

NAP Technical Guidelines
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Least Developed Country Expert Group 2025

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Preface

Since its establishment in 2001, the Least Developed Countries Expert Group (LEG) has played a pivotal role in supporting countries in their adaptation efforts. This support has been delivered through the development and application of guidelines, tools, and methodologies, as well as the provision of technical guidance, capacity-building, and the facilitation of knowledge exchange, among other key modalities.

In 2010, the process for formulating and implementing national adaptation plans (NAPs) was introduced to enable countries to identify their medium- and long-term adaptation needs, and to design and implement strategies to address those needs. Over the years, countries, alongside the broader support ecosystem, have built substantial experience in adaptation planning and implementation, starting with the National Adaptation Programmes of Action in 2001, and transitioning to NAPs from 2010 onward.

As mandated, this update to the NAP technical guidelines is informed by the latest scientific findings, including the contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, and reflects the alignment with the Global Goal on Adaptation.

A core element of the update process has been robust and inclusive engagement with Parties and relevant stakeholders. We gathered feedback from Parties on their experiences, lessons learned, and perspectives for improving the guidelines. We also convened consultations with organizations and experts during the sessions of the Subsidiary Bodies and the Conference of the Parties, as well as through a dedicated expert meeting held in March 2025. Additional insights were obtained during the presentation of the draft guidelines at the First Climate Week of 2025 in Panama.

Moreover, the understanding of both the NAP as a plan and the underlying process supporting its formulation and implementation has evolved over time. There is now a firm deadline of 2025 for all countries to have in place their first NAPs, and to have progressed in implementing the policies, projects, and programmes identified in the NAPs by 2030. There is growing interest in understanding the impacts of different temperature scenarios, and in addressing the full spectrum of adaptation actions, from risk reduction and resilience-building to contingency actions and addressing losses. The importance of gradually building capacity to access a broader range of adaptation financing sources and modalities has also gained wide recognition.

Reflecting these developments, the updated guidelines provide strengthened guidance on NAP implementation, alignment with the Global Goal on Adaptation, strategies for resource mobilization across diverse funding sources and modalities, and a proposed structure for the content of a NAP.

The guidelines are designed to be applicable in any stage or context of the NAP process, whether a country is implementing the policies, projects and programmes identified in the NAP, in the early stages of NAP formulation, or updating the NAP. The LEG remains committed to working with all countries and organizations in effectively applying the updated NAP technical guidelines, and to contribute to the development of successful and sustainable approaches to climate adaptation.

Adao Soares Barbosa

LEG Chair

List of abbreviations and acronyms

AC	Adaptation Committee	M&E	monitoring and evaluation
AF	Adaptation Fund	MDB	multilateral development bank
AR6	sixth assessment report of the Intergovernmental Panel on Climate Change	MEL	monitoring, evaluation and learning
BEC	biodiversity, ecosystems, and climate nexus	MHEWS	multihazard early warning system
BTR	Biennial Transparency Report	NAP	national adaptation plan
CBA	cost-benefit analysis	NAPA	national adaptation Programme of action
CEA	cost-effectiveness analysis	NbS	nature-based solution
CIS	climate information services	NDA	nationally designated authorities
CMA	Conference of the Parties serving as the meeting of the Parties to the Paris Agreement	NDC	nationally determined contributions
COP	Conference of the Parties	NGO	non-governmental organisation
CP	Conference of the Parties	NLP	natural language processing
CSR	corporate social responsibility	NWP	Nairobi work Programme
DFI	development finance institutions	PCCB	Paris Committee on Capacity-building
ESG	environmental, social and governance	PCL	pre-emptive, contingency, loss
EW4ALL	Early Warnings for All initiative	PEG M&E Tool	Progress, Effectiveness and Gaps Monitoring and Evaluation Tool
EWS	early warning system	SBSTA	Subsidiary Body for Scientific and Technological Advice
FDI	foreign direct investment	SBI	Subsidiary Body for Implementation
FM	financial mechanism of the UNFCCC	SCCF	Special Climate Change Fund
FWG/ LCIPP	Facilitative Working Group of the Local Communities and Indigenous Peoples Platform	SDG	Sustainable Development Goal
GCF	Green Climate Fund	SIDS	small island developing states
GEF	Global Environment Facility	TAP	transboundary adaptation programmes
GGA	Global goal on adaptation	TEC	Technology Executive Committee (UNFCCC)
GIS	geographic information system	TNA	technology needs assessment
GST	Global Stocktake	UNEP	United Nations Environment Programme
		UNFCCC	United Nations Framework Convention on Climate Change

IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services	WEF	water-energy-food nexus
LDC	least developed country	WGII	Working Group II (IPCC)
LDCF	Least Developed Countries Fund	WMO	World Meteorological Organisation
LEG	Least Developed Countries Expert Group		

Glossary

Early Warnings for All initiative	Recognized in decision 2/CMA.5, Parties and financial institutions are invited to support the implementation of the Early Warnings for All initiative, which was launched by the UN Secretary General and aims to ensure universal coverage of early warning systems by 2027.
Global goal on adaptation	As established in Article 7, paragraph 1 of the Paris Agreement and elaborated in decision 2/CMA.5, the Global Goal on Adaptation (GGA) aims to enhance adaptive capacity, strengthen resilience, and reduce vulnerability to climate change with a view to contributing to sustainable development and ensuring an adequate adaptation response in the context of the Paris Agreement's temperature goal.
Global Stocktake	Established under Article 14 of the Paris Agreement and implemented through Decision 19/CMA.1, the global stocktake assesses collective progress towards achieving the purpose and long-term goals of the Agreement.
Maintaining the adaptation process	Ongoing efforts to ensure that strategies and actions remain relevant and effective in the face of a changing climate. This includes regular monitoring and evaluation, iterative updates to plans, and continuous stakeholder engagement.
Process to formulate and implement national adaptation plans	Decision 1/CP.16 established the process to enable least developed country Parties to formulate and implement national adaptation plans (NAP), building on experience with national adaptation programmes of action, with the aim of identifying medium- and long-term adaptation needs and developing strategies to address them. The acronym NAP is defined in the COP decision 3/CP.17 to refer to national adaptation plan. The process to formulate and implement the NAP is often referred to as the NAP process
national adaptation programme of action	Established under Decision 28/CP.7 to enable least developed country Parties to identify and communicate urgent and immediate adaptation needs, focusing on those for which further delay would increase vulnerability or lead to increased costs.
well-adapting country	Country that is effectively addressing climate change impacts through proactive measures and building resilience. This involves formulating and implementing NAPs, integrating climate considerations into national development policies, and taking actions across sectors to reduce vulnerability and enhance adaptive capacity.

1. Introduction

1.1 Mandate to update the technical guidelines for NAPs

CMA 5 requested the LEG to update the technical guidelines for the NAP process, reflecting the provisions of decision 2/CMA.5 (global goal on adaptation) as well as the best available science, including the IPCC AR6. It also called on Parties that have not yet done so to have in place their national adaptation plans, policies and planning processes by 2025 and to have progressed in implementing them by 2030.

1.2 Background on the process to formulate and implement NAPs

COP 16 established the process to formulate and implement NAPs under the Cancun Adaptation Framework through decision 1/CP.16 to enable the LDC Parties to formulate and implement NAPs with a view to identifying medium- and long-term adaptation needs and developing and implementing strategies and programmes to address those needs; and invited other developing country Parties to employ the modalities formulated to support NAPs.

The objectives of the NAP process are to:

- (a) Reduce vulnerability to the impacts of climate change by building adaptive capacity and resilience;
- (b) Facilitate the integration of climate change adaptation, in a coherent manner, into relevant new and existing policies, programmes and activities, in particular development planning processes and strategies, within all relevant sectors and at different levels, as appropriate.¹

COP 17 requested the LEG to prepare technical guidelines for the NAP process based on the initial guidelines for the formulation of NAPs by LDCs annexed to decision 5/CP.17. The technical guidelines were developed in 2012 and have since been supplemented with resources developed by the LEG and various organizations that are relevant to the process to formulate and implement NAPs, such as tools, methodologies and guidance.

The formulation and implementation of NAPs is guided by the following principles: ensuring a continuous, progressive and iterative process that is not prescriptive; facilitating country-owned, country-driven action; following a gender-sensitive, participatory and transparent approach, taking into consideration vulnerable groups, communities and ecosystems; and being based on and guided by the best available science and traditional and Indigenous knowledge (decision 5/CP.17).

Funding related to the formulation and implementation of NAPs is provided through the GCF, the LDCF, the SCCF and other channels. COP 17 approved the governing instrument of the GCF, in which NAPs are identified among the plans to be funded by the GCF. COP 18 mandated the GEF to provide funding for activities to enable the preparation of NAPs through the LDCF for the LDCs and through the SCCF for developing countries that are not LDCs. COP 21 requested the GCF to expedite support for the LDCs and other developing country Parties for the formulation of NAPs and for the subsequent implementation of policies, projects and programmes identified therein (paragraph 46 of decision 1/CP.21).

¹ Decision 5/CP.17, para 1.

Technical support for formulating and implementing NAPs is provided by the LEG, other constituted bodies, United Nations organizations, specialized agencies and other relevant organizations, as well as by bilateral and multilateral agencies, including through support programmes. Together with relevant organizations, the LEG created the NAP technical working group, including four subgroups, to advance its work on technical guidance and support for NAPs and to help coordinate activities across all providers of support.

1.3 Adaptation in the Paris Agreement and the global goal on adaptation

Article 7 of the Paris Agreement established the global goal on adaptation of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change, with a view to contributing to sustainable development and ensuring an adequate adaptation response in the context of the temperature goal referred to in Article 2.

To better understand, conceptualize and ultimately achieve this goal, the countries that were signatories to the Paris Agreement (collectively, the CMA) launched the Glasgow–Sharm el-Sheikh work programme on the global goal on adaptation at 26th United Nations Climate Change Conference in Glasgow in 2021, to be carried out by the Subsidiary Body for Scientific and Technological Advice (SBSTA) and the Subsidiary Body for Implementation (SBI).

At CMA 4 in 2023, Parties initiated the development of a framework for the global goal on adaptation to guide the achievement of the global goal and the review of overall progress in achieving it with a view to reducing the increasing adverse impacts, risks and vulnerabilities associated with climate change, as well as to enhancing adaptation action and support.

At CMA 5 in 2024, Parties adopted the United Arab Emirates Framework for Global Climate Resilience, as part of the United Arab Emirates Consensus. The framework includes a range of thematic and dimensional targets for climate adaptation and resilience. CMA 5 also established a two-year United Arab Emirates–Belém work programme on the development of indicators for measuring progress achieved towards the targets outlined in the framework, and Parties provided guidance on the structure and modalities of the work programme at SB 60.

The NAP process is part of the evolution of adaptation under the Convention, together with the process to prepare and implement NAPAs created at COP 7 in 2001, along with the LDCF, the LEG and the LDC work programme. See table 1 for an illustration of the evolution of adaptation under the Convention.

Table 1. Evolution of adaptation under the Convention

TIMELINE	KEY MILESTONES
1996 (COP 2)	National communications
2001 (COP 7)	LDC work programme; NAPAs, LEG, LDCF, SCCF, and Adaptation Fund established
2002	Global launch of NAPA preparation; First LEG meeting
2004	First NAPA submitted in 2004 (Mauritania)
2005 (COP 11)	Nairobi work Programme; guidance to LDCF on implementation of NAPAs
2007 (COP 13)	Bali Action Plan
2009 (COP 15)	Goal of mobilizing jointly USD 100 billion a year by 2020
2010 (COP 16)	Cancun Adaptation Framework: the process to formulate and implement national adaptation plans (NAPs) Adaptation Committee; loss and damage work programme; GCF established
2011 (COP 17)	Initial guidelines for the formulation of NAPs in the LDCs; NAP objectives; financial and technical support; and reporting; mandate to LEG to produce technical guidelines for the NAP process; governing instrument of the GCF and reference to support for NAP formulation and implementation
2012 (COP 18)	Technical guidelines for the NAP process published by the LEG GEF mandated to provide funding for NAPs through LDCF and SCCF
2013 (COP 19)	Establishment of the Warsaw International Mechanism and its Executive Committee First NAP Expo held in Bonn
2014 (COP 20)	LDCs and other developing country Parties invited to submit NAPs and related outputs and outcomes of the process NAP Central launched as a repository for NAPs, and for all pertinent information
2015 (COP 21)	Adoption of the global goal on adaptation; Establishment of adaptation communications; Mandate to GCF to expedite support for formulation of NAPs and implementation; GCF establishment of readiness support for NAP formulation; Submission of first NAPs (Burkina Faso, Cameroon); Commencement of annual progress reports in the process to formulate and implement NAPs by the LEG
2016 (COP 22)	First adaptation communication submitted (Argentina)
2018 (COP 24)	Implementation guidelines for the Paris Agreement finalized First five yearly assessment of progress in the process to formulate and implement NAPs Compilation of gaps and needs related to the formulation and implementation of NAPs
2019 (COP 25)	Enhanced Lima work programme on gender and its gender action plan Facilitative Working Group of the Local Communities and Indigenous Peoples Platform established Establishment of the Santiago Network
2021 (COP 26)	Establishment of the Glasgow-Sharm-el-Sheikh work programme on the global goal on adaptation
2022 (COP 27)	Encouragement to double adaptation finance from 2019 levels by 2025
2023 (COP 28)	Conclusion of the first global stock take. Adoption of UAE Framework for Global Climate Resilience, and the thematic and dimensional targets of the Global Goal on Adaptation; Call to Parties have in place NAPs, policies, policies and planning processes by 2025 and to have progressed in implementing them by 2025 LEG to update NAP technical guidelines; Invitation to developed countries to share their NAPs and strategies on NAP Central; Second five yearly assessment of progress in NAPs initiated
2024 (COP 29)	NCQG to support implementation of NDCs, NAPs and adaptation communications; Launch of Baku to Belém Roadmap to 1.3T aiming at scaling up climate finance; Mandate to establish a support programme for implementing NAPs; NAPs identified as one of the channels through which the targets of the Global Goal on Adaptation can be achieved

2. Experience of the LDCs in formulating and implementing NAPs

2.1 General experiences

The process to formulate and implement NAPs has been monitored on an annual basis through reports of the LEG, including an annual progress report on NAPs. Every five years, the COP, through the Subsidiary Body for Implementation, conducts a comprehensive review of progress, which usually includes a meeting with Party experts. A second such review was due in 2024 and is planned to be completed in 2025. The LDCs also share their experience during NAP Expos, side events and workshops on NAPs. Additionally, the LEG conducted a survey of the LDCs and other developing countries in 2024 on how they have used the NAP technical guidelines. These processes and other sources have provided many insights on the experience of the LDCs, including the following:

Foundational work and progress

- The LDCs have been building institutional and technical capacity and laying the groundwork for adaptation through the preparation and implementation of NAPAs since 2001, and their experience in accessing support, conducting assessments, planning and implementation have contributed to their realization. In many cases, there is sufficient groundwork to guide the formulation of the first NAP;

Funding and the roles of the GCF

- Almost all LDCs have relied on funding from the GCF NAP Readiness Support Programme to advance the NAP process. Although in some cases it has taken countries several years to access this funding, they waited until their funding requests were approved to make tangible progress. In cases where it was not possible to access this funding, a handful of LDCs have used funding from other projects or funding sources to formulate and submit their NAP;
- The LDCs have experienced delays in accessing funding for NAP formulation from the GCF NAP Readiness Support Programme owing to many reasons, from complexity in addressing proposal template requirements or multiple cycles of questions to address before proposal approval, to challenges associated with finding a delivery partner and constraints associated with the delivery partner;
- Most LDCs have not succeeded in getting national direct access entities accredited under the GCF or the AF, resulting in the use of regional or international delivery partners, which in turn face limitations in the number of projects they can support, with some countries being unable to secure their services;
- The nature of project contracts between delivery partners and the Funds have made it difficult to introduce agility into the process and to adapt to changing parameters during the lifetime of NAP readiness projects;
- Currently, producing a NAP does not lead to automatic funding for implementation, which may have led to a lack of motivation to produce a NAP promptly. The GCF has not yet responded to the mandate to expedite support for the LDCs for the implementation of policies, projects and programmes identified in their NAPs;

Human and technical capacity constraints

- Human capacity in the LDCs is always limited; this applies to capacity for adaptation as well. In some cases, it has been a cause of delays in making progress on NAPs;
- Limited research and observational networks in the LDCs lead to data limitations in support of adaptation. This is a perpetual challenge that can only be addressed with greater investment in research and data collection over time;

Evolving understanding and roles of NAPs

- The understanding of both the NAP and the process supporting its formulation and implementation has evolved over time. There is now a firm deadline of 2025 for formulating (first) NAPs. The underlying process will continue to be iterative based on assessments, further planning, implementation and so on over time. Implementation of the NAP refers to implementation of the projects, programmes and policies identified in the NAP. Currently, NAPs are treated as resource mobilization instruments for adaptation, directly as investment plans, or with investment plans as the next step after production of the NAP and its identified priority adaptation actions;

Integration and alignment with other reports

- As a national plan, the NAP should include adaptation activities and plans at all relevant levels and scales;
- Adaptation information for a country is included in multiple other reports and documents produced by Parties to the Convention and the Paris Agreement, and there are good source of support materials to guide countries in aligning their activities and reporting on adaptation, notably in relation to alignment between NAPs, adaptation communications, NDCs, national communications and BTRs;

Global goal on adaptation

- While there are multiple entry points to adaptation assessment, planning and implementation, the recently adopted thematic targets of the global goal on adaptation offer a framework for ensuring that all key sectors identified under the Convention and the Paris Agreement are adequately covered.

2.2 What has worked in some LDCs? Lessons learned and good practices

Examples of lessons learned and good practices in formulating and implementing NAPs in the LDCs include the following:

- Countries that have explored multiple sources of support for their NAPs have managed to overcome challenges associated with core funding for the formulation of NAPs under the GCF NAP readiness support;
- Countries that have involved multiple stakeholders in the country have more ownership of the NAP across government entities, as opposed to a single ministry and/or the focal point working exclusively with the delivery partner in formulating the NAP;
- Countries that used the diverse information already available on assessments of hazards, key vulnerabilities and climate risks and options for dealing with them instead of conducting new assessments have been able to formulate a NAP quickly, with additional work being undertaken to broaden future NAP development;
- Some countries have progressed in one or several sectors and produced sectoral plans, with work under way on formulating a national NAP;
- Delinking GCF NAP readiness support from the formulation of the NAP has helped countries to produce a NAP quickly, as they avoided the delays caused by the process of accessing the readiness support and the subsequent necessary arrangements between the GCF and delivery partners before funds are disbursed;
- Having a formal mandate ensures a clear understanding of the obligations of different government entities to deliver adaptation plans, and also ensures an explicit definition of vulnerable groups so that they can be prioritized in the provision of support;
- Formal integration of climate change adaptation in national planning (e.g. through budget processes) has ensured progress in mainstreaming climate change;
- Some countries have put in place institutional structures to ensure effective access to and use of adaptation funding for formulating and implementing their NAPs such as financing

strategies, national climate funds and special programmes for particular groups, hazards or themes. These are in addition to the required designated focal points or authorities to the respective entities of the Financial Mechanism.

