



National Monitoring, Evaluation, and Learning Systems for Climate Change Adaptation

A comparative analysis of nine
countries

IISD REPORT



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National Monitoring, Evaluation, and Learning Systems for Climate Change Adaptation: A comparative analysis of nine countries

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Executive Summary

The need for monitoring, evaluation, and learning (MEL) systems that can help countries understand how to best adapt to climate change has become increasingly important as the effects of climate change increase and climate shocks intensify. Understanding if climate change adaptation (from here on “adaptation”) actions are reducing vulnerability, increasing resilience, and enhancing adaptive capacities is crucial for planning and decision making, along with understanding how—and for whom—actions are working or not.

Countries started to set up MEL systems for adaptation over a decade ago, with efforts to track, assess, and report on adaptation toward learning and improving adaptation actions. Today, more countries have integrated MEL systems as part of their national adaptation plans (NAPs), processes, and actions. The uptake has been slow, but significant progress has been observed since 2014.

MEL systems are needed across scales, especially at the national level, to understand the impacts and effectiveness of adaptation actions. More recently, the United Arab Emirates (UAE) Framework for Global Climate Resilience (FGCR) adopted in 2023 under the Paris Agreement established a global framework to track, report, and assess collective progress on adaptation that affirms the need for developing national MEL systems for adaptation as a key source of information in global processes.

This report addresses the ongoing need to understand national-level MEL systems for adaptation, paying particular attention to variations in approaches to this work. It analyzes and compares MEL systems in nine countries with varying economic and governance contexts and with different adaptation needs and priorities: Canada, France, Kenya, Namibia, Peru, Somalia, Tonga, the United Kingdom, and Vietnam. It highlights the main components of MEL systems for adaptation, considering differences in contexts, approaches, and activities in MEL systems for adaptation based on literature reviews and key informant interviews. This report also compares progress on national MEL systems with the status of MEL systems included in a similar study published in 2014 (Hammill & Dekens, 2014).

The findings show that all nine countries have initiated work and have at least partly functional MEL systems for adaptation and NAP processes. Among these countries, the operationalization of MEL systems focuses primarily on monitoring and progress reporting, while evaluation and learning remain less developed. Some countries, such as France, the United Kingdom, and Vietnam, have more advanced MEL systems, where the focus has turned to evaluation and learning, while others have just started to develop their MEL frameworks—for example, Somalia. The research conducted for this report shows that there is no one-size-fits-all approach to this work and that MEL systems must fit national contexts and needs, capitalizing on existing monitoring and evaluation systems. This research further shows that establishing a MEL system is generally an incremental process in which components are added over time, taking into account the country’s circumstances, capacities, adaptation needs, and goals.



Among the countries sampled for this report, all have undertaken some form of assessment of adaptation progress and have monitoring processes relevant to adaptation. This underscores the importance for the UAE FGCR to draw on existing structures and data from national MEL systems to inform the assessment of progress toward the global goal on adaptation. As discussions on the UAE FGCR continue, it is crucial to understand and build on countries' existing work to establish MEL systems. Successful national MEL systems for adaptation will be most valuable when they facilitate meaningful adjustments in responses to climate change and prioritize learning as a fundamental part of this work.



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Acronyms and Abbreviations

AdCom	Adaptation Communication
BTR	Biennial Transparency Reports
CCC	Climate Change Committee
CCD	Climate Change Directorate
CCRA	climate change risk assessment
CCU	Climate Change Unit
CNTE	National Council of Ecological Transition
COP	Conference of the Parties
DCC	Department of Climate Change
Defra	Department of Environment, Food and Rural Affairs
ECCC	Environment and Climate Change Canada
FAO	Food and Agriculture Organization of the United Nations
FGCR	Framework for Global Climate Resilience
GESI	gender quality and social inclusion
GGA	global goal on adaptation
JNAP	Joint National Action Plan
IVRA	impact, vulnerability, and risk assessment
KII	key informant interview
LDC	least developed country
M&E	monitoring and evaluation
MEFT	Ministry of Environment, Forestry, and Tourism
MEL	monitoring, evaluation, and learning
MIMAM	Ministry of Environment
MONRE	Ministry of Natural Resources and Environment
MoPIED	Ministry of Planning, Investment, and Economic Development
MRV+	monitoring, reporting, and verification plus
NAP	national adaptation plan



