components of each activity such as: performance indicators; result indicators with starting, mid-term and final costs; a responsible institution for implementation; timing; total funding requirements; and sources of financing. During the sessions, the members discussed the funding sources for each activity proposed in the Program, taking into consideration potential internal and external funding sources. The Action Plan has three levels of performance to track progress towards climate-resilient readiness of health institutions: (i) insufficiently prepared system of public health and health services to respond to climate change; (ii) strengthened system of public health and health services to respond to climate change; (iii) a prepared system of public health and health services to respond to climate change. Progress towards a climate-resilient health system will be supported by the forward planning evident in the resource mobilization strategy.

6 MONITORING, EVALUATION AND REPORTING

6.1 HNAP MONITORING, EVALUATION AND REPORTING PLAN

The HNAP includes a comprehensive monitoring, evaluation and reporting (M,E&R) plan to oversee HNAP implementation (“are HNAP activities being implemented according to the plan?”), and the impact of the implementation of adaptation actions. V&As establish the baseline that can be used to monitor HNAP impact. It is unlikely that the impact of the HNAP (such as reductions in mortality or morbidity of climate-sensitive diseases from the baseline) will be evident in the short term. However, the HNAP process is a long-term planning process that includes periodic V&As and HNAP iterations.

The M,E&R plan specifies indicators at all levels (outputs/process, outcomes and impact), at specific short-, medium- and long-term timeframes, with designated roles and responsibilities (across sectors) and reporting requirements. The results of HNAP M,E&R can then be used to inform ongoing and future adaptation planning, including iterations of the HNAP. Alignment of the M,E&R plan with the NAP monitoring, evaluation and reporting requirements and schedule as well as other relevant national and international climate change and health reporting schedules (such as NDCs and National Communications), improves consistency and coherence and reduces administrative burden. It is recommended to ensure that relevant information related to HNAP implementation is also integrated into NDCs, National Communications and other climate change and health processes.

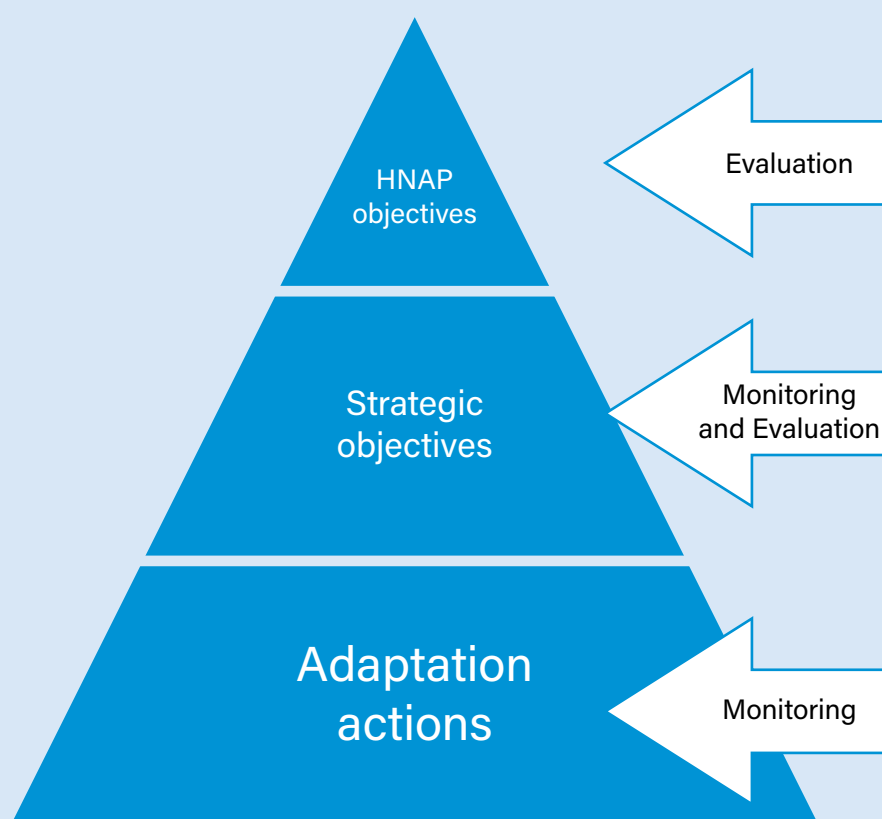
The LEG publication, *Monitoring and assessing progress, effectiveness and gaps under the process to formulate and implement national adaptation plans: The PEG M&E tool* (7), describes 10 essential functions in the process to formulate and implement NAPs and a set of generic metrics to assess these functions. Used in conjunction with the HNAP guidance, the PEG M&E tool is useful to inform the development of a HNAP M,E&R plan.

Box 10. Development of the Tanzania HNAP monitoring, evaluation and reporting plan

In February 2018, a cross-sectoral HNAP team comprising representatives from the Ministry of Health, Community Development, Gender, Elderly and Children, the Vice President's Office – Division of Environment, Tanzania Meteorological Agency, Ministry of Water and Irrigation, Ministry of Finance and Economic Affairs, Muhimbili University of Health and Allied Sciences and Sokoine University of Agriculture, along with WHO and GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit), gathered for a five-day workshop to finalize the draft Tanzania HNAP.

The outcome of one of the sessions, led by a GIZ consultant, was a comprehensive M,E&R plan for the Tanzania HNAP. Development of the M,E&R plan was based on the framework outlined in Figure 8, and the guiding principles of **collective participation** across sectors at all levels, **transparency** and **accountability**.

Figure 8. Tanzania M&E logical framework



The M&E logical framework guided the development of indicators at each level, such as those that measure and monitor progress (process/input and output indicators), and those that measure and evaluate the effectiveness of the HNAP (outcome indicators). The comprehensive M,E&R plan describes the indicators, means of verification, frequency of reporting and responsible institution for each objective and action. The plan also prepares for regular evaluation of the HNAP itself, considering its **relevance**, **effectiveness** and **efficiency**. The M,E&R plan aims to ensure that the HNAP is implemented as planned, as well as regularly reviewed and updated to ensure that the overall goal of a climate-resilient health system in Tanzania is being achieved.

6.2 MECHANISM FOR PERIODIC HNAP ITERATIONS

A specified implementation period for each iteration of the HNAP is recommended to allow measurable goals to be set and for regular assessment of country conditions, HNAP implementation, relevance and effectiveness of adaptation actions, and new knowledge and technologies. A five-year period is recommended (4) for each iteration of the HNAP, because the timeframe needs to be long enough to achieve substantive actions and gains, but also short enough to allow reassessment of priorities for uncertainty and change in circumstances. The flexibility of regular HNAP iterations also allows for results from the M,E&R process to promptly inform adaptation planning. HNAP iterations aligned with NAP iterations and other climate change and/or health planning processes will avoid duplication of efforts and improve synergies.

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