2.3 Feedback from the LDCs and other developing countries on updating the technical guidelines

As part of the steps in updating the technical guidelines, the LEG conducted a survey of developing countries in 2024 on their experience with the original technical guidelines published in 2012 and related supplementary materials produced by various organizations since then. Responses from 29 countries showed that 86% of them have used the technical guidelines and found them useful in formulating the NAP. The following are some suggestions for the LEG to consider when updating the technical guidelines:

General suggestions

- Capacity-building and outreach on the application of the guidelines is essential and can include training, including online training, leading to certification;
- Drawing lessons from countries and sharing of their experience is a useful way to learn from others, including both positive and negative experience with adaptation planning;
- Providing an example for a specific country of an exemplary NAP based on the application of the guidelines would be a helpful learning resource;
- The application of the guidelines should be regularly monitored to help identify gaps and new topics to be addressed;
- The updated guidelines should be simple and succinct, and could be more prescriptive with less room for individual interpretation by supporting agencies and countries;
- Translation into other languages will always be beneficial;
- There are many cross-cutting issues that are important to highlight, and information can be further summarized to show how these issues are addressed across the NAP, including in relation to gender mainstreaming, mobility, Indigenous Peoples and local communities, and youth;
- Consideration should be given on how to advance NAPs for countries with special considerations, such as war- and conflict-related issues;
- There is a special need for information and lessons learned on transitioning from NAP formulation to implementation;
- There is a need to incorporate more comprehensive guidance on how to assess, address and develop strategies to manage climate-related loss and damage, which is a growing concern for many LDCs, including development of specific response and recovery plans;
- There are multiple synergies to be considered, such as between climate change and biodiversity, and between processes under the Convention and the Paris Agreement, such as adaptation communications, NDCs, long-term low-emission development strategies and BTRs.
- Although some sectors may be more important than others to include in the NAP, it would be important to include best practices and examples of all seven thematic targets under the global goal on adaptation.

Under assessment

- Methods and tools for analysing current and future climate change scenarios suitable for application in the LDCs and SIDS are needed;
- Topics for greater technical coverage include clear frameworks for undertaking climate change vulnerability assessment in terms of impacts, assessment of elements at risk, adaptive

capacity assessment, determination of vulnerability indices, and development of adaptation options, detailed methodologies on the selection of adaptation options at the national and subnational levels in relation to the resource base, and status of technology in the specific country or location.

Under planning

- Planning should take into account gaps in global adaptation and regional issues;
- It is important to include in the plan the cost of implementing the NAP at the subnational and community levels and information on practical tools for appraising and ranking adaptation actions;
- The updated guidelines should guide the levels of consideration of the link between NDCs, national risk and disaster management plans and non-state actor involvement in implementation and financing, as well as other synergies.

Under implementation

- In addition to implementation strategies and road maps involving different financing instruments, the guidelines should include information on developing a long-term national investment and financial plan, including how to gradually and iteratively build capacity for more advanced financing approaches;
- Implementation and financing should cover all adaptation priorities and interventions prioritized in the NAP – in other words, the NAP should be implemented as a holistic programme.

Under monitoring and evaluation

- The guidelines should include high-level metrics and indicators on impacts to enable countries to monitor and assess progress towards achieving the global goal on adaptation through the NAP;
- The guidelines should promote reporting under the NAP to enable comparability and aggregation of country reports at the global level.

3. Guiding principles for adaptation

In decision 5/CP.17, paragraphs 3 and 4, the COP agreed that enhanced action on adaptation in an effective NAP process should:

- Be undertaken in accordance with the Convention;
- Follow a country-driven, gender-sensitive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems;
- Be based on and guided by the best available science and, as appropriate, traditional and Indigenous knowledge, and by gender-sensitive approaches, with a view to integrating adaptation into relevant social, economic and environmental policies and actions, where appropriate;
- Not be prescriptive, nor result in the duplication of efforts undertaken in-country, but rather facilitate country-owned, country-driven action.

Key resources to guide developing countries and implementing partners in strengthening and accounting for these considerations are listed in table 2.

Table 2. Resources developed to support consideration of the guiding principles of the NAP process

Constituted body/partner	Resource	Guiding principle of focus
LEG and AC (with the NAP Global Network)	Toolkit for a Gender-Responsive Process to Formulate and Implement National Adaptation Plans (NAPs)	Designed to support country efforts to pursue a gender-responsive NAP process
LEG	Considerations regarding vulnerable groups, communities and ecosystems in the context of the national adaptation plans	Provides technical guidance and advice to the LDCs on how to strengthen considerations regarding vulnerable groups, communities and ecosystems in climate change adaptation.
PCCB	Toolkit to assess capacity-building gaps and needs to implement the Paris Agreement	Developed to serve as a resource for developing countries and their implementing partners in assessing relevant capacity needs and determining gaps in implementing the Paris Agreement.
LEG and AC	Joint workshops, technical briefs and synthesis reports	The LEG and AC jointly organize workshops on gender mainstreaming in NAP implementation and inclusive approaches for the LDCs and vulnerable countries. Technical briefs and synthesis reports are often prepared as a result of these workshops.

4. Vision for a well-adapting country by 2030 and 2035: the future as a baseline for adaptation

The following is a vision for a well-adapting country by 2030 and 2035, offering a baseline against which to monitor progress:

- a. Political will and awareness of climate change is high, leading to a prioritization of adaptation in all aspects of development and planning in relation to a national vision for development, *as demonstrated by climate change adaptation considerations being well integrated into all planning and development activities and institutions are operating to support climate change adaptation goals at all levels of government;*
- b. Technical capacity to deal with climate change is high, covering all aspects such as assessment, planning and implementation, including specific steps related to access to and absorption of adaptation finance; *as demonstrated by reduced reliance on international consultants and faster delivery of outputs and outcomes, and application of outputs such as climate risk information in informing investment decisions through credit ratings;*
- c. Efforts to address climate change adaptation are well coordinated and aligned between different actors, leading to a coherent and complementary approach to adaptation, *as demonstrated by effective coordination mechanisms that are in place with clear leadership of the national government;*
- d. Chronic changes (slow onset events) are being addressed, with measurable benefits in reducing vulnerability and enhancing resilience (across all thematic targets of the global goal

on adaptation), without impacting development trajectories, *as demonstrated by steady progress in development that is little affected by chronic climate changes;*

- e. The country is responding to climate change along the full spectrum of actions needed to build resilience and reduce disaster risk, managing impacts by optimizing pre-emptive, contingency actions and actions to address loss, *as demonstrated by seamless efforts to respond to climate change risks and impacts spanning adaptation and loss and damage windows of support, in coordination with humanitarian and development efforts;*
- f. Financing needs for adaptation are being met at scale through a wide range of sources, without increasing indebtedness, *as demonstrated by levels of debt related to adaptation actions by 2030 and 2035, and progressively after;*
- g. Adaptation efforts are socially inclusive and equitable, prioritizing the needs, involvement and leadership, of vulnerable groups, communities and ecosystems, with attention given to gender-responsiveness, the inclusion of local and Indigenous stakeholders, and local communities, among others, *as demonstrated by targeted programmes;*
- h. The capacity of the country is increasing over time in several aspects relating to the formulation and implementation of NAPs, such as in relation to readiness and capacity to engage in and catalyse additional and more advanced and diverse financing instruments and modalities, *as demonstrated by an expanding mobilization of support for adaptation and progress towards closing the gap in adaptation financing.*

5. Key design considerations for the updated NAP technical guidelines

5.1 General

The following considerations were taken into account in updating the NAP technical guidelines, *inter alia*:

a. **The NAP as the overall adaptation strategy and policy anchor for the whole-of-government**

The NAP should serve as the primary national strategy and policy for adaptation, risk management and climate resilience. It defines the vision, goals and objectives for the country and provides a national mandate to guide and coordinate all adaptation efforts across the whole of government and beyond. It promotes national leadership and governance of adaptation efforts at all levels, serving as a convenor of multiple and diverse stakeholders at the national to co-produce solutions and interventions that make sense from a multisectoral perspective (economic, environmental, health and social well-being), and as the main interface with regional and international climate mechanisms.

b. **The NAP as the national umbrella plan for adaptation representing plans and strategies of all national stakeholders**

The NAP should serve as the overall umbrella plan that aggregates and integrates various subnational, sectoral and local strategies and plans, forming a holistic picture of adaptation efforts for the country. It promotes coherence with national development priorities and a common shared vision for adaptation, building on robust stakeholder engagement and taking into consideration guiding principles of adaptation.

c. **The NAP and the global goal on adaptation**

The thematic and dimensional targets of the global goal on adaptation provide a framing for adaptation approaches and actions at the national level. The NAP serve as important channels via which the targets of the global goal on adaptation can be achieved. Activities contributing to meeting these targets are carried out by different sectors (ministries), and these are distributed among various entities/sectors/elements during assessment, planning and implementation. Meeting the global goal on adaptation and its targets supports a shift towards implementation without long delays in new assessments and aligns adaptation with broader agendas such as the SDGs, the Sendai Framework for Disaster Risk Reduction 2015–2030, the Kunming–Montreal Global Biodiversity Framework, the Land Degradation Neutrality initiative, the New Urban Agenda framework and other international, regional and national agendas.

d. **Applying best available science including the IPCC AR6**

The NAP draws on the latest science from the IPCC AR6 and how adaptation is framed in terms of vulnerability, risk and resilience. A combination of risk management with resilience building focused on benefits of adaptation leads to better plans that cover the short and medium and long-term approach to adaptation. The knowledge synthesized in the IPCC AR6 provides a broad understanding of climate hazards and associated impacts and is a useful learning tool for dealing with particular climate risks, valuable for communities facing new climate threats. It also draws on Indigenous and traditional knowledge to support investment decisions during its implementation.

e. **The NAP recognizes the complexity of adaptation**

The NAP links to the multiple scales and levels of adaptation assessment, planning and action from the global to regional, subnational to local, representing the multi-scalar nature of risk across boundaries. Many systems are interlinked, face multiple risks, and actions often involve trade-offs. Stakeholders in the country choose entry points to the NAP.

f. The NAP prioritizes results

By linking key risks to solutions that are then implemented, the NAP works on producing specific results and benefits, besides managing climate risk, as way to build resilience for the medium and long-term. Choice of essential systems to address in the NAP is based on contribution towards risk reduction and adaptation benefits, as a contribution towards sustainable development in term of the economy, environment and social and human well-being.

g. The NAP process builds capacity over time

The process underpinning the formulation and implementation of NAPs works on the gradual and persistent development of capacity in all key areas from data, assessment, planning and implementation and monitoring and evaluation, such as the building of readiness to engage in more and more complex financing modalities over time. See figure 1.

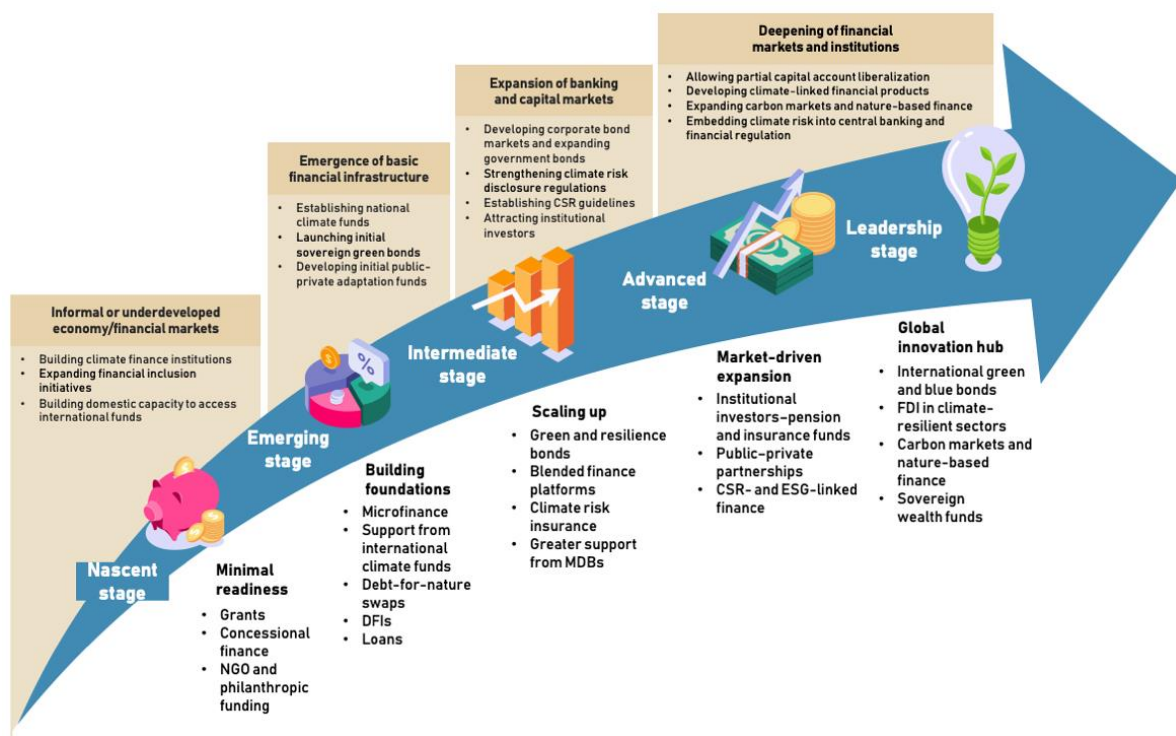


Figure 1. Gradual progression in capacity to engage in and catalyse increasingly complex financing instruments and modalities

h. The NAP and the spectrum of response, including full climate risk management

The NAP recognizes the continuum of response to climate change impacts, from pre-emptive and contingency arrangements, anticipatory actions when impacts are imminent and actions to address loss and damage, including recovery, rebuilding, rehabilitation etc, as depicted in figure 1. These are addressed under their respective workstreams under the Convention and Paris Agreement, and the NAP promotes coherence and complementarities between the respective actions and modalities of support.

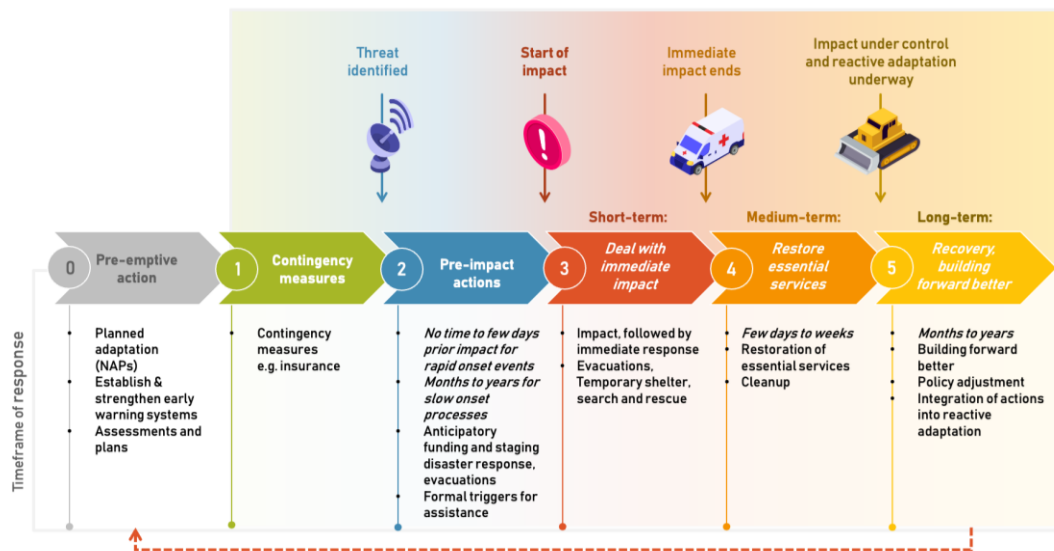


Figure 2. Framing of the spectrum of actions in responding to climate impacts (for time-bound impacts).

In managing climate risk, optimizing across the spectrum of response ensures a comprehensive approach to risk management, where nothing is left to chance. Resources would be allocated to intolerable losses based on cost-effectiveness analysis (CEA), while for tolerable risks, cost-benefit analysis (CBA) would be used, iteratively, to ensure the whole spectrum of risk is covered, including use of insurance and pre-arranged finance to cover those risks that cannot be addressed directly due to costs (see figure 3). This may offer insight into improved strategic activities that would avoid much higher costs of recovery later.

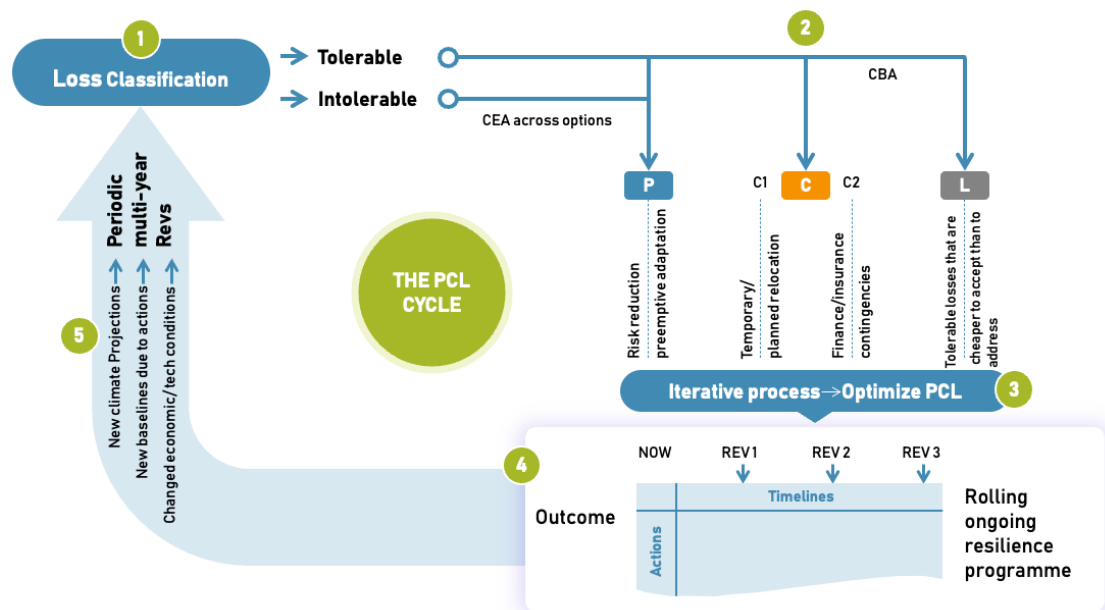


Figure 3. Methods in optimizing the response to climate impacts along the pre-emptive - contingency -loss cycle²

i. The NAP builds on best available information

As a learning by doing and progressive process, the formulation and implementation of NAPs builds on best available information at any given moment in time, informed by experience and lessons from other regions and as synthesized in reports such as those by the IPCC, IPBES and similar global processes. As such, the NAP should not await new assessments, rather, the NAP process should support continuing data collection and assessment to improve future NAPs.

j. The NAP implements the adaptation cycle in parallel with a focus on vulnerable groups, communities and ecosystems

Given countries are at different stages of addressing different vulnerabilities and risks, and in many cases reacting and responding to recent impacts, the NAP contains a mix of actions spanning the spectrum of response and the adaptation cycle (decision 2/CMA.5, paragraph 10), and in some cases, would include scaling up of activities underway. Given limited resources, activities would prioritize needs of vulnerable groups, communities and ecosystems, and those activities that ensure sustainable development pathways. In other words, the elements of the adaptation cycle would not be approached sequentially, rather, activities would be addressed in parallel.

5.2 Use of the IPCC WGII AR6 results: the fusion of vulnerability, risk and resilience

The contribution of WGII to the IPCC AR6 presents a comprehensive framework for understanding and assessing climate risk, moving beyond traditional concepts of vulnerability. It considers risk in the context of climate change impacts as arising from the dynamic interplay between climate-related hazards, the exposure of affected human or ecological systems, and their vulnerability. Additionally, it considers risk in the context of climate responses, recognizing that risks may also emerge when

² Source: Nassef, Y. 2020. The PCL Framework: A strategic approach to comprehensive risk management in response to climate change impacts. Available at <https://arxiv.org/pdf/2004.06144>.

responses fail to achieve their intended objectives or produce unintended trade-offs or adverse side effects. The following are practical considerations in applying the AR6:

- Adaptation is complex, over space, time, policy and many other facets. It therefore requires efforts to recognize the interlinkages and interdependencies between these facets, although adaptation actions will focus on a small window/section of that complexity.
- Adaptation assessment, planning and implementation have multiple entry points, and if done properly and comprehensively the overall end result should be similar.
- Adaptation spans biophysical and human systems and, as such, stakeholder participation in defining criteria for choices made is critical in satisfying their perception of successful adaptation.
- Adaptation is interlinked with development, and its goals are intermingled with those of other agendas. Since there is no optimal pathway to achieve all these goals, stakeholder participation is key in defining success criteria.
- Different actors have evolved their own frameworks for adaptation to govern all stages of the adaptation cycle, leading to silos and a lack of coherence.
- Adaptation is defined and approached from overlapping and complementary entry points, spanning concepts including exposure/hazards, vulnerability, risk, resilience and transformation. The entry point used depends on the context.
- The IPCC provides a global consensus view of how to frame and summarize adaptation, and the AR6 framing of risk and associated approaches to synthesizing risk (key and representative risks and reasons for concern) should provide the basis for a common/shared approach going forward.

5.3 Managing climate risk versus managing for adaptation benefits: a dual lens for effective climate resilience planning

Managing climate risk and managing for adaptation benefits are two complementary but strategically different approaches to adaptation. These two conceptual approaches have emerged in climate adaptation planning: managing climate risk and managing for adaptation benefits. While both are essential, they emphasize different goals, metrics, and outcomes. **Managing Climate Risk** focuses on identifying, reducing, and responding to specific climate hazards and associated vulnerabilities. It asks: *What climate threats pose the greatest harm, who is vulnerable, and how can we reduce their impacts?* **Managing for Adaptation Benefits** focuses on the developmental and co-benefits of resilience-building actions, particularly for vulnerable populations. It asks: *How can we use adaptation to enhance systems, wellbeing, and opportunity in a changing climate, especially for the most vulnerable?*

An in-depth comparison and reflection to help clarify their roles in policy, planning, and financing is given in table 3.

Table 3. Managing climate risk versus managing for adaptation benefits

Dimension	Managing Climate Risk	Managing for Adaptation Benefits
Primary Focus	Reducing losses and damages from climate hazards	Enhancing positive outcomes and resilience dividends
Core Question	<i>How do we prevent or minimize harm from climate threats?</i>	<i>How do we improve wellbeing, systems, and opportunities in a changing climate?</i>
Time Orientation	Often short- to medium-term (focused on known risks)	Medium- to long-term (future-oriented and transformative)
Examples	<ul style="list-style-type: none"> - Flood-proofing infrastructure - Drought insurance for farmers - Early warning systems for cyclones 	<ul style="list-style-type: none"> - Regenerative agriculture to increase productivity and enhance soil health - Urban greening for cooling, aesthetics, and biodiversity - Ecosystem restoration including wetlands for flood buffering and livelihoods
Metrics	Avoided losses, reduced exposure, faster recovery	Enhanced assets, increased productivity, improved health and equity
Mental Model	<i>Avoid danger</i> (defensive stance)	<i>Unlock opportunity</i> (developmental stance)
Typical Actors	Disaster risk managers, emergency services, insurers	Development planners, ministries of health, finance, agriculture, environment
Financial Framing	Cost of inaction, cost-effectiveness of risk reduction	Return on investment, co-benefits, resilience dividends
Role of Vulnerability	Central to risk analysis - determines who is most affected	Central to benefit targeting - ensures inclusion and equitable outcomes

The framing shapes investment. If adaptation is framed only as risk reduction, it becomes a cost to bear. But when framed in terms of benefits - health, equity, food security, green jobs - it becomes an investment with returns. Planning and prioritization also differ. Risk-focused strategies tend to prioritize hazard-prone hotspots and quick-win protective measures. Benefit-oriented approaches focus on transformative change, especially in development sectors (education, energy, finance).

Effective adaptation planning requires integrating both lenses. For example: flood protection systems (risk reduction) can double as community parks (benefits: recreation, cooling, aesthetics) as in the design of Chulalongkorn University Centenary Park in Bangkok. Another example is in the case of drought early warning (risk), which can be linked with solar irrigation and market access (benefits: productivity, income). Both approaches must be rooted in a clear understanding of vulnerability, which shapes the severity of risk and the accessibility of benefits.

In the NAPs, the risk lens helps prioritize vulnerable populations and high-exposure geographies; while the benefit lens aligns adaptation with national development goals (e.g., food security, green jobs), ensuring that vulnerable groups gain from interventions. Jointly, they help governments identify "no-regret" options - those that reduce risks *and* improve lives regardless of future climate scenarios.

Box 1. Why adapt? A non-exhaustive list of specific benefits and outcomes of adaptation activities

Below is a non-exhaustive list of benefits and outcomes of adapting to climate change, listed in no particular order. Each one points to a type of intervention and suggests a funding/financing source and modality for measurement to facilitate decision-making.

1. **Safeguarding lives and human well-being:** Protects human life and well-being
 - The Nigeria Erosion and Watershed Management Project (NEWMAP) restored gully sites and built nearly 60 catchments, improving the well-being and safety of over 12 million people across 23 states in Nigeria
2. **Safeguarding livelihoods and heritage:** Protects livelihoods, biodiversity, ecosystems and cultural heritage from permanent loss or degradation.
 - Nepal's preservation of cultural heritage against climate risks: protecting Kathmandu's historical sites saved over USD 50 million annually in income from tourism.
3. **Mitigating extreme climate impacts:** Shields populations from severe climate events, such as heatwaves, floods, droughts and storms.
 - The Republic of Korea's heatwave adaptation policies: smart cooling strategies prevented USD 1 billion in healthcare costs and heat-related productivity losses.
 - The Bee Branch Creek Restoration project in the US: the restoration has been proven to manage flash flooding from the Mississippi River, protecting over 1,100 properties and preventing \$11.6 million in damages.
4. **Avoiding disaster recovery costs:** Lowers the economic burden of rebuilding after climate-related disasters by investing in proactive adaptation measures.
 - Japan's disaster preparedness for typhoons: each USD 1 invested in Japan's early warning system saved USD 7 in post-disaster relief and infrastructure repairs.
5. **Strengthening early warning and preparedness:** Enhances forecasting systems, anticipatory financing and rapid response capabilities to mitigate climate hazards.
 - Mozambique's early warning system: by strengthening EWS through a World Bank program, Mozambique issued warnings for at risk communities ahead of Cyclone Freddy, and economic damages were significant lower compared to the previous Cyclone Idai, with an estimated 83% reduction.
 - India's cyclone early warning system: over 1,000 lives were saved and USD200 million in economic losses prevented during Cyclone Phailin in 2013.
6. **Enhancing capacity to cope with new/future climate shocks:** Strengthens the ability of communities, ecosystems and economies to withstand and recover from climate-related shocks.
 - Viet Nam's coastal mangrove restoration: USD 1 million investment in mangroves saved USD 7.3 million annually in avoided flood damage.
7. **Promoting social equity:** Targets support for the most vulnerable (e.g. women, children, the poor) and encourages inclusive decision-making and locally led solutions.
 - Introduction of eco-stoves in indigenous communities reduced reliance on fuelwood, empowering indigenous women in Brazil and improving their health.
8. **Attracting investment and reducing risk:** Countries that manage climate risks effectively can lower their risk ratings, making them more attractive to major investors and lenders.
 - Chile issued a \$1.4 billion green bond, attracting investors and funding projects in agriculture and biodiversity protection.
 - Indonesia's green bonds and climate risk reduction: its USD 1.25 billion green sukuk bond attracted investors owing to strong climate risk management.
9. **Managing climate risks through insurance and transfers:** Helps protect production, infrastructure and property by distributing risk across financial mechanisms.

- India's crop insurance scheme (PMFBY): Farmers insured under PMFBY saved up to 25% of income losses during drought years;
 - Sovereign insurance schemes through regional risk facilities in Africa, the Caribbean and the Pacific.
10. **Driving economic transformation:** Fosters new industries and productive capacities that align with climate-resilient development.
 - China's green infrastructure investment: adaptation-linked investments in green cities created 1.5 million jobs and generated USD 100 billion in economic activity;
 - Ethiopia's "Green Legacy Initiative": the project has already planted 25 billion seedlings throughout the nation, contributing to environmental protection, restoration of degraded natural resources and the creation of more than 767,000 jobs, mostly for women and youth.
 11. **Creating growth opportunities:** Generates economic benefits by fostering innovation and investment in climate-adaptive sectors.
 - Viet Nam's shift to climate-smart agriculture: climate-resilient rice farming improved export revenue by USD 3 billion annually.
 12. **Integrating climate resilience into development planning:** Ensures that infrastructure, urban planning and policies are designed to withstand future climate risks.
 - Japan's earthquake and flood-resistant infrastructure: investing 5% more in climate-proofing buildings extended asset lifespan by 20 years or more and saved 40% in reconstruction costs.
 13. **Restoring and protecting ecosystems:** Supports rehabilitation and conservation efforts to maintain critical ecosystem services and biodiversity.
 - Pakistan's Ten Billion Tree Tsunami project: the project is expected to generate USD 120 million in ecosystem benefits annually.
 - Bolivia's Conservation efforts: Fundación Natura has succeeded in conserving a little more than 1.48 million acres across 80 municipalities in Bolivia with the participation of 24,000 farmers.
 14. **Enhancing policy effectiveness:** Strengthens sustainable resource management and governance to mitigate climate risks.
 - Thailand's water management policies: better irrigation policies reduced drought-related GDP losses by USD 500 million per year.
 15. **Reducing climate-driven migration:** Helps minimize forced migration from vulnerable regions by improving local resilience and economic stability.
 - Bangladesh's adaptation in coastal villages: community-led adaptation (embankments, climate-smart farming) reduced climate-induced migration by 30%.
 - Panama's planned relocation of the Guna people: The Guna community on Gardi Sugdub Island is relocating to the mainland due to increased flooding from sea-level rise. This planned move, supported by the government, aims to provide safer living conditions and prevent forced displacement.
 16. **Preventing internal displacement:** Reduces both forced and planned relocations within countries, cutting associated costs and social disruption.
 - Brazil's Adaptive Social Protection system: the Bolsa Família program accelerated cash transfers to support families affected by climate-induced floods in 2024, reducing displacement. The government initiated a USD 1,000 reconstruction aid per family targeting those displaced by the heavy rains. Shifting to digital payments has also been key to increasing resilience to shocks.
 - China's Sponge Cities programme (urban flood resilience): flood adaptation measures in 30 cities prevented the displacement of 1 million people, saving billions in resettlement costs.
 17. **Indirect private sector benefits:** Government-led disaster risk reduction and adaptation initiatives create indirect benefits for businesses and stakeholders.

- Malaysia's climate-resilient business incentives: Government incentives for businesses investing in resilience led to USD 2 billion in private sector adaptation funding.
 - AI-driven irrigation in Latin America: Kilimo, a company founded in 2014, provides farmers from Argentina, Brazil, Chile, Guatemala, Mexico, Peru and Uruguay with data-based tools to optimize their irrigation and water management, saving 72m cubic meters in two years. This technology has attracted investment from the private sector.
18. **Indirect benefits from transboundary adaptation efforts:** Countries can benefit from climate-resilience investments made in neighbouring regions, reducing shared risks.
- Mekong River Basin regional cooperation: joint adaptation efforts among Cambodia, the Lao People's Democratic Republic and Viet Nam reduced regional flood risks by 30%, avoiding USD 2 billion in damage.
19. **Leveraging 'virtual water' strategies:** Countries can offset local water scarcity by importing water-intensive products or engaging in agricultural production abroad.
- The United Arab Emirates' foreign agricultural investments (in Asia and Africa): investments in foreign farmland saved billions of cubic metres of water, reducing food import costs.

<End Box 1>

5.4 Unpacking the targets of the global goal on adaptation in paragraphs 9 and 10 of decision 2/CMA.5 in new NAPs

Understanding the Global Goal on Adaptation

UAE Framework for Global Climate Resilience

The UAE Framework for Global Climate Resilience guides the achievement of **Global Goal on Adaptation (GGA)** and reviews the overall progress in adapting to climate change. It presents a comprehensive approach to **enhance adaptive capacity, strengthen resilience & reduce vulnerability** to climate change.



Figure 3. A summary of the key features of the UAE Framework for Global Climate Resilience.

The following are main components of the seven GGA thematic targets (based on paragraph 9 and 10 of decision 2/CMA.5). These component sub-targets can be viewed as areas that can be assessed separately or as parts of a higher level of aggregation in the context of national planning and development. For example, the sub-targets under GGA 2 can be part of an analysis of food security, or treated separately.

1. Climate-Resilient Water Security for all

Significantly reducing climate-induced water scarcity and enhancing climate resilience to water-related hazards towards a climate-resilient water supply, climate-resilient sanitation and towards access to safe and affordable potable water for all (paragraph 9a of decision 2/CMA.5);

- Reduction in climate-induced **water scarcity**
- Enhanced climate resilience to **water-related hazards**
- Climate-resilient **water supply** for all
- Climate-resilient **sanitation** for all
- Access to **safe potable water** for all
- **Affordable potable water** for all

2. Sustainable Food and Nutrition Security for all

Attaining climate-resilient food and agricultural production and supply and distribution of food, as well as increasing sustainable and regenerative production and equitable access to adequate food and nutrition for all (paragraph 9b of decision 2/CMA.5);

- Climate-resilient **food and agricultural production**
- Climate-resilient **food supply**
- Climate-resilient **distribution of food**

- Sustainable and **regenerative food and agricultural production**
- Equitable access to **adequate food and nutrition** for all

3. **Climate-Resilient Health Systems and Services**

Attaining resilience against climate change related health impacts, promoting climate-resilient health services, and significantly reducing climate-related morbidity and mortality, particularly in the most vulnerable communities (paragraph 9c of decision 2/CMA.5);

- Resilience against climate change related health impacts (particularly in the most vulnerable communities)
- Climate-resilient health services (particularly in the most vulnerable communities)
- Reducing climate-related morbidity and mortality (particularly in the most vulnerable communities)

4. **Healthy Ecosystems and Biodiversity**

Reducing climate impacts on ecosystems and biodiversity, and accelerating the use of ecosystem-based adaptation and nature-based solutions, including through their management, enhancement, restoration and conservation and the protection of terrestrial, inland water, mountain, marine and coastal ecosystems (paragraph 9d of decision 2/CMA.5);

- Reduced climate **impacts on ecosystems** (through their management, enhancement, restoration and conservation and the protection)
- Reduced climate **impacts on biodiversity** (through their management, enhancement, restoration and conservation and the protection)
- Accelerated use of **ecosystem-based adaptation** and **nature-based solutions** (in terrestrial, inland water, mountain, marine and coastal ecosystems)

5. **Climate-Resilient Infrastructure and Human Settlements for all**

Increasing the resilience of infrastructure and human settlements to climate change impacts to ensure basic and continuous essential services for all, and minimizing climate-related impacts on infrastructure and human settlements (paragraph 9e of decision 2/CMA.5);

- **Climate-resilient infrastructure** to climate change impacts to ensure basic and continuous essential services for all
- **Resilient human settlements** to climate change impacts to ensure basic and continuous essential services for all
- Minimized **climate-related impacts** on infrastructure and human settlements;

6. **Climate-proof Poverty Reduction and Livelihoods and climate-social protection measures for all**

Substantially reducing the adverse effects of climate change on poverty eradication and livelihoods, in particular by promoting the use of adaptive social protection measures for all (paragraph 9f of decision 2/CMA.5);

- Reduced adverse effects of climate change on **poverty eradication and livelihoods**
- Use of **adaptive social protection measures** for all;

7. **Climate-proof Cultural Heritage**

Protecting cultural heritage from the impacts of climate-related risks by developing adaptive strategies for preserving cultural practices and heritage sites and by designing climate-resilient

infrastructure, guided by traditional knowledge, Indigenous Peoples' knowledge and local knowledge systems (paragraph 9g of decision 2/CMA.5);

- Protecting cultural heritage from the impacts of climate-related risks by **preserving cultural practices** (*guided by traditional knowledge, Indigenous Peoples' knowledge and local knowledge systems*);
- Protecting cultural heritage from the impacts of climate-related risks by **preserving heritage sites** (*guided by traditional knowledge, Indigenous Peoples' knowledge and local knowledge systems*);
- Protecting cultural heritage from the impacts of climate-related risks by designing **climate-resilient infrastructure** (*guided by traditional knowledge, Indigenous Peoples' knowledge and local knowledge systems*);

Components of the four-dimensional targets of the global goal on adaptation

The four dimensional targets of the global goal on adaptation (described in paragraph 10 of decision 2/CMA.5) can be broken down as follows:

8. Impact, vulnerability and risk assessment and early warning systems

Impact, vulnerability and risk assessment: by 2030 all Parties have conducted up-to-date assessments of climate hazards, climate change impacts and exposure to risks and vulnerabilities and have used the outcomes of these assessments to inform their formulation of national adaptation plans, policy instruments, and planning processes and/or strategies, and by 2027 all Parties have established multi-hazard early warning systems, climate information services for risk reduction and systematic observation to support improved climate-related data, information and services (paragraph 10a of decision 2/CMA.5);

By 2030

- Each Party to have conducted up-to-date **assessments of climate hazards, climate change impacts and exposure to risks and vulnerabilities**
- The outcomes of these **assessments used to inform their formulation or updating of national adaptation plans, policy instruments, and planning processes and/or strategies, and the implementation** thereof

By 2027 all Parties have established

- **Multi-hazard early warning systems**
- **Climate information services for risk reduction**
- **Systematic observation** to support improved climate-related data, information and services;

9. Plans, processes and mainstreaming

Planning: by 2030 all Parties have in place country-driven, gender-responsive, participatory and fully transparent national adaptation plans, policy instruments, and planning processes and/or strategies, covering, as appropriate, ecosystems, sectors, people and vulnerable communities, and have mainstreamed adaptation in all relevant strategies and plans (paragraph 10b of decision 2/CMA.5);

- The **NAP by 2025** (GST decision)
- **Policy instruments and planning processes and strategies by 2030** covering ecosystems, sectors, people and vulnerable communities
- **Adaptation mainstreamed** in all relevant strategies and plans

10. Implementation and resilience benefits

Implementation: by 2030 all Parties have progressed in implementing their national adaptation plans, policies and strategies and, as a result, have reduced the social and economic impacts of the key climate hazards identified in the assessments referred to in paragraph 10(a) of decision 2/CMA.5 (paragraph 10c of decision 2/CMA.5)

- Progress in **implementing the NAP, policies and strategies**
- **Measurable reduction** of the social and economic impacts of the key climate hazards identified in the assessments

11. Monitoring, evaluation and learning

Monitoring, evaluation and learning: by 2030 all Parties have designed, established and operationalized a system for monitoring, evaluation and learning for their national adaptation efforts and have built the required institutional capacity to fully implement the system (paragraph 10d of decision 2/CMA.5)

- **Designed and established a system** for monitoring, evaluation and learning
- **Operationalized the system** for monitoring, evaluation and learning
- **Built the required institutional capacity** to fully implement the system for monitoring, evaluation and learning

A practical approach is to up to break down each of the targets into systems for further analysis. The systems can be constructed to represent basic units of assessment and action. See table 4 below.

Table 4. Collection of systems used in addressing components of the targets of global goal on adaptation (an expanded table with descriptions of each with examples is given in the annex I).

GGA Target	Components of the target	System
A. Climate-Resilient Water and Sanitation Security for All	<ul style="list-style-type: none"> - Reduction in climate-induced water scarcity - Enhanced climate resilience to water-related hazards - Climate-resilient water supply for all - Climate-resilient sanitation for all - Access to safe potable water for all - Affordable potable water for all 	Disaster preparedness and response (linked to MHEWS)
		Water supply system
		Water use management, governance, standards and policies
		Transboundary water agreements
		Storm water drainage system
		Sewage/Sanitation system
		Water processing for safety
		Water pricing and affordability system
B. Sustainable Food and Nutrition Security for All	<ul style="list-style-type: none"> - Climate-resilient food and agricultural production - Climate-resilient food supply - Climate-resilient distribution of food - Sustainable and regenerative food and agricultural production - Equitable access to adequate food and nutrition for all 	Food crop production
		Commercial crop production
		Food supply (local, household level)
		Food supply (gross national level)
		Food distribution/supply chain
		Equitable access to food and nutrition
		National food security
		Pastoral livestock production
Farm livestock production		

		Fisheries production
		Forestry production
C. Climate-Resilient Health Systems and Services	<ul style="list-style-type: none"> - Resilience against climate change related health impacts (particularly in the most vulnerable communities) - Climate-resilient health services (particularly in the most vulnerable communities) - Reducing climate-related morbidity and mortality (particularly in the most vulnerable communities) 	Emergency response
		Health services
		Healthcare infrastructure
		Climate morbidity and mortality
D. Healthy Ecosystems and Biodiversity	<ul style="list-style-type: none"> - Reduced climate impacts on ecosystems (through their management, enhancement, restoration and conservation and the protection) - Reduced climate impacts on biodiversity (through their management, enhancement, restoration and conservation and the protection) - Accelerated use of ecosystem-based adaptation and nature-based solutions (in terrestrial, inland water, mountain, marine and coastal ecosystems) 	Ecosystem management (impact reduction)
		Ecosystem function (resilience)
		Biodiversity hotspots
		General biodiversity loss reduction (habitat, rights)
		Genetic biodiversity preservation - crop
		Genetic biodiversity preservation - plants
		Genetic biodiversity preservation - fish
Genetic biodiversity preservation - animal		
E. Climate-Resilient Infrastructure and Human Settlements for All	<ul style="list-style-type: none"> - Climate-resilient infrastructure to climate change impacts to ensure basic and continuous essential services for all - Resilient human settlements to climate change impacts to ensure basic and continuous essential services for all - Minimized climate-related impacts on infrastructure and human settlements 	Key infrastructure
		Essential services: access, shelter, energy, water, health services
		Living spaces
		Land use and zoning
		Building designs, codes and regulations
F. Climate-Proof Poverty Reduction and Livelihoods, and climate-social protection measures for All	<ul style="list-style-type: none"> - Reduced adverse effects of climate change on poverty eradication and livelihoods - Use of adaptive social protection measures for all 	The national economic engine
		Poverty reduction system
		Employment
		Rural livelihoods
		Social protections
G. Climate-Proof Cultural Heritage	<ul style="list-style-type: none"> - Protecting cultural heritage from the impacts of climate-related risks by preserving cultural practices - Protecting cultural heritage from the impacts of climate-related risks by preserving heritage sites - Protecting cultural heritage from the impacts of climate-related risks by designing climate-resilient infrastructure 	Preservation of cultural heritage sites (systems)/Tangible Cultural Heritage Protection System
		Preservation of cultural practices and traditional knowledge/Intangible Cultural Heritage System
		Economics of cultural heritage/Cultural Economy and Creative Livelihoods
		Non-economic value system of cultural heritage/Cultural Infrastructure and Institutions
		Rights and access to Cultural Resources

Impact, vulnerability and risk assessment and early warning systems	<ul style="list-style-type: none"> - Multi-hazard early warning systems - Climate information services - Systematic observations 	MHEWS
		Climate information services
		Systematic observation systems
Plans, processes and mainstreaming	<ul style="list-style-type: none"> - NAP by 2025 - Policies, plans and strategies by 2030 (targeting ecosystems, sectors, people and vulnerable communities) - Mainstreaming adaptation in strategies and plans 	Submission of NAPs
		Integrating adaptation in strategies and plans
Implementation and adaptation/resilience benefits	<ul style="list-style-type: none"> - Progress in implementation of NAPs, policies and strategies by 2030 - Measurable reduction in social and economic impacts 	Implementation of NAPs
		Measurement of reduction in social and economic impacts (adaptation benefits)
Monitoring, evaluation and learning	<ul style="list-style-type: none"> - Monitoring, evaluation and learning system (MEL) 	Design and establishment of MEL system
		Operationalization of MEL
		Institutional capacity-building to fully implement the MEL system

5.5 Identifying connected systems to promote integrated approaches and avoiding silos

Multiple entry points to systems

To manage interactions between systems and various dimensions of adaptation, the LEG has developed an approach, termed the NAP integrating framework or iFrame, to facilitate the mapping of different aspects associated with systems or management units.³ The approach makes it easy to identify dependencies and synergies between components, and can be extended to any consideration. Figure 4 and 5 shows how the seven GGA themes map to sample systems in the middle of the diagram, and how each of the system in turn, maps to different lenses on the outside, from hazards, spatial scales, development themes, SDGs, etc.

Applying the NAP iFrame enables countries to harmonize addressing SDGs, the GGA targets, and national goals (development, disasters, etc.) with activities designed to address adaptation in a *country-driven manner*. It facilitates harmonized reporting on indicators for the SDGs and assessment of outcomes of the adaptation benefits. To do this well, it requires good collaboration between all relevant ministries and supporting agencies and organizations – *avoiding a siloed approach*, maximizing synergy and effectiveness.

³ https://unfccc.int/files/bodies/adaptation_committee/application/pdf/20170517_leg_nap.pdf.

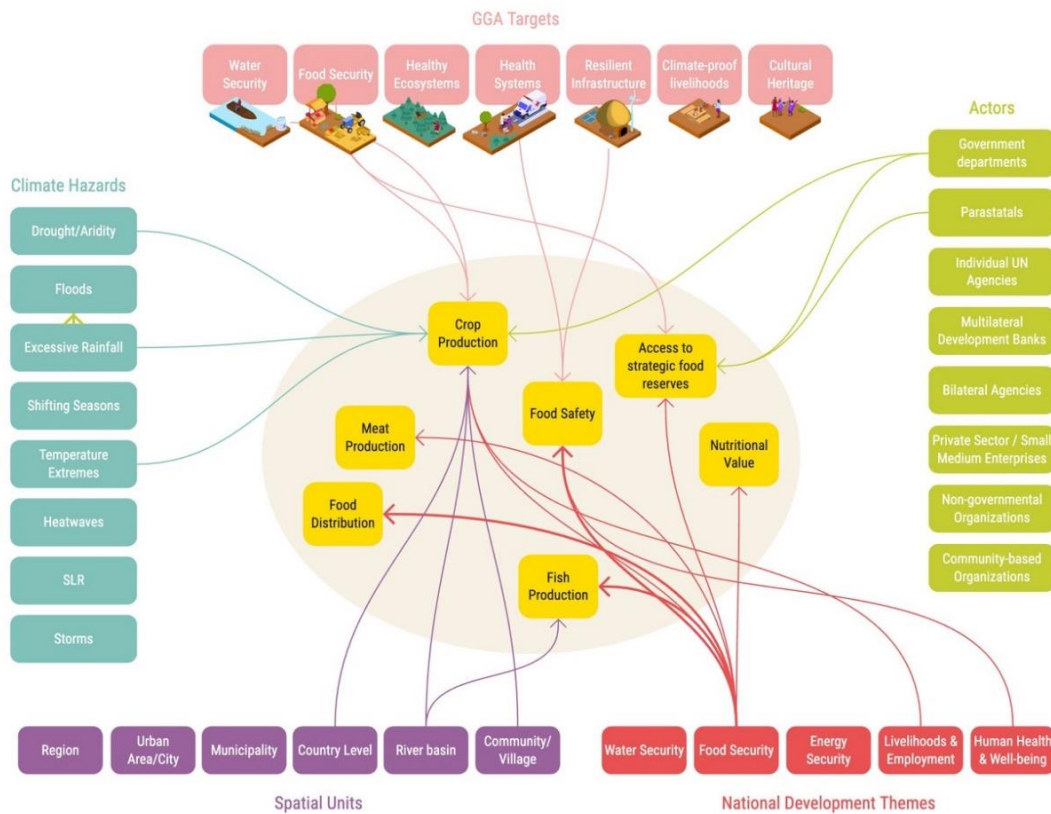


Figure 4. The NAP iFrame showing agriculture and food systems mapped to different entry points for assessment

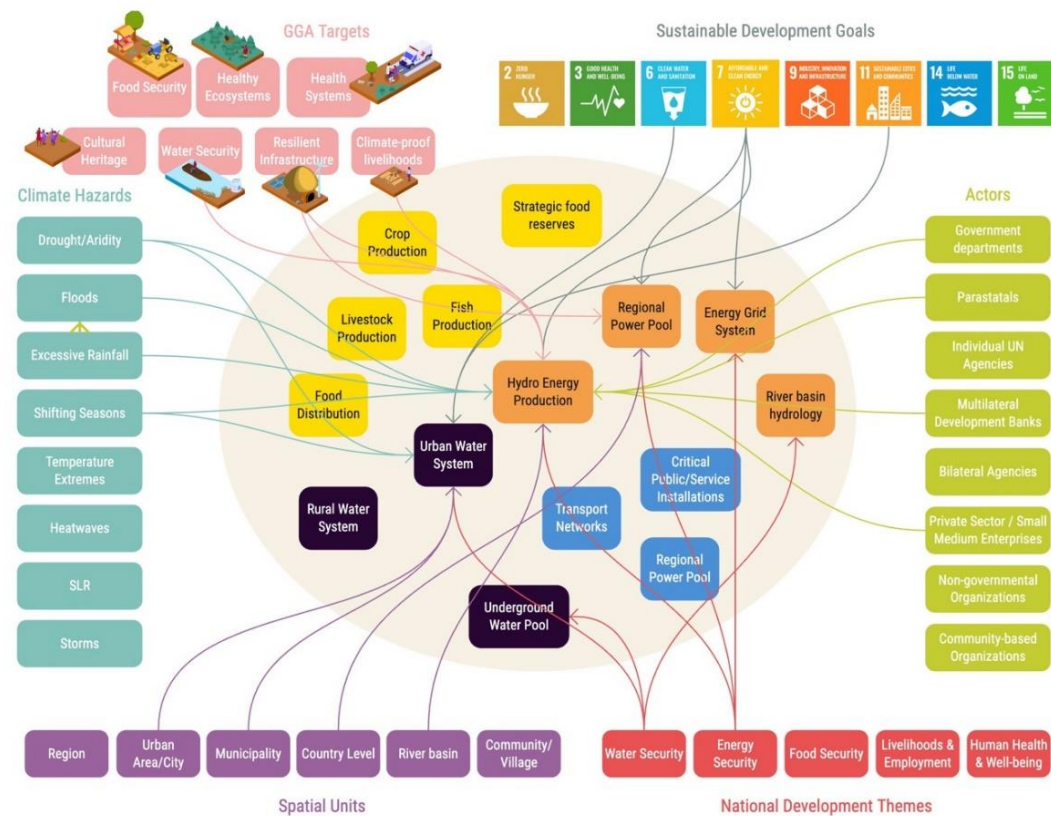
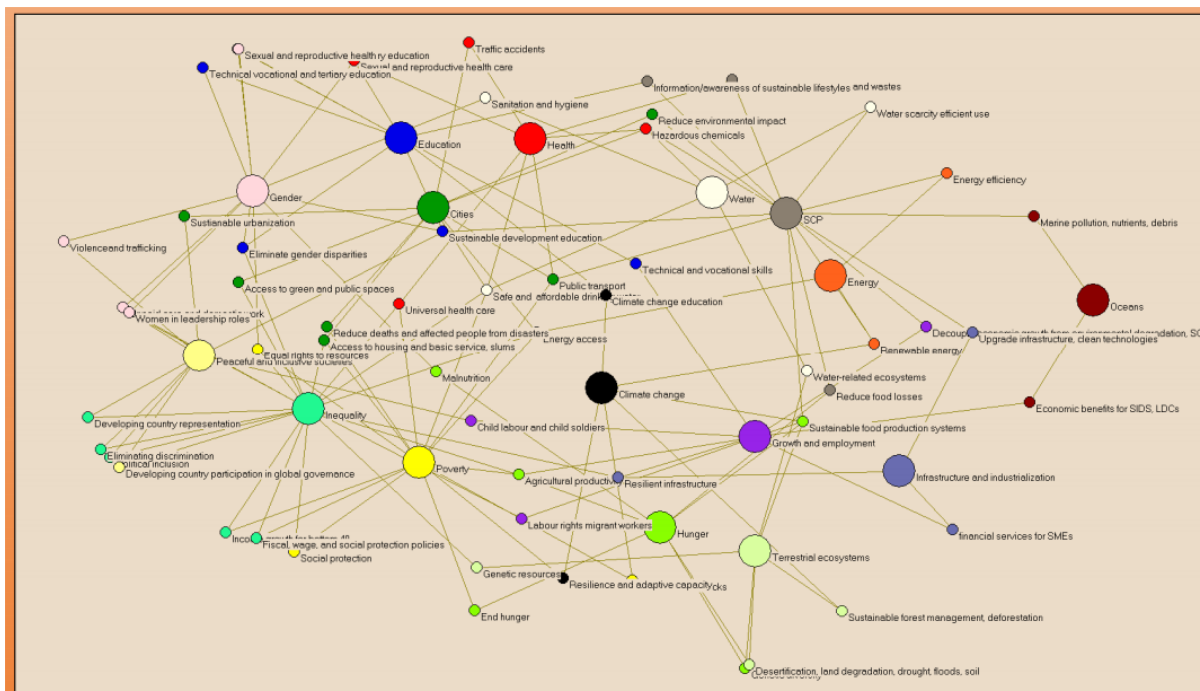


Figure 5. The NAP iFrame showing systems from four themes mapped to different entry points for assessment

The NAP iFrame above is a useful tool for multi-stakeholder dialogues in identifying linkages between different entry points, and to help understand scales and other dimensions at which different processes and issues are relevant. Careful application of the iFrame avoids activities to promote integration and synergy after the fact.

Interactions between systems (nexuses approaches)

There are many interactions between components of the global goal of adaptation thematic areas, and in fact, most activities on the ground address multiple issues concurrently. Such interactions can be reinforcing, enabling, constraining, counteracting, or cancelling. In the case of the SDGs, the interactions between goal targets and the indicators are well studied and point towards an integrated approach to addressing the SDG and avoiding treating the goals in silos⁴ (see figure 6 below). Similarly, a similar approach should be taken for the GGA targets, to avoid a siloed approach and ensure that trade-offs and complementariness are explicitly considered.



Source: David Le Blanc, "Towards integration at last? The SDGs as a Network of Targets," Rio+20 Working Paper 4

Figure 6. Sustainable development goals showing interactions between targets

The so-called nexus approaches are a useful way to recognize interactions between systems and to manage tradeoffs between them. In advancing adaptation in alignment with the global goal of adaptation, a nexus approach between components and systems from different target areas would lead to addressing adaptation in ways that more closely match how issues are dealt with in a country. The following are a few examples of nexuses that have been looked at in detail:

- *WEF (Water-Energy-Food) Nexus*: Highlights the interdependence of water, energy, and food systems, emphasizing the need for integrated resource management to ensure sustainable access and resilience.⁵
- *IPBES (Nexus Report)*: Recognizes that the global crises of biodiversity loss, water and food insecurity, health risks and climate change are interconnected. The five nexus elements,

⁴ <https://council.science/publications/a-guide-to-sdg-interactions-from-science-to-implementation>.

⁵ <https://www.unwater.org/water-facts/water-food-and-energy>.

including their social, economic, and environmental components: Interact across ecosystems, geographic regions and scales; Influence each other (interlinkages) and; Depend on each other to function (interdependences).⁶

- *Biodiversity-Ecosystems-Climate (BEC) Nexus*: Refers to the interconnectedness and mutual influence between biodiversity, ecosystems, and climate change.
- *Climate-Health-Livelihoods Nexus*: Climate driven impacts and interconnected influence on human lives, health, livelihoods, and wellbeing.⁷
- *Urban-Infrastructure-Social Nexus*: Climate change impacts on key urban infrastructure with interactions across social dimensions of wellbeing and livelihoods.
- *Land-Soil-Food Nexus*: Highlights how health and management of soil directly impact food production, security, sustainability, and vice-versa.
- *Water-Sanitation-Public Health Nexus*: Interconnectedness of water systems and health. How water sanitation quality are vital for public health outcomes, especially when impacted by climate-induced stressors such as droughts and floods.⁸
- *Finance-Governance-Implementation Nexus*: Emphasizes alignment of financial resources, institutional governance, and effective implementation mechanisms for delivery adaptation at scale.

Addressing cross-cutting sectors not covered directly by the seven GGA themes

One of the frequently asked questions is about how to deal with sectors that are considered important for a country but which are not included in the seven GGA themes. For example, tourism and hydroelectricity production. If we consider these as cross-cutting issues, then compound systems or nexuses can be built by linking to component systems from the different GGA areas.

For example, hydroelectricity production can be considered a function of water supply; infrastructure in terms of the grid and generation equipment, energy demand dynamics related to water, food, health and livelihoods; and water related hazards in terms of impacts of floods and droughts, or seasonal changes in rainfall.

Tourism on the other hand could be considered to include links to ecosystems, cultural heritage, infrastructure and livelihoods. In this way, any sectors that are considered important for a country can easily be considered by mapping to relevant components of the seven GGA target areas.

⁶ IPBES (2024). Summary for Policymakers of the Thematic Assessment Report on the Interlinkages among Biodiversity, Water, Food and Health of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. IPBES secretariat, Bonn, Germany. DOI: <https://doi.org/10.5281/zenodo.13850289>.

⁷ <https://www.thinkglobalhealth.org/article/cop28-climate-health-nexus-turned-corner-better-and-worse>.

⁸ Philip, L. Overlooking the critical nexus between water, sanitation, and health. *Nat Water* 2, 1042–1043 (2024). <https://doi.org/10.1038/s44221-024-00337-z>. <https://www.nature.com/articles/s44221-024-00337-z>.

5.5 Overall approach of the technical guidelines focused on managing flow of information between steps

An important approach in the updated technical guidelines is the focus on main information that is assembled in each step and passed on to subsequent steps, to inform decisions along the adaptation cycle. See figure 7. The information is produced using by a variety of methods and techniques available to the NAP teams based on the data, technology and technical capacity.

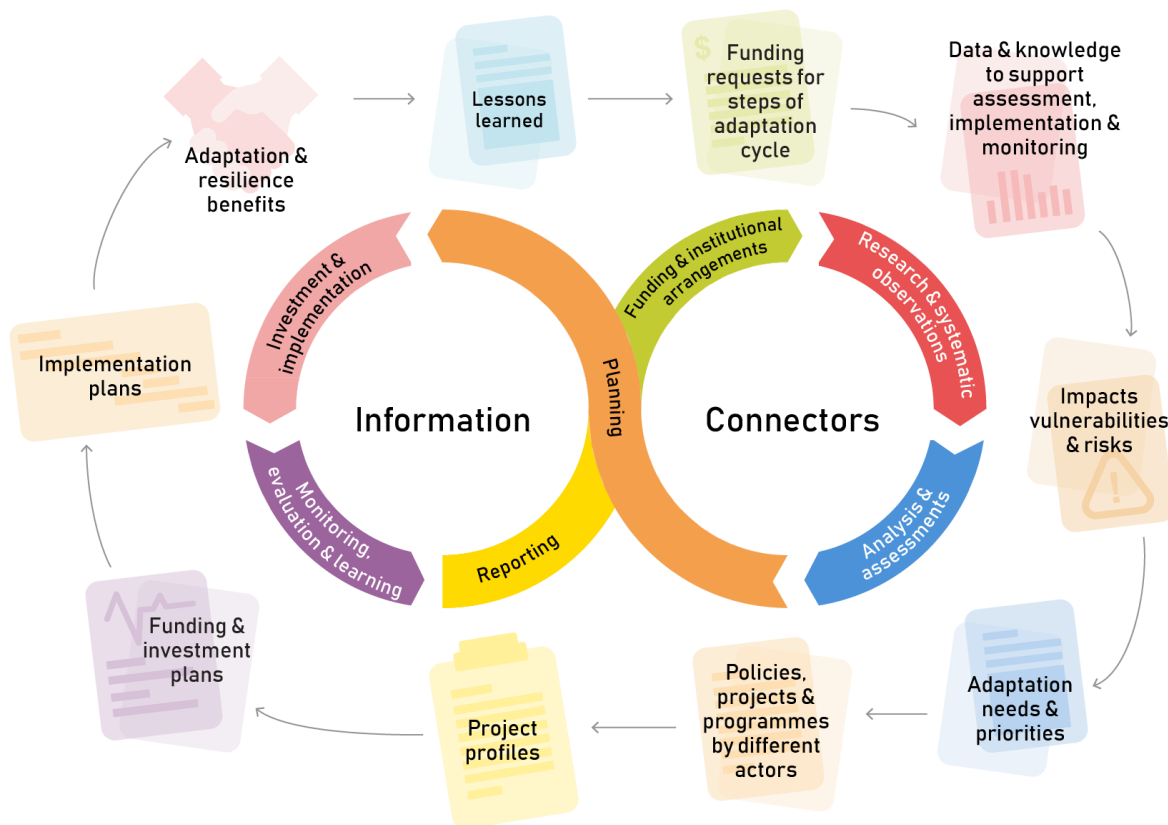


Figure 7. Key data and information assembled under key steps of the adaptation cycle and used in subsequent steps, showing a focus on information to support decision-making and implementation, rather than technical methodologies under each step

7. Recommended contents of the NAP

The following are chapters that would be useful to include in the main NAP (the plan) to effectively communicate adaptation priorities, how they would be implemented, and information on resource mobilization. It is highly recommended that additional details and lengthy reports are included either in annexes, or better yet, in separate outputs of the NAP process that would be referenced in the NAP. Users of the NAP are therefore encouraged to consider all outputs of the NAP process as sources of information related to the formulation and implementation of the NAP for the country. The NAP should contain information that will facilitate subsequent extraction of information for further use in implementing the NAP, while providing only sufficient background details and descriptions of the approaches used, while pointing to more detailed reports elsewhere.

Best practice contents of the NAP

1. Background and contextual information about the country

- Include information describing the country to provide a broad context for the rest of the document and the general approaches used in developing the NAP (full details would be provided later in the document).

2. Vision, goals and objectives

- Present a vision for a climate-resilient future, for example by 2030 or 2035 and beyond, to establish a future baseline against which to measure progress;
- List clear and measurable national adaptation goals in the context of the themes of the GGA as a minimum, and additional elements considered important for the country;
- Describe specific and actionable objectives and targets that contribute to achieving the country's overall adaptation goals.

3. Policy and regulatory framework

- Provide information on policies and regulations (current and proposed) that support the country's climate adaptation efforts, including mandates at different levels and among various sectors;
- Include any incentives (new and proposed) for adopting climate-resilient practices and disincentives for activities that increase vulnerability to climate change;
- Describe the delineation of areas of interest, such as the most vulnerable groups and ecosystems, or regions of special focus;
- Provide information on institutional and legal arrangements for the NAP process, including the distribution of work across different actors;
- Include reference to any instructions or orders to government ministries and agencies on actions to be undertaken to address climate change adaptation.

4. Framework for the NAP

- Describe the approach for development of the NAP as supported by stakeholders
- Frame adaptation at the national level according to the themes of the GGA;
- Choice of systems and components representing the themes of the GGA to be considered in the NAP, including a definition of nexuses to be considered, reflecting priority systems to be considered by taking into account ongoing adaptation efforts;
- Describe stakeholder engagement at relevant stages of the NAP process.

5. Consideration of guiding principles (best practices) for adaptation
 - Describe how gender responsiveness has been considered;
 - Provide information on how Indigenous Peoples and local communities have been considered;
 - Describe how youth and other vulnerable groups have been considered;
 - Describe how all other guiding principles have been addressed.

6. Key climate risks and vulnerabilities, and adaptation needs
 - Make reference to the climate and socioeconomic scenarios used;
 - Describe and list current and recent past vulnerabilities and impacts in relation to the main climatic hazards;
 - Describe projected future vulnerabilities and risks and potential impacts and losses in the future;
 - Include information on applicable approaches (e.g. those focusing on managing risk, reducing vulnerability reduction or avoiding exposure) and a discussion on climate resilience and what that means.

7. Priority adaptation actions
 - Present priority adaptation solutions and measures as a result of ranking and appraising options on the basis of established/agreed criteria;
 - Cluster activities on the basis of stage of response (such as pre-emptive and disaster risk reduction actions, or contingent and anticipatory actions), and provide references to how to address loss and damage under related workstreams and other planning processes (such as complementary efforts under funding channels for loss and damage, or disaster management and response);
 - Arrange the adaptation priorities into action plans, policies, programmes and projects.

8. Integration of the NAP with national development and sectoral plans, including the identification of synergies
 - Describe the integration of climate adaptation priorities and plans into broader development plans to ensure that all development activities consider climate risks and contribute to resilience-building;
 - Describe the integration of NAP priorities into sectoral plans to align with financing and implementation plans at the national level and as required for some funding through multilateral entities;
 - Describe how synergies with different agendas (e.g. the SDGs, biodiversity, disaster management, urban agendas, land degradation neutrality) will be promoted.

9. Required financial resources
 - Present broad estimates of the financial resources required for each adaptation action and for the overall NAP;
 - Describe how much and where financial support is already being mobilized (from all sources including national budgets) to help calculate financing gaps.

10. Implementation strategy
 - Identify appropriate approach(es), including sectoral, thematic, or territorial approaches, as well as project or programmatic approaches;

- Describe the phased approach to implementing adaptation projects, prioritizing them according to the level of urgency;
- Describe support needs for implementation;
- Show how implementation will be distributed between different actors, including government entities, the private sector, civil society and local communities.

11. Resource mobilization strategy

- Present a concrete strategy for resource mobilization linked to different funding sources and their applicable modalities, covering the international climate funds under the Financial Mechanism of the Convention and the Paris Agreement, other multilateral sources;
- Include cost estimates of the adaptation priorities, where possible;
- Include a mapping to the following sources:
 - GCF country programme;
 - GEF, LDCF, SCCF;
 - AF country programme;
 - Country engagement plans with international financial institutions (in parallel with NAP efforts);
 - Contributions from the national budget in support of the NAP, to facilitate recognition of efforts of the country in addressing adaptation needs, and also as part of integration of the NAP in national plans and processes;
 - Any other sources deemed appropriate by the country.
- Describe provisions for enhancing complementarity between the activities under the different funding channels in support of implementing the NAP as a national programme.

12. Monitoring, evaluation and learning

- Monitoring, evaluation and learning framework:
 - Monitoring and evaluation framework: develop/apply a framework for monitoring and evaluating the progress and effectiveness of adaptation actions;
 - Indicators and metrics: define/apply specific indicators and metrics to track progress towards adaptation goals and objectives;
- Learning platform:
 - Describe plans for learning and how experience from other regions would be integrated into national adaptation practices.

13. Reporting

- Describe plans for reporting systems to ensure transparency and accountability in the implementation of the NAP;
- Align NAP reporting with reporting on BTRs and other adaptation reporting under the Convention and the Paris Agreement, such as adaptation communications and NDCs.

14. Annex: Selected project profiles: essential projects and other priorities

- Include profiles of the main projects suggested by the GGA dimensional targets:
 - GCF NAP readiness and other readiness support;
 - Multi-hazard early warning systems;

- Climate information services;
 - Others;
- Include profiles of selected priority projects and programmes that are part of the first phase of NAP implementation.

8. Modules and steps of the updated technical guidelines

8.1 Modules of the NAP process

Every country has been embarking on adaptation. These guidelines start from that assumption and work towards enhancing existing efforts and producing a NAP as a key milestone, to advance towards implementation at scale.

The modules and steps are not sequential, in fact, many should be addressed in parallel, and provide inputs to other steps in an iterative fashion.

The four elements of the first technical guidelines (based on the initial guidelines for the formulation of NAPs in the LDCs from decision 5/CP.17) have been aligned with the dimensional targets of the GGA (paragraph 10, decision 2/CMA.5) along with considerations of implementation of the NAPs. The resulting five modules of these updated technical guidelines reflect the necessary actions to fully consider maintaining the underlying support process, and the formulation and implementation of NAPs and cross-cutting activities such as building readiness, accessing funding and technical support from relevant sources. See figure 8 and table 5.



Figure 8. Modules of the NAP process incorporating the four dimensions of the iterative adaptation cycle described in decision 2/CMA.5, paragraph 10.

Table 5. The modules and steps of the updated NAP technical guidelines

A: Building readiness and accessing funding and other support for the whole process

1. Access GCF NAP Readiness funding, and other sources, to support the process of formulation, and implementation of NAPs, capacity-building and related enabling activities to maintain the process
2. Lay the groundwork for implementation and resource mobilization for addressing climate change including by accessing available technical support
3. Build/update a data and knowledge base for the NAP
4. Strengthen institutional arrangements and regulatory frameworks

B: Assessment

1. Develop plausible climate change and socio-economic scenarios for the medium and long-term
2. Document baseline climate hazards, vulnerabilities and risks and impacts of climate change
3. Conduct assessments of climate hazard/exposure, vulnerability and risk

C: Plan development

1. Understand the vision for development for the country and major thrusts of that aspirational vision
2. Frame adaptation at the national level in the context of the GGA thematic targets
3. Synthesize best available information on climate hazard/exposure, vulnerability and risk from relevant assessments
4. Adaptation response: Identify options to address key climate risks and vulnerabilities and build resilience
5. Estimate costs for implementation
6. Compile the NAP and process endorsement and submission to the UNFCCC (after Element D)

D: Resource mobilization and implementation

1. Develop a resource mobilization strategy
2. Implement/execute adaptation/risk management and resilience solutions

E: Monitoring, evaluation and learning and reporting

1. Systematic data collection to inform adaptation and monitoring including of progress
2. Periodic evaluation and learning
3. National reporting
4. Links to international reporting

8.2 Steps and indicative activities under each module

A: Building readiness and accessing funding and other support for the whole process

1. *Access GCF NAP Readiness funding, and other sources, to support the process of formulation, implementation of NAPs, capacity-building and related enabling activities to maintain the process*

- Access funding from GCF Readiness Support for the formulation of the NAP and development of project proposals for NAP implementation
- Access funding from GCF and other sources for NAP implementation
- Access funding from the other GCF Readiness Support windows, and other funds, for accreditation and related capacity building for engagement with the GCF
- Continue to build capacity for the NAP process based on identified priority needs
- Create and strengthen stakeholder participation processes

2. *Lay the groundwork for implementation and resource mobilization for addressing climate change including by accessing available technical support*

- Support national entities to get accredited with the FM Funds (GCF and AF)
- Support functions of designated national authorities to process adaptation projects
- Incentivize development of innovative financing solutions
- Integrate adaptation in national and sectoral planning processes
- Create enabling environment for the non-state actors to participate in the implementation of the NAP
- Access available technical support and assistance (see Annex V for examples)

3. *Build/update a data and knowledge base for the NAP*

- Develop data policies and data-sharing protocols between ministries and different actors
- Conduct a stocktaking, mapping and synthesis of available information
- Assemble relevant goals and plans for development for the country from relevant ministries and other relevant stakeholders
- Assemble relevant data, models, tools and knowledge systems for key NAP-GGA systems

4. *Strengthen institutional arrangements and regulatory frameworks*

- Create/update formal mandates and legislation for adaptation as appropriate
- Strengthen coordination mechanisms between ministries
- Integrate climate change adaptation in sectoral planning

<Start Box 2>

Box 2, GCF's Readiness Programme

GCF's Readiness and Preparatory Support Programme ("Readiness") supports country-driven initiatives to strengthen their institutional capacities, governance mechanisms, and planning and programming frameworks towards their long-term climate action agenda. At the time of writing, GCF has deployed 657 million USD through Readiness to support 812 requests in 142 countries.

Following consultations and in response to feedback, GCF is rolling out a new approach to Readiness during 2025 in line with the new 2024-2027 Readiness Strategy (<https://www.greenclimate.fund/document/readiness-strategy-2024-2027>). The new approach builds on successes and lessons learned in the past and represents a transition to a programmatic approach to readiness.

GCF has committed to becoming simpler and easier to access, reducing transaction costs and the time required to access readiness support. Readiness will now intentionally support national coordination when designing, requesting, and implementing support. The new approach aims to provide fast access to the world's top-tier expertise and fit-for-purpose experience, including from local service providers, leaving the ultimate choice of delivery partner to countries and entities.

The Readiness and Preparatory Support Programme (the Readiness Programme) supports country-driven initiatives to strengthen their institutional capacities, governance mechanisms, and planning and programming frameworks towards a transformational long-term climate action agenda.

Readiness support is provided to countries through National Designated Authorities (NDAs) and/or focal points (FPs). Readiness funding can also be deployed to strengthen Direct Access Entities.

All developing country Parties to the UNFCCC can access the Readiness Programme.

- Country window:

Total envelope: Countries can access a total envelope of up to **USD 7 million per country over 4 years** for the integrated planning and implementation of adaptation and mitigation measures. This includes previously available support for National Adaptation Plan (NAP) formulation (NAP.1) for countries that have not yet fully utilised it. Additionally, countries can submit an additional request for up to USD 3 million to support NAP implementation (NAP.2) if the main envelope has less than USD 250,000 remaining in committed funds. This additional funding is based on a mutually agreed clear need and demonstrable impact on NAP implementation.

- DAE window:

Within the DAE modality, funding is provided to assist accredited DAEs as well as candidate DAEs in the advanced stages of the GCF accreditation process.

The total financial envelope for DAE support includes: Up to USD 1 million per entity over the four-year period¹. This financing modality is intended for addressing the readiness objectives as they pertain to DAEs, based on coordination with respective NDAs and in line with country priorities. Readiness support is to be requested based on a four-year planning. Activities can be implemented within any period deemed appropriate, so long as a funding request(s) is approved within the GCF-2 period, i.e., 2024-2027.

- GCF expert placement scheme

The Readiness Strategy 2024-2027 aims to help countries build the institutional capacity necessary for effective and consistent engagement with the GCF. As part of this strategy, National Designated Authorities (NDAs) and focal points have the option of requesting the placement of a local expert within their offices or another relevant agency. The expert placed by the GCF serves to assist the country in their interactions with the GCF Secretariat, including, but not limited to country programming, planning readiness support over medium-term, supporting origination efforts for mainstream funding, overseeing readiness activities and climate investments, and monitoring and reporting. This initiative not only aims to enhance the immediate engagement with the GCF but also seeks to build long-term local capacity to address climate priorities effectively.

Budget: For Least Developed Countries (LDCs) and Small Island Developing States (SIDS), the cost will be covered by the dedicated allocation of USD 320,000.

Request: To initiate the process of hiring a GCF expert, NDAs should submit a request via email to their regional desk.

Readiness proposal development



(Source: GCF website, GCF Readiness Strategy 2024–2027, GCF Readiness Knowledge Bank)

<End Box 2>

<Start Box 3>

Box 3. Addressing data related challenges in the NAP process: the NAP Data and Model Initiative

A key element in the formulation and updating of a NAP is the ability to assemble and leverage relevant data, models, tools, and knowledge systems that inform evidence-based decision-making.

Effective climate adaptation planning relies on data-driven insights, including historical and projected climate data, socio-economic and sectoral data, impact and vulnerability models, scenario planning tools, and integrated systems for cross-sectoral analysis. These resources help countries assess risks, identify adaptation options, and track resilience. However, many LDCs face challenges in accessing long-term climate data and applying these tools, which can hinder proactive, evidence-based decision-making aligned with national priorities.

The NAP Data Initiative

The NAP Data Initiative addresses critical data-related challenges faced by many LDCs by promoting the use of open-source climate datasets and flexible modeling tools, making these resources more scalable and accessible to all countries. In addition, it provides NAP teams with accessible and user-friendly tools like RStudio, R Markdown, and GitHub to manage, analyze, share, and store data, visualization, and report creation. It promotes collaboration and facilitates the creation of dynamic, continuously updated documents that help countries stay on top of their adaptation needs. The initiative also encourages interoperability between sectoral data systems, allowing countries to link information across different sectors, like agriculture, hydrology, and health, for more integrated decision-making. NAP teams receive guidance on how to use these tools without needing specialized expertise, with technical assistance available through the LEG.

For more information, see:

The Least Developed Countries Expert Group (LEG). 2024. *Technical brief: The NAP Data Initiative*. Available at <https://unfccc.int/documents/645427>.

<End Box 3>

B: Assessment

5. *Develop plausible climate change and socio-economic scenarios for the medium and long-term*

- Develop a plausible scenario for future climate, guided by the global temperature goal of 1.5° C
- Develop corresponding socio-economic scenarios for the medium and long-term
- Assemble relevant projections such as for economic growth, social development, population

6. *Document baseline climate hazards, vulnerabilities and risks and impacts of climate change*

- Synthesize recent changes in climate and observed hazards and general trends in climate variables
- Compile observed impacts of climate change and emergent vulnerabilities and risks

7. *Conduct assessments of climate hazard/exposure, vulnerability and risk*

- Apply the framing of vulnerability and risk based on the IPCC AR6 to define the assessment approach
- Understand and estimate risk and vulnerability using applicable assessment methodologies, models and tools for each NAP-GGA system or combinations of such systems in the form of a nexuses
- Use a multistakeholder process to identify key risks and vulnerabilities to be addressed further
- Produce (and co-produce with different stakeholders) outputs such as risk indices to meet needs of different stakeholders, including the private sector
- Produce an assessment report as part of the GGA dimensional target

C: Plan development

8. *Understand the vision for development for the country and major thrusts of that aspirational vision*

- Consider the aspirational future for the country based on national development plans and strategies to define boundaries for adaptation
- Articulate how climate change will impact that aspirational state in the context of climate change scenarios to inform framing of adaptation

9. *Frame adaptation at the national level in the context of the GGA thematic targets*

- Define institutional and governance arrangements for the NAP as the umbrella programme for adaptation for the country
- Define the vision, goals and objectives of the NAP, in the context of the GGA themes and national development
- Define criteria for choice of systems to focus on, and for ranking adaptation options
- Select NAP-GGA systems for each GGA theme to focus on in the NAP

10. Synthesize best available information on climate hazard/exposure, vulnerability and risk from relevant assessments

- Apply the framing of vulnerability and risk based on the IPCC AR6 to define the approach for synthesizing assessment results
- Synthesize risks and vulnerability for each NAP-GGA system or combinations of such systems in the form of a nexuses based on best available science
- Use a multistakeholder process to identify key risks and vulnerabilities to be addressed further

11. Adaptation response: Identify options to address key climate risks and vulnerabilities and build resilience

- Propose adaptation, risk management and resilience-building options to address the key risks and vulnerabilities, taking into account guiding principles related to gender responsiveness, IPs and local community issues, youth etc.
- Appraise and rank the response options into priority adaptation solutions and actions to meet the GGA thematic targets

12. Estimate costs for implementation

- Estimate costs of implementing the priority adaptation solutions and actions to meet the GGA thematic targets

13. Compile the NAP and process endorsement and submission to the UNFCCC (after the resource mobilization strategy in Element D), and based on the Section 7 on the recommended contents of the NAP)

- Define an implementation strategy that assigns adaptation actions to ministries and other actors
- Consider transboundary/multi-country, regional approaches to the implementation of actions and projects
- Compile a draft NAP, and include priorities from sectoral, subnational or local plans prepared in parallel, for stakeholder endorsement and validation
- Integrate the NAP priorities into sectoral, subnational plans and local plans as necessary
- Submit the nationally endorsed NAP to the UNFCCC

D: Resource mobilization and implementation

14. Develop a resource mobilization strategy

- Map adaptation priority actions into project ideas and programmes
- Integrate NAP priority projects into applicable country programmes/country assistance frameworks for each actor or funding vehicle
- Develop a 5-year programme for implementing the whole NAP, targeting a variety of funding/financing windows for the projects or combinations of windows in blended financing
- Follow the relevant project or funding cycles to prepare funding requests (in the form of project proposals or other formats as applicable)

15. Implement/execute adaptation/risk management and resilience solutions

- Manage implementation of projects and execute adaptation solutions
- Develop and apply systematic observation and monitoring of systems under adaptation intervention to identify triggers or nodes for changes in adaptation pathways

<Start Box 4>

Box 4: Applying finance mapping to advance NAP formulation and implementation

The [Mapping of available sources of finance for climate adaptation for least developed countries](#) by the LEG provides LDCs with a practical tool to identify and apply financing at each stage of the adaptation cycle. It enables countries to navigate funding sources including the UNFCCC financial mechanism, multilateral development banks (MDBs) and international financial institutions (IFIs) and other relevant sources. By linking funding opportunities to the specific stages of the adaptation process and categories of need, the finance mapping also serves as a foundation for developing a clear and targeted resource mobilization strategy.

Green Climate Fund (GCF) Financial Instruments: Grants, Concessional loans, Guarantees, Equity	<ul style="list-style-type: none">• Projects Window (Full Scale)• Simplified Approval Process (SAP)• Private Sector Facility (PSF)• Readiness and Preparatory Support Programme• Adaptation Planning Readiness Window
Global Environment Facility (GEF) Grants	<ul style="list-style-type: none">• Challenge Program for Adaptation Innovation
Least Developed Countries Fund (LDCF)	<ul style="list-style-type: none">• Country submits proposal through GEF agency and following GEF/LDCF project cycle.
Special Climate Change Fund (SCCF)	<ul style="list-style-type: none">• Country submits proposal through GEF agency and following GEF/SCCF project cycle.
Adaptation Fund Grants	<ul style="list-style-type: none">• Single Country Funding Window.• Regional Projects and Programmes• Enhanced Direct Access (EDA) Funding• Large (Single/Regional) Innovation Grant• NIE Small Grants for Innovation.
World Bank	<ul style="list-style-type: none">• Country Climate & Development Reports (CCDRs)• International Development Assistance (IDA)• International Bank for Reconstruction and Development (IBRD)• Climate Investment Funds (CIFs)• Global Concessional Financing Facility (GCFF)

<End Box 4>

E: Monitoring, evaluation and learning and reporting

16. Systematic data collection to inform adaptation and monitoring including of progress

- Develop or apply M&E systems to track progress, effectiveness and gaps in adaptation
- Apply protocols for data collection for monitoring key NAP-GGA systems, guided by, as appropriate, metrics and indicators being developed for the GGA thematic targets
- Monitor and document climatic events to improve understanding of impacts, vulnerabilities and risks to inform further adaptation responses

17. Periodic evaluation and learning

- Assess limits to adaptation and identify opportunities for transformation
- Periodically assess/evaluate progress and effectiveness (and other parameters) based on data from the regular monitoring, including through independent assessments)
- Capture lessons learned in addressing adaptation to inform subsequent actions

- Assess effectiveness of adaptation and whether maladaptation is taking place

<Start Box 5>

Box 5. The Progress, effectiveness and gaps monitoring and evaluation tool (PEG M&E 2.0 tool)

The LEG in 2015 developed the technical paper titled “Monitoring and assessing progress, effectiveness and gaps under the process to formulate and implement National Adaptation Plans: The PEG M&E tool”. The PEG M&E tool provides a set of five generic metrics that can be applied when monitoring and assessing progress and effectiveness, and in so doing, helping identify gaps and needs to further improve the process. The five metrics relate to inputs, process, outputs, outcomes and impacts.

The PEG M&E 2.0 is a tool to monitor and evaluate the progress in the process to formulate and implement NAPs. It uses the approach of defining metrics (scoring system) to measure the progress across six overarching areas:

1. Provision of financial and technical support for adaptation
2. Access to financial support by developing countries for adaptation
3. Science, framing knowledge and methodologies for adaptation
4. Achieving the essential functions of the process to formulate and implement NAPs
5. Addressing the guiding principles of the process to formulate and implement NAPs
6. Achieving the two objectives of the process to formulate and implement NAPs and the targets of the UAE Framework for Global Climate Resilience

<End Box 5>

18. National reporting

- Address national reporting needs as per the NAP mandate and relevant national policies
- Prepare a progress report on the implementation of the NAP by 2030

19. Links to international reporting

- Contribute information on adaptation to different reports to the UNFCCC and Paris Agreement (such as national communications, NDCs, adaptation communications and BTRs)
- Include information in the NAP to address needs for information by different workstreams under the UNFCCC and Paris Agreement (e.g., in relation to gender, LCIPP, youth, and other aspects)

<Start Box 6>

Box 6. Aligning NAPs, NDCs, and Adaptation Communications

The LEG policy brief on aligning NAPs, NDCs, and adaptation communications emphasizes the importance of coherence among these instruments to enhance climate resilience. The brief outlines that such alignment can improve the effectiveness of adaptation actions, streamline reporting processes, and facilitate access to climate finance. By integrating the detailed planning of NAPs with the strategic vision of NDCs and the communicative function of adaptation communications, countries can present a unified approach to adaptation that aligns with their development goals and international commitments. The LEG highlights that this synergy can lead to more improved

efficiency and coordination, better resource allocation, and comprehensive approach to climate change.

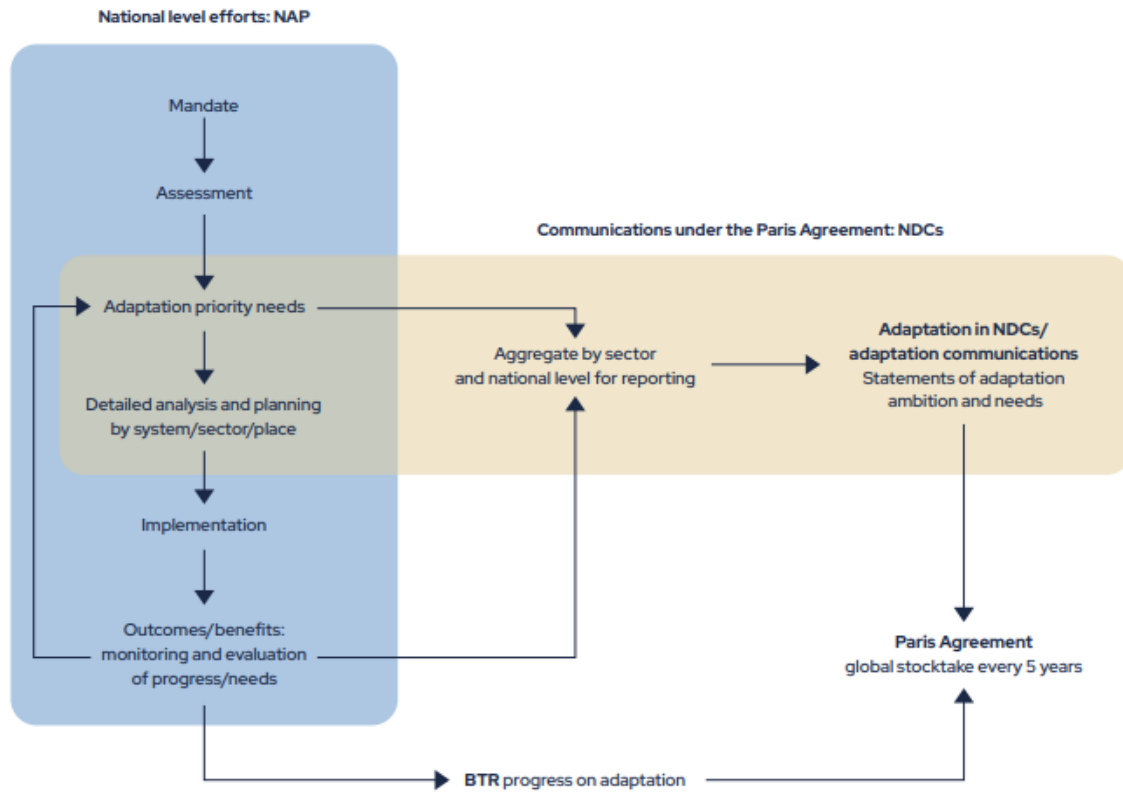


Figure 9: Overview of steps involved in developing a NAP and how these relate to the production of NDCs, adaptation communications and progress reporting in BTRs, ultimately contributing to the global stocktake under the Paris Agreement.

<End Box 6>

8.3 Addressing cross-cutting issues

This section addresses some of the cross-cutting topics that can be incorporated into the NAP.

Consideration of IPs and local communities

Participatory and inclusive planning processes that actively involve Indigenous Peoples and local communities at every stage are essential for meaningful engagement in NAPs. This involves identifying stakeholders early, co-developing culturally appropriate consultation protocols, and establishing mechanisms for sustained engagement. Indigenous and local knowledge should be systematically integrated into climate vulnerability and impact assessments to complement scientific data and ensure locally grounded solutions. The LEG recommends developing participatory tools and ethical guidelines for knowledge sharing to respect the rights and practices of Indigenous groups.⁹ Collaboration with community-based organizations and local institutions to facilitate meaningful participation and integrate traditional knowledge into the design of adaptation strategies is crucial.

Gender responsiveness

NAPs can be made gender-responsive by conducting a gender analysis to identify how climate change affects women, men, and gender-diverse people differently, and by embedding gender considerations into every step of the adaptation planning cycle. This includes ensuring gender balance in stakeholder consultations, addressing barriers to participation, and collecting and analyzing sex-disaggregated data. Based on the findings of gender analysis, adaptation actions should include gender-responsive indicators, budgeting, and monitoring frameworks.

The Toolkit for a Gender-Responsive Process to Formulate and Implement National Adaptation Plans (NAPs), developed by the NAP Global Network in collaboration with the LEG and the AC, provides a structured framework to systematically mainstream gender equality throughout the NAP process.¹⁰ This guidance supports governments in designing inclusive adaptation strategies that recognize the distinct vulnerabilities, knowledge, and capacities of women, men, and marginalized groups. The toolkit outlines a step-by-step approach to gender-responsive adaptation, beginning with gender-disaggregated data collection and analysis to inform evidence-based planning. It emphasizes the critical role of inclusive stakeholder engagement, ensuring the meaningful participation of women and marginalized communities in decision-making processes. To strengthen institutional coherence, the toolkit aligns NAPs with national gender policies and promotes gender-responsive budgeting to allocate resources equitably. Capacity-building is a central pillar of the framework, offering methodologies to train policymakers and practitioners on gender-responsive adaptation strategies. Additionally, the toolkit integrates a robust monitoring and evaluation system, featuring gender-responsive indicators to assess whether adaptation interventions reduce disparities and enhance equitable resilience.

⁹ UNFCCC. (2012). *National Adaptation Plans: Technical guidelines for the national adaptation plan process*. Least Developed Countries Expert Group. Available at: https://unfccc.int/sites/default/files/resource/NAP_technical_guidelines_EN.pdf.

¹⁰ NAP Global Network & UNFCCC. (2019). *Toolkit for a Gender-Responsive Process to Formulate and Implement National Adaptation Plans (NAPs)*. Dazé, A., & Church, C. (Lead Authors). Winnipeg: International Institute for Sustainable Development. Available at: https://unfccc.int/sites/default/files/resource/NAP_Gender_Toolkit.pdf.

Just transitions

The NAP is one of the tools through which just transition pathways can be determined at a national level. Integrating just transition pathways into NAPs can play an important role in ensuring that adaptation efforts are equitable, inclusive and leave no one behind.

Recognizing the whole-of-society nature of just transitions and ensuring that the NAP process is inclusive is important in fostering its alignment with just transition pathways. This can be achieved by ensuring meaningful participation and consultation of vulnerable and marginalized groups—including workers, informal workers, women, Indigenous Peoples, local communities, migrants and internally displaced persons, children, youth—in decision-making, and by designing adaptation measures that protect livelihoods and promote social justice. Recognizing the importance of social dialogue, the full respect for labour rights and identifying strategies related to education, upskilling, reskilling is another way in which NAPs could be aligned with just transition pathways.

Mainstreaming just transitions considerations into NAPs could also entail recognizing the multi-sectoral and whole-of economy nature of just transitions, including by identifying a role for the private sector, including micro, small and medium enterprises in contributing to climate resilience while leaving no-one behind.

The NAP could play an important role in supporting vulnerable communities and sectors most exposed to climate risks, while also enhancing their access to the opportunities that arise from more resilient and sustainable development in an inclusive and country driven manner, including through social protection systems.

Aligning NAPs with other national policies and strategies, including national employment, education, and social development policies ensures that adaptation contributes not only to climate resilience but also to fair and inclusive development.

Nature-based solutions

Integrating nature-based solutions (NbS) into NAPs involves identifying and prioritizing ecosystems that provide critical services - such as flood control, water regulation, and coastal protection - during vulnerability assessments, and selecting NbS as key adaptation options in sectors like agriculture, water, urban planning, and coastal management. Effective integration also requires, aligning adaptation measures with national policies on biodiversity and land use, securing climate finance to support implementation, and incorporating ecosystem-based indicators in monitoring frameworks.

Landscape/spatial approaches

Landscape or spatial approaches in national adaptation planning are methods that take into account the geographic, ecological, and socio-economic characteristics of a particular area - such as a watershed, forest region, coastal zone, or urban-rural interface - to design and implement climate adaptation actions that are well-suited to that specific context. These approaches look at the bigger picture of how land, ecosystems, and human activities interact within a defined area, rather than treating adaptation actions in isolation or based only on political or administrative boundaries. By integrating these approaches in NAPs, it tailors adaptation measures to local conditions, enhances system-wide resilience instead of focusing on individual project outcomes, improves cross-sectoral coordination, and promotes nature-based solutions such as forest restoration, wetland conservation, and agroforestry. It can also be an effective way to integrate multiple strategies (climate-related and others) to a national physical development plan that ensures sustainable development in a holistic manner.

Transboundary risk and collaboration

Addressing transboundary climate risks within NAPs requires identifying and incorporating vulnerabilities that extend beyond national borders, such as shared water resources, migratory species, and regional climate impacts, into the planning process. This requires collaborative and coordinated approaches, including cross-border consultations, joint vulnerability and risk assessments, establishment of shared databases and early warning systems, and coordinated implementation strategies. Adaptation planners should engage with regional institutions and frameworks such as river basin organizations and regional economic communities to align national priorities with regional or basin-wide strategies, thereby reducing the risk of fragmented or conflicting adaptation measures. Ensuring regular dialogue, harmonized planning cycles, and co-financing arrangements can further strengthen resilience to shared risks and create opportunities for mutual benefits across borders. The development of transboundary adaptation programmes is on the rise, and several resource materials are available.¹¹

Transboundary adaptation programmes (TAPs) provide an approach for coordinated actions to be taken by multiple countries or regions to address climate impacts across geographical boundaries. These programmes allow adaptation planners to address cascading impacts and shared risk to enhance resilience to climate change by implementing coordinated adaptation measures leveraging shared knowledge and resources.

The following are activities leading to the development of TAPs, with real-world examples (relevant to LDCs):

1. Securing high-level commitments and political ownership: Several regions have integrated transboundary climate risks into high-level strategies
 - The African Union Climate Change and Resilient Development Strategy and Action Plan (2022-2032) aims to coordinate transboundary and cascading risk management through RECs and basin-wide development plans.
 - The 53rd Pacific Islands Forum (2024) reaffirmed a regional approach via the FRDP.
 - Declarations, such as the 19th African Ministerial Conference on the Environment Declaration, have encouraged cooperation on regional frameworks and indicators.
2. Embedding transboundary risks into policies and assessments: Efforts are being made to assess and integrate transboundary risks into national and sectoral frameworks
 - IGAD's Strategy for Sustainable and Resilient Livestock Development in View of Climate Change (2022-2037) promotes alignment of national policies and expansion of EWS to transboundary risks.
 - NAPs in countries such as Sierra Leone, Chad, Cambodia, and Timor-Leste identify the importance of transboundary issues like shared ecosystems, trade exposure, and regional coordination.
 - Cross-border collaboration is also reflected in mechanisms such as the India-Nepal Joint Committees on Water (Inundation and Flood Management; Joint Commission on Water Resources).

¹¹ For example, Harris, K., Williamson, K., Klein, R.J.T., Shawoo, Z., Browne, K., Mackey, A., & Zwahlen, J. (2024). Transboundary climate risks and adaptation in mountain areas: shaping the global agenda in 2024 and beyond. *Adaptation Without Borders*. <https://adaptationwithoutborders.org/knowledge-base/adaptation-in-mountains/transboundary-climate-risks-and-adaptation-in-mountain-areas-a-brief-for-parties-and-observers-to-the-unfccc/>

3. Co-developing roadmaps and adaptation strategies: Stakeholders across regions are co-creating pathways for addressing shared risks.
 - A workshop with the African Union Commission and four RECs helped identify entry points for managing transboundary risks.
 - Strategic roadmaps have been developed in Africa, the Hindu Kush Himalaya, and the Pacific, promoting coordinated regional planning and monitoring.
4. Advancing joint programming and finance: Joint programming efforts are merging, linking climate action with economic development.
 - The Pacific 2050 Strategy Implementation Plan and COMESA's regional resilience framework promote regional coordination and joint interventions.
 - Multi-country financing models including the AIP Transboundary PIDA Water Investment Programme in the African Union and the ADAPT-WAP9 project.
5. Establishing tools, indicators, and MEL frameworks
 - The LDC Group is pushing for indicators on transboundary risks under the UAE Framework. The Pacific Islands align regional indicators and MEL systems through the 2050 Strategy for the Blue Pacific Continent.

Use of AI tools

Artificial intelligence (AI) tools can be leveraged throughout the NAP process to improve the accuracy and efficiency of climate risk analysis, decision support, and stakeholder engagement. AI can process large climate datasets, model future scenarios, and support geospatial mapping of climate vulnerabilities and hotspots. For example, machine learning algorithms can be used to identify trends in climate extremes and project localized impacts, while natural language processing can analyze stakeholder input from consultations. In data-scarce contexts, AI and digital innovations offer valuable support for adaptation planning, particularly when countries engage with research institutions and private-sector technology developers to access AI-enabled tools and platforms. AI can also be leveraged for scenario planning, simulating different adaptation pathways and their potential outcomes to support evidence-based decision making. AI-powered monitoring systems can track implementation progress and the effectiveness of adaptation measures in real time, enabling adaptive management approaches. Capacity building on the appropriate use of AI tools should be prioritized, with special attention to addressing potential biases in AI systems and ensuring that these tools are transparent, accountable, and designed to complement rather than replace stakeholder participation, particularly from Indigenous Peoples and local communities, whose knowledge remains invaluable. The UNFCCC's Technology Executive Committee (TEC) also recognizes AI as an emerging tool in adaptation planning and urges countries to incorporate digital solutions while ensuring ethical use, transparency, and equitable access.¹²

¹² See, [Annex III](#). Leveraging artificial intelligence in the NAP process.

9. How should the updated technical guidelines be used?

The guidelines will be used by all stakeholders of the NAP process, from providers of financial and technical support, to national stakeholders at all relevant levels in the country. The guidelines provide the anchor to meeting the GGA targets, and should be useful in linking adaptation work to related processes under the Convention and Paris Agreement such as reporting through Adaptation Communications, NDCs and BTRs. In addition, the guidelines support the acceleration of NAP implementation, promoting innovative financing approaches, and enhancing countries' capacity to develop project proposals

The guidelines should be used in designing the process supporting adaptation planning and implementation within a country, and would facilitate aggregation of efforts at different levels into a national effort. The steps apply for an adaptation plan at any level, national to subnational levels, city or sector. They are primarily geared towards the national level, with a collection of actions at regional or subnational to sectoral and local levels, by a wide range of actors from government, UN organizations, IFIs and MDBs, private sector, local governments, and NGOs alike.

Given almost all countries are doing something on adaptation and specifically on NAPs, the guidelines are geared towards enriching that ongoing process rather than starting from scratch. A country should select relevant steps to further advance on their efforts. For example, figure 10 below provides four sample use cases:

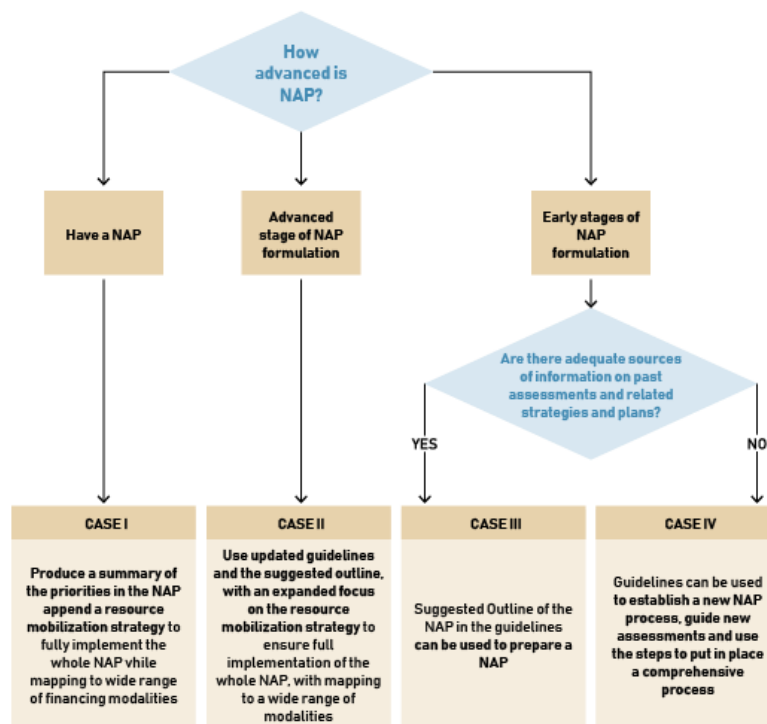


Figure 10. Use cases for the updated guidelines based on the stage of formulation of the NAP in the country

Case I: A country that has a NAP already.

The updated guidelines can support the development of a summary of NAP priorities, along with an appended resource mobilization strategy to enable full implement of the NAP, while mapping to wide range of financing modalities.

Case II: A country in an advanced stage of NAP formulation.

The country would use the updated guidelines as far as possible to address all important areas and apply the suggested outline, while placing expanded focus on the resource mobilization strategy to enable full implementation of the NAP, with a mapping to a wide range of financing modalities.

Case III: A country in the early stages of NAP formulation.

If sufficient information is available from past assessments and related strategies and plans, the suggested outline of the NAP in the guidelines would be used to prepare one, without the need for new assessments.

Case IV: A country in the early stages of NAP formulation, with limited information from past assessments or from other plans and strategies.

The guidelines can then be used to establish a new NAP process, guide new assessments and outline the steps needed to implement a comprehensive process.

ANNEXES

Annex I. Collection of systems used in addressing components of the targets of global goal on adaptation with descriptions to supplement table 3 in the main text

GGA Target	Components of the target	System	Description
A. Climate-Resilient Water and Sanitation Security for All	<ul style="list-style-type: none"> - Reduction in climate-induced water scarcity - Enhanced climate resilience to water-related hazards - Climate-resilient water supply for all - Climate-resilient sanitation for all - Access to safe potable water for all - Affordable potable water for all 	Disaster preparedness and response (linked to MHEWS)	Activities to monitor, anticipate and respond to extremes and disasters related to water, such as drought, floods, water-borne diseases. As part of early warning systems and response, activities may be distributed among different ministries and other entities
		Water supply system	The water supply system consists of infrastructure for sourcing, treating, and distributing water to users. It includes water abstraction from rivers or aquifers, treatment plants, storage facilities, and urban and rural distribution networks.
		Water use management, governance, standards and policies	This component includes laws, institutions, and policies that regulate water use, promote equitable access, and guide resource protection.
		Transboundary water agreements	These agreements manage shared watercourses across national borders, addressing joint use, planning, and conservation. This often involves binding agreements on amounts of water that can be extracted/made available to each country.
		Storm water drainage system	Storm water systems reduce flood risk and manage rainfall runoff in urban areas through drains, canals, and detention structures.
		Sewage/Sanitation system	This refers to waste collection and treatment systems that prevent environmental contamination and support public health.
		Water processing for safety	Water processing includes treatment processes to make water safe for drinking and other uses.
		Water pricing and affordability system	This component defines tariff systems, subsidies, and affordability measures to ensure financial sustainability and equitable access.
		B. Sustainable Food and Nutrition Security for All	<ul style="list-style-type: none"> - Climate-resilient food and agricultural production - Climate-resilient food supply - Climate-resilient distribution of food - Sustainable and regenerative food and agricultural production - Equitable access to adequate food and nutrition for all
Commercial crop production	Involves production of export-oriented or cash crops such as tobacco, tea, sugarcane, macadamia, and cotton, typically grown under estate or contract farming systems.		
Food supply (local, household level)	Refers to the availability of food at the community and household level through own production, local markets, and informal trade.		
Food supply (gross national level)	Refers to national availability of food through domestic production, imports, and food reserves.		

		Food distribution/supply chain	Involves storage, transport, processing, and market systems that move food from producers to consumers.
		Equitable access to food and nutrition	Description: Ensures that all population groups - especially women, children, and the poor - can access sufficient, diverse, and nutritious food.
		National food security	Refers to a country's ability to ensure that its entire population has access to adequate food at all times, even in the face of shocks or crises.
		Pastoral livestock production	Pastoral livestock production refers to extensive, often nomadic or semi-nomadic systems in which herders rely on grazing rangelands for animal feed. It is highly climate-sensitive, dependent on rainfall patterns, pasture availability, and access to water. Pastoralism is practiced mainly in arid and semi-arid regions.
		Farm livestock production	Farm-based livestock production involves rearing animals such as chickens, pigs, goats, and dairy cattle within smallholder or commercial farm settings. It is typically integrated with crop production and depends on household or local feed inputs.
		Fisheries production	Fisheries production includes capture fisheries from lakes, rivers, and oceans, as well as aquaculture. It supports nutrition and livelihoods, particularly in riparian and coastal communities.
		Forestry production	Forestry production involves the cultivation, harvesting, and sustainable use of forests for timber, fuelwood, non-timber products, and ecosystem services. It overlaps with conservation, livelihoods, and carbon sequestration goals.
C. Climate-Resilient Health Systems and Services	<ul style="list-style-type: none"> - Resilience against climate change related health impacts (particularly in the most vulnerable communities) - Climate-resilient health services (particularly in the most vulnerable communities) - Reducing climate-related morbidity and mortality (particularly in the most vulnerable communities) 	Emergency response	The system for detecting, responding to, and managing health emergencies such as disease outbreaks, climate-induced disasters, and environmental health threats.
		Health services	Core public health and medical services including prevention, diagnostics, treatment, maternal care, and disease surveillance.
		Healthcare infrastructure	Physical facilities such as hospitals, clinics, and laboratories, along with energy, water, waste, and ICT systems supporting them.
		Climate morbidity and mortality	The incidence and causes of illness and death directly or indirectly related to climate variability and change.
D. Healthy Ecosystems and Biodiversity	- Reduced climate impacts on ecosystems	Ecosystem management (impact reduction)	Strategic planning, conservation, and sustainable use of ecosystems (e.g., wetlands, forests, grasslands) to reduce the adverse

	(through their management, enhancement, restoration and conservation and the protection) - Reduced climate impacts on biodiversity (through their management, enhancement, restoration and conservation and the protection) - Accelerated use of ecosystem-based adaptation and nature-based solutions (in terrestrial, inland water, mountain, marine and coastal ecosystems)		effects of climate change on both people and nature.
		Ecosystem function (resilience)	Maintaining or enhancing the ecological processes (e.g., nutrient cycling, carbon storage, water retention) that enable ecosystems to absorb shocks and recover from climate stresses.
		Biodiversity hotspots	Geographic areas with exceptionally high levels of endemic species that are severely threatened by human activity and climate change.
		General biodiversity loss reduction (habitat, rights)	Efforts to halt or reverse biodiversity decline by protecting habitats, enforcing environmental rights, and supporting sustainable land-use practices.
		Genetic biodiversity preservation - crop	Conservation and use of diverse crop varieties - including landraces and climate-resilient strains - for food security and climate adaptation.
		Genetic biodiversity preservation - plants	Protection of native plant species (medicinal, wild edible, cultural) and endemic flora through seed banks, ex-situ and in-situ conservation.
		Genetic biodiversity preservation - fish	Safeguarding genetic diversity in wild and farmed fish populations, including threatened or endemic aquatic species.
		Genetic biodiversity preservation - animal	Preserving the genetic traits of traditional livestock breeds and wild animals to retain disease resistance, climate tolerance, and cultural value.
E. Climate-Resilient Infrastructure and Human Settlements for All	- Climate-resilient infrastructure to climate change impacts to ensure basic and continuous essential services for all - Resilient human settlements to climate change impacts to ensure basic and continuous essential services for all - Minimized climate-related impacts on infrastructure and human settlements	Key infrastructure	Physical systems critical to economic and social functioning that must be climate-resilient, including roads, bridges, ports, irrigation canals, and public buildings.
		Essential services: access, shelter, energy, water, health services	Public utilities and systems that enable people to meet basic needs and cope with climate stresses.
		Living spaces	Urban and rural residential areas, including informal settlements, peri-urban zones, and communal housing environments.
		Land use and zoning	Policies and spatial planning instruments that regulate where and how land is used, developed, or conserved.
		Building designs, codes and regulations	Technical standards and legal frameworks that guide how structures are designed, built, and maintained to withstand climate risks.
F. Climate-Proof Poverty Reduction and Livelihoods, and climate-social protection measures for All	- Reduced adverse effects of climate change on poverty eradication and livelihoods - Use of adaptive social protection measures for all	The national economic engine	The overarching system that drives macroeconomic growth, including key sectors such as agriculture, mining, tourism, manufacturing, and trade.
		Poverty reduction system	A combination of strategies, institutions, and programmes aimed at lifting people out of poverty, especially those most vulnerable to climate change.

		Employment	Job creation systems, both formal and informal, across public and private sectors that provide income-generating opportunities.
		Rural livelihoods	Traditional and evolving means of earning income in rural areas, including smallholder farming, fishing, forest product harvesting, and rural enterprise.
		Social protections	Systems that provide safety nets and support to individuals and households during shocks, chronic poverty, or emergencies. Includes pensions, insurance, food aid, and disaster response support.
G. Climate-Proof Cultural Heritage	<ul style="list-style-type: none"> - Protecting cultural heritage from the impacts of climate-related risks by preserving cultural practices - Protecting cultural heritage from the impacts of climate-related risks by preserving heritage sites - Protecting cultural heritage from the impacts of climate-related risks by designing climate-resilient infrastructure 	Preservation of cultural heritage sites (systems)/ Tangible Cultural Heritage Protection System	This refers to the safeguarding of physical cultural assets—monuments, sacred sites, architecture, archaeological sites, and historic urban landscapes.
		Preservation of cultural practices and traditional knowledge/ Intangible Cultural Heritage System	Includes knowledge systems, oral traditions, language, music, rituals, and local ecological practices.
		Economics of cultural heritage/ Cultural Economy and Creative Livelihoods	Refers to economic activities rooted in heritage and creativity—such as cultural tourism, crafts, performing arts, and storytelling.
		Non-economic value system of cultural heritage/ Cultural Infrastructure and Institutions	Museums, libraries, archives, community halls, and traditional leadership structures that maintain, transmit, and steward heritage.
		Rights and access to Cultural Resources	This includes recognition of cultural rights, land access tied to cultural identity, and equitable participation in decisions affecting heritage.
Impact, vulnerability and risk assessment and early warning systems	<ul style="list-style-type: none"> - Multi-hazard early warning systems - Climate information services - Systematic observations 	MHEWS	MHEWS are integrated systems that monitor, predict, and communicate risks from multiple climate and weather-related hazards - such as floods, droughts, heatwaves, storms, and landslides - to enable timely action. They include hazard monitoring across multiple types (hydro-meteorological, geophysical, biological); risk mapping and vulnerability overlays; communication protocols to alert authorities and the public; and, linkage to response mechanisms and contingency plans
		Climate information services	CIS refers to the generation, tailoring, dissemination, and use of climate data and forecasts to support sector-specific decision-making in agriculture, health, water, infrastructure, and disaster preparedness. They include seasonal and short-term forecasts, agro-meteorological bulletins and advisories, user-centered design (e.g.,

			translated, locally contextualized) and can be delivered via radio, SMS, extension workers, or mobile apps
		Systematic observation systems	These include meteorological, hydrological, and environmental observation networks that produce data for weather forecasting, climate modeling, risk analysis, and long-term trend tracking. Key features include weather stations, rain gauges, river flow sensors, satellite remote sensing; data sharing through regional/global frameworks (e.g., WMO, GCOS); and long-term datasets for climate variability, extremes, and change
Plans, processes and mainstreaming	<ul style="list-style-type: none"> - NAP by 2025 - Policies, plans and strategies by 2030 (targeting ecosystems, sectors, people and vulnerable communities) - Mainstreaming adaptation in strategies and plans 	Submission of NAPs	The NAP is a national strategic plan developed under the UNFCCC framework that outlines medium- and long-term adaptation priorities, supported by risk and vulnerability assessments and aligned with development objectives. When submitted to the UNFCCC, it is posted on NAP Central.
		Integrating adaptation in strategies and plans	Mainstreaming refers to embedding climate adaptation considerations into existing and new development, sectoral, and budgetary frameworks at all levels - from national to community.
Implementation and adaptation/resilience benefits	<ul style="list-style-type: none"> - Progress in implementation of NAPs, policies and strategies by 2030 - Measurable reduction in social and economic impacts 	Implementation of NAPs	This system refers to the institutional, financial, and programmatic mechanisms by which countries execute the priorities outlined in their National Adaptation Plans. Implementation involves turning plans into funded actions across sectors, regions, and governance levels. Key subsystems include: governance and coordination such as oversight committees, interministerial taskforces, and subnational integration platforms; financing through mobilization of domestic budgets, international climate finance (e.g., GCF, GEF, LDCF, SCCF, and AF), and other relevant sources, and vertical funding transfers to local levels; project pipeline and execution through development of bankable projects, procurement, infrastructure roll-out, and service delivery linked to NAP priorities; and, capacity support through training, technical assistance, and institutional strengthening to manage adaptation delivery.
		Measurement of reduction in social and economic impacts (adaptation benefits)	This system supports the tracking and attribution of resilience outcomes resulting from adaptation interventions. It moves beyond outputs (e.g., number of wells built) to outcomes such as reduced vulnerability, fewer disruptions, and improved adaptive capacity. Key subsystems may include: indicator systems; baseline and counterfactual modelling by looking at plausible 'no-adaptation' scenarios to quantify avoided damage or enhanced productivity; data platforms for the use of GIS, remote sensing, household surveys, early warning systems, and administrative data to monitor and analyze

			change; and, attribution methods: Qualitative and quantitative tools (e.g., impact evaluation, cost-benefit analysis, resilience scoring) to estimate benefits from specific adaptation measures.
Monitoring, evaluation and learning	- Monitoring, evaluation and learning system (MEL)	Design and establishment of MEL system	This refers to the conceptualization, structuring, and development of a national or programmatic framework for tracking adaptation progress, effectiveness, and outcomes. It includes the development of objectives, indicators, data flows, reporting templates, alignment the GGA and the Paris Agreement. Key components may include: a theory of change outlining how adaptation activities lead to expected resilience outcomes; an indicator framework that includes input, process, output, outcome, and impact indicators across GGA thematic areas; baseline setting establishes about a reference year's conditions and adaptation capacities across sectors; alignment ensuring consistency with international guidance (e.g., UNFCCC MPGs, SDG 13.1, Sendai indicators).
		Operationalization of MEL	Once designed, the MEL system must be rolled out and embedded in institutional processes. This includes data collection, validation, analysis, reporting, and feedback mechanisms to inform decision-making and accountability. Key components may include: data systems that integrate with national statistical systems, GIS platforms, and early warning systems; roles and responsibilities as defined by mandates for data providers, evaluators, and oversight institutions; annual reporting cycles that produce NAP progress reports and inputs to the global stocktake; and, learning and feedback loops that make use of evaluation findings to adjust strategies and reallocate resources.
		Institutional capacity-building to fully implement the MEL system	This involves equipping government ministries, agencies, and subnational authorities with the skills, tools, and human resources needed to implement the MEL system consistently and sustainably. Key components may include: training programs targeting M&E officers, planners, and data managers across sectors; technical guidelines in the form of operational manuals and standard operating procedures for indicator tracking and evaluation; resource mobilization including through budget allocation or donor support for MEL implementation and innovation (e.g., use of AI, remote sensing); and, institutional embedding by making MEL part of routine performance audits, budget processes, and policy reviews.

Annex II. Template for project profiles

Including project profiles in NAPs is essential because it helps translate broad climate adaptation priorities into concrete, actionable initiatives that can attract technical and financial support. Project profiles provide clarity on activities, implementation timelines, and resource needs, making it easier for governments, donors, and development partners to coordinate efforts and invest effectively. This level of detail enhances the credibility and readiness of a country's adaptation agenda, ultimately accelerating climate resilience at both national and local levels.

Under the NAP Implementation Pipeline Development Initiative, the LEG is supporting all the LDCs to move towards successful adaptation by helping each to initiate and submit project proposals to the GCF and other sources of funding for implementing adaptation priorities associated with their NAPs.

The project ideas developed by the LDCs are compiled and updated on an ongoing basis and are available on NAP Central.¹³ The compilation contains project ideas to be further developed into concept notes and project proposals to be submitted by the LDCs for funding.

Countries are encouraged to align their project profiles with the project proposal templates of the funds under the Financial Mechanism of the UNFCCC—such as the Green Climate Fund (GCF)¹⁴, the Adaptation Fund (AF)¹⁵, and the Global Environment Facility (GEF)¹⁶—to ensure that project ideas are presented in a format consistent with funding requirements. The Mapping of relevant sources of finance for climate change adaptation for the least developed countries (LEG, 2023) contains detailed information on different sources of funding and how to access them.¹⁷

To facilitate this process, Table 1 below offers a simpler annotated template to help countries arrange their adaptation priorities into projects profiles.

¹³ Available here <https://www.napcentral.org/projectcatalogues>

¹⁴ GCF Concept Note User's Guide, <https://www.greenclimate.fund/document/gcf-concept-note-users-guide> and GCF Funding Proposal template to be used by Accredited Entities, <https://www.greenclimate.fund/document/funding-proposal-template>.

¹⁵ The Adaptation Fund application details can be found at: <https://www.adaptation-fund.org/apply-funding>.

¹⁶ See, GEF-8 project identification form (PIF), <https://www.thegef.org/documents/gef-8-project-identification-form-pif>.

¹⁷ Available here <https://unfccc.int/topics/adaptation-and-resilience/resources/publications/mapping-of-relevant-sources-of-finance-for-climate-change-adaptation-for-the-least-developed>

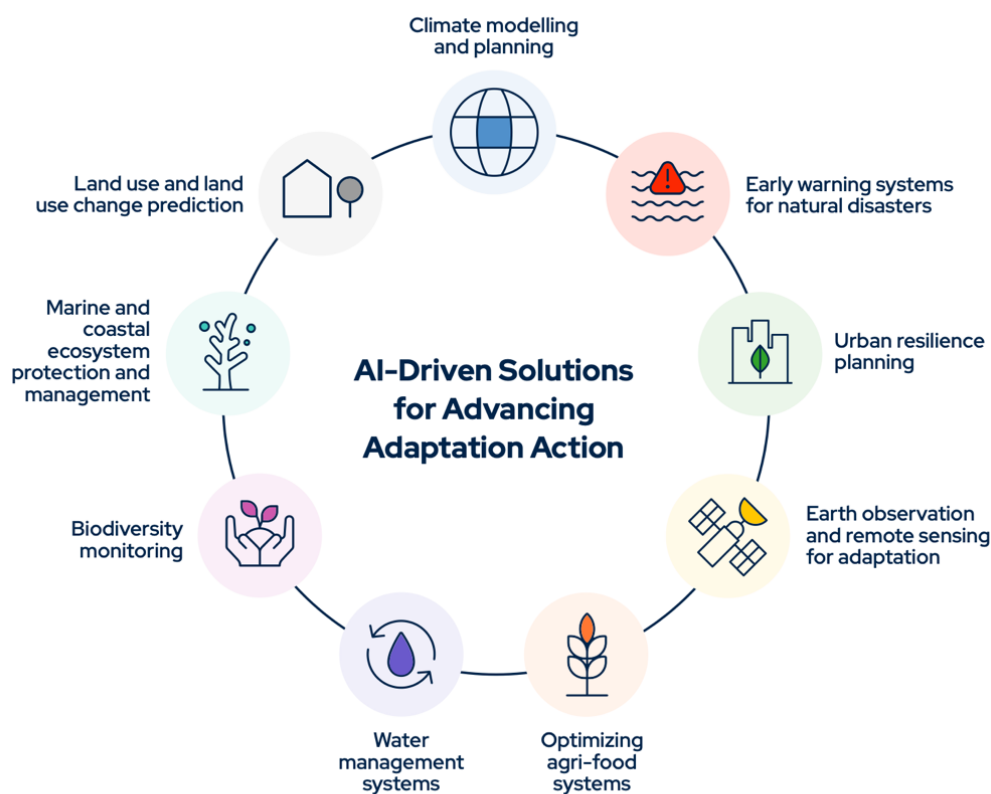
Table II.1 Simple template for project profiles

Project title	Provide a concise and descriptive name that clearly reflects the core aim of the adaptation project
Sector(s) (based on GGA targets)	Identify the relevant sectors (e.g., water, agriculture, health, infrastructure, ecosystems and biodiversity, livelihoods, cultural heritage) in line with the Global Goal on Adaptation targets.
Context	Describe the specific climate risks, vulnerabilities, and socio-economic conditions that justify the project. This explains the rationale for the proposed intervention.
Overall objective(s)	State the concrete, long-term goals the project seeks to achieve
Activities	Outline the specific actions or interventions to be implemented. Each activity should contribute directly to achieving the project's objectives and outcomes
Timeline	Provide an estimated schedule for project implementation
Outcomes	Describe the expected medium-term results that will be achieved if the project is implemented successfully. These should be measurable and aligned with the objectives
Indicators	List quantitative or qualitative metrics to track progress and assess the effectiveness of activities and outcomes
Estimated costs	Present a financial estimate for implementing the project, ideally broken down by major components or activities
Source and instrument of funding	Identify the anticipated funding source(s) (e.g., national, MDBs, other sources, etc.) and the type of financing instrument (e.g., grant, loan, blended finance, etc)
Implementing agency	Name the organization(s) responsible for executing the project on the ground (international, regional or national)
Responsible ministry	Indicate the government ministry (or subnational entity) overseeing the project's strategic alignment with national adaptation priorities and policy coordination

Annex III. Leveraging artificial intelligence in the NAP process

Artificial intelligence (AI) offers powerful tools to support countries - especially LDCs and SIDS - in the formulation and implementation of NAPs. AI can enhance climate and vulnerability assessments, inform planning, strengthen monitoring, and improve the delivery of adaptation actions across key sectors. The following outlines practical entry points, supported by real-world examples, and key risks

This section is informed by the *UN TEC Information Note, "Artificial Intelligence for Climate Action in Developing Countries: Opportunities, Challenges and Risks"*¹⁸



AI applications for climate change adaptation

1. Enhancing risk assessment, climate information systems, and climate planning

- AI can inform the formulation of NAPs by analysing large and diverse datasets (e.g., socioeconomic, climate, geospatial) to support risk and vulnerability assessment and inform evidence-based adaptation planning.
- It can improve long-term climate forecasting, identification of high-risk areas, and helps integrate resilience into infrastructure and spatial planning.
- AI can strengthen multi-hazard early warning systems by improving the accuracy of forecasts for floods, droughts, and cyclones, supporting timely preparedness.
- For example, AI is used to predict deforestation trends in the Amazon, Madagascar, and Mexico, to enable proactive conservation efforts and guide policy responses.

¹⁸ UNFCCC, Technology Executive Committee. *Artificial Intelligence for Climate Action in Developing Countries: Opportunities, Challenges and Risks*
https://unfccc.int/ttclear/misc/_StaticFiles/gnwoerk_static/AI4climateaction/28da5d97d7824d16b7f68a225c0e3493/a4553e8f70f74be3bc37c929b73d9974.pdf.

- In Ethiopia, AI and satellite data identify communities at risk under the Early Warnings for All (EW4ALL) initiative.
- In Viet Nam, AI-powered remote sensing improves the detection of forest cover changes, supporting forest planning and monitoring.
- In the Caribbean, AI maps housing vulnerabilities to support urban resilience planning and disaster risk management.

2. Supporting adaptation in key sectors

- AI can assist in prioritizing adaptation actions through scenario modelling, cost-benefit analysis, and optimization algorithms.
- AI systems can play a key role in analysing climate data and predicting climate impacts such as sea-level rise and deforestation. Countries can simulate the potential outcomes of policies and projects to guide formulation of adaptation strategies under uncertainty.
- In agriculture, AI helps optimize planting schedules, monitor crop health, and predict pest outbreaks - critical for food security in LDCs and SIDS.
- In Kenya, AI-based early warning systems deliver localized crop yield forecasts to smallholder farmers in local languages.
- In Saint Kitts and Nevis, AI supports drought risk modelling for better decision-making on water use.
- In coastal zones, AI combined with satellite data is used to monitor illegal fishing, coral reef health, and coastal erosion, supporting marine adaptation in SIDS.
- AI tools can monitor soil health, land degradation, and water levels, enabling timely adaptation in water and natural resource management.
- AI can predict land use and land cover changes to support integrating planning. In North Sumatra, Indonesia, it forecasts shifts from forest to plantation, informing sustainable land management.

3. Improving monitoring, evaluation, and learning

- AI can automate the collection and analysis of adaptation data, supporting MEL frameworks.
- Natural language processing (NLP) tools can extract insights from reports and community feedback, while dashboards provide real-time tracking of the implementation of adaptation projects identified in the NAP.
- In Colombia, Project Guacamaya uses AI to track deforestation and biodiversity loss via satellite imagery, sensors, and acoustic monitoring.

4. Risks and governance considerations

- Digital divides and limited access to data, infrastructure, and finance constrain AI use in some developing countries.
- Data security and inclusive design are essential to avoid misuse or reinforcement of inequities.
- AI systems have significant energy and water footprints, and if misused, may increase climate risks.
- The #AI4ClimateActionInitiative under the Technology Mechanism supports LDCs and SIDS through the AI Innovation Grand Challenge and capacity-building programmes.
- At COP28, Parties highlight the importance of addressing capacity needs and increasing awareness of AI's potential in NDCs, NAPs, and TNAs.

AI Tool Examples	Use Case for NAPs
ChatGPT and Deep Research (OpenAI)	Drafting summaries, processing technical reports, extracting policy-relevant insights using natural language processing. Deep research employs “active learning” using user query supported by data or documents to conduct in-depth research and searches over 30 minutes
Claude (Anthropic)	Generating and refining documents, supporting inclusive communications for stakeholders
NotebookLM and Gemini Deep Research (Google)	Organizing and querying document repositories to support NAP research and formulation. Deep research employs “active learning” using user query supported by data or documents to conduct in-depth research and searches over 30 minutes
Climate TRACE	Monitoring GHG emissions and land use changes via AI-enhanced satellite data; relevant for MEL frameworks
FAIR Forward Early Warning AI (Kenya)	Localized crop yield prediction using weather, satellite, and soil sensor data; supports agriculture and food security
Digital Earth/Segment Anything Model	Mapping housing vulnerability in the Caribbean using drone imagery and deep learning for urban resilience
AI Forest Cover Detector (Viet Nam)	Neural networks and satellite images to track forest change and degradation for land use planning and conservation
Drought Forecasting Tool (Saint Kitts and Nevis)	Combines weather and water datasets for proactive water management in drought-prone SIDS
Project Guacamaya (Colombia)	Combines satellite, camera traps, and acoustic sensors to monitor biodiversity and deforestation
AI Land Use Model (Indonesia)	Predicts land use change using spatial data and ANN-based cellular automata for sustainable resource planning

Annex IV. Template on NAP finance mapping based on windows under the UNFCCC and PA funds

Sources of finance	Objective	Funding instruments and access modalities	Applicable adaptation sectors and activities
<i>List the funding entity(ies) or mechanisms</i>	<i>Describe the main goal or purpose for which this source is needed</i>	<i>Types of financial tools (grants, loans, bonds, equity, guarantees, venture capital/crowd funding, public-private-partnerships, payment for ecosystem services, etc.) and how they will be accessed (direct access, through international accredited entity, project proposals, etc.)</i>	<i>Indicate the specific NAP priority sectors (e.g., agriculture, water) or activities the funding will support</i>
National sources			
Domestic public finance			
Financial Mechanism under the UNFCCC			
Green Climate Fund			
Global Environment Facility			
Least Developed Countries Fund (LDCF)			
Special Climate Change Fund (SCCF)			
Adaptation Fund			
Multilateral Development Banks			
World Bank			
AfDB			
ADB			
ISDB			
IADB			
Etc.			
Other sources			

Annex V. Examples of available technical support and assistance

Technical support and assistance is provided by a range of constituted bodies and UNFCCC and Paris Agreement programmes and many organizations and entities. Details on the activities undertaken are given in annual progress reports on NAPs produced by the LEG, available at <http://unfccc.int/leg>. Below is a non-exhaustive list of available support as contained in the 2024 annual progress report.¹⁹

Support by the UNFCCC constituted bodies and UNFCCC programmes

Primary technical support and guidance is provided through the LEG and the AC, including through their subgroups (technical working group on NAPs, LDC Roster of Experts, and related initiatives for the LEG, and for the AC, through its task force on NAPs).

The CGE, the PCCB, the SCF, the TEC and the WIM Executive Committee also support countries in various aspects of the process to formulate and implement NAPs, and such activities are also carried out under the LCIPP and the NWP.

UN4NAPs, launched by the UNFCCC secretariat in 2021, is a United Nations technical backstopping initiative designed to rapidly respond to technical requests from the LDCs and SIDS that are in the process of formulating and implementing NAPs. It offers a platform for countries to communicate their needs for technical assistance, which are immediately shared with relevant partners from a roster of more than 55 participating United Nations agencies and intergovernmental organizations.

The NAP 3.0 initiative of the Executive secretary focuses on promoting innovative and novel adaptation financing for NAPs, updating the NAP technical guidelines, including by integrating the GGA, supporting expedited submission of NAPs to comply with the 2025 deadline, and supporting countries in developing successful project proposals for implementing the adaptation priorities identified in NAPs as soon as possible.

The UNFCCC and PA funds (GCF, LDCE, SCCF, GEF, and AF) provide funding for technical support and technical assistance, in addition to their funding for adaptation projects and programmes.

Technical assistance related to technology is also provided through CTCN, while technical assistance related to loss and damage is provided through the Santiago network.

Support by relevant organizations and entities

The NAP Global Network supports countries in undertaking activities relevant to the process to formulate and implement NAPs, such as on integrating gender and social inclusion considerations into adaptation action, developing and/or strengthening MEL on adaptation, engaging the private sector in adaptation, developing NAP communication strategies, linking adaptation planning at the national and subnational level, developing adaptation financing and resource mobilization strategies, developing methodologies for costing adaptation priorities, enhancing sectoral integration of adaptation, integrating ecosystem-based adaptation approaches into NAPs, and aligning NAPs with peacebuilding processes.

SCALA, co-led by FAO and UNDP supports countries to translate their NDCs and NAPs into transformative climate action in land use and agriculture.

IKI funds projects that focus on supporting the process to formulate and implement NAPs. Its implementing organizations include CARE, FAO, GIZ, the International Institute for Sustainable

¹⁹ [FCCC/SBI/2024/12](https://unfccc.int/LEG#reports), available at: <https://unfccc.int/LEG#reports>.

Development, the International Union for Conservation of Nature, the Potsdam Institute for Climate Impact Research, UNDP and WMO, as well as local organizations.

The Group on Earth Observations (GEO) provides technical support on integrating earth observation into the process to formulate and implement NAPs, specifically as it relates to agriculture and food security, under its flagship initiative GEOGLAM.

The UNCDF, under LoCAL and via its other finance solutions, promotes the channelling of climate finance to local government authorities in the LDCs and other developing countries that are particularly vulnerable to the effects of climate change for implementing NAP-aligned local adaptation actions in support of building climate-resilient communities and local economies.

UNDP supports the formulation of NAPs and helps countries in accessing GCF readiness funding for formulating their NAPs. UNDP, together with partners, support the United Nations Secretary-General's Adaptation Pipeline Accelerator initiative. Under the United Nations system-wide effort Climate Promise 2025, UNDP helps countries submit their third NDCs, ensuring their alignment with NAPs, and accelerating the NDCs implementation.

UNDRR promotes and pursues a comprehensive risk management approach to enable countries to effectively integrate climate change adaptation and disaster risk reduction efforts. It provides technical assistance for planning and implementing disaster risk reduction and adaptation actions.

UNEP supports countries in formulating their NAPs and accessing GCF readiness funding for NAPs and in accessing LDCF funding, especially on ecosystem-based adaptation and nature-based solutions in NAPs.

UNICEF helps countries recognize the specific and heightened vulnerabilities of children to climate change impacts and their meaningful participation in climate action in order to prioritize the implementation of child-responsive adaptation measures.

WHO provides technical assistance to countries for formulating the health component of their NAPs.

WMO supports developing countries in accessing and using climate science information for adaptation, including by supporting project implementation under Early Warnings for All and the Global Basic Observing Network. It also assists developing countries in mobilizing financial and technical resources for collecting weather and climate information.

For up-to-date information on available support, visit NAP Central at <http://napcentral.org>, the annual progress report on NAPs at <https://unfccc.int/LEG#reports>, and webpages of each of the organizations and entities mentioned above. Each of them produces relevant resource materials that are supplementary to the NAP technical guidelines.

About the LEG