NAS	National Adaptation Strategy
NCCAP	National Climate Change Action Plan
NCCC	National Climate Change Committee
NCCP	National Climate Change Policy
NDC	nationally determined contribution
NGO	non-governmental organization
NPD	National Planning Division
OECD	Organisation for Economic Co-operation and Development
ONERC	National Observatory on the Effects of Global Warming
PNACC	Le Plan National d'Adaptation au Changement Climatique
SOP	standard operating procedure
UAE	United Arab Emirates
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change



1.0 Introduction

Assessing progress on adaptation is crucial for understanding how well communities and ecosystems are responding to the increasingly severe impacts of climate change. Recognizing if climate change adaptation (from here on abbreviated as “adaptation”) actions are reducing vulnerability, increasing resilience, and enhancing adaptive capacities is crucial for planning and decision making. Monitoring, evaluation, and learning (MEL) systems help countries gather evidence and lessons about whether adaptation actions work or not, how they work, and for whom—as well as how to improve actions based on the insights gained.

Work on national MEL systems for adaptation is not new, yet countries have been slow to take up work over the past decade (Hammill & Dekens, 2014). An increase in climate change impacts has provided incentives for countries to strengthen their MEL system for adaptation. Additionally, the ratification of the Paris Agreement and the establishment of different associated communications and reporting instruments have provided additional framing and direction for countries to track, assess, and report on their national adaptation actions.

In fact, work in this area has grown significantly in recent years. As of 2024, 53% of countries that have submitted their national adaptation plan (NAP) documents have included MEL frameworks, a 17% increase since the end of 2021 (NAP Global Network, 2024). The number of countries engaged in developing or using mechanisms to track the implementation of their NAPs increased by 40% between 2017 and 2020, with 75% of countries now committing to reporting on their progress as part of their NAPs (Leiter, 2021). These commitments indicate an uptake in the development and implementation of MEL systems for adaptation.

Adaptation has long been understood as a primarily local endeavour, though adaptation actions are inextricably linked with national and international processes. The global goal on adaptation (GGA) established in Article 7 of the Paris Agreement in 2015, the Glasgow–Sharm el-Sheikh Work Programme on the GGA, and the 2023 United Arab Emirates (UAE) Framework for Global Climate Resilience (FGCR) have reinforced the need to monitor, report, assess, and learn from collective adaptation progress across local, national, and international levels (Conference of the Parties serving as the meeting of the Parties to the Paris Agreement [CMA], 2024, p. 3). The UAE FGCR embeds MEL as one of the key four dimensions of the iterative adaptation cycle, emphasizing the need to consider the development and strengthening of MEL systems as an adaptation action in itself (Beauchamp, 2024). With the contextual and localized nature of climate impacts and vulnerability, national MEL systems are not only crucial for informing global processes but, most importantly, key to informing national and sub-national planning for successful adaptation actions (Beauchamp & Gebreyes, 2023)

The agreement on a global framework to assess collective progress on adaptation, including tracking the establishment and operationalization of MEL systems, means it is critical for countries to take stock of their current status. Countries are not starting from scratch, and the impetus for work on MEL must first recognize existing systems, processes, and structures to avoid internal duplication and accelerate successful adaptation actions.



This report first aims to inform countries as they develop and strengthen their national MEL systems for adaptation about the different approaches used globally to advance this work. Second, it aims to provide recommendations and a better understanding of how national MEL systems for adaptation can inform global reporting adaptation processes, such as the UAE FGCR. It presents a comparative analysis of MEL systems for adaptation in nine countries: Canada, France, Kenya, Namibia, Peru, Somalia, Tonga, the United Kingdom, and Vietnam. The report shows the different journeys countries have undertaken to develop and implement their MEL systems through a comparative analysis and extended case studies (see the Appendix).

This study is also an update and extension of a previous study on national efforts in MEL systems across 10 countries, *Monitoring and Evaluating Adaptation at Aggregated Levels: A Comparative Analysis of Ten Systems* (from here on “the 2014 study”) (Hammill & Dekens, 2014). While the sample of countries reviewed differ, a similar methodological approach was applied to allow for a comparison of trends in countries’ efforts on national MEL systems for adaptation over the past decade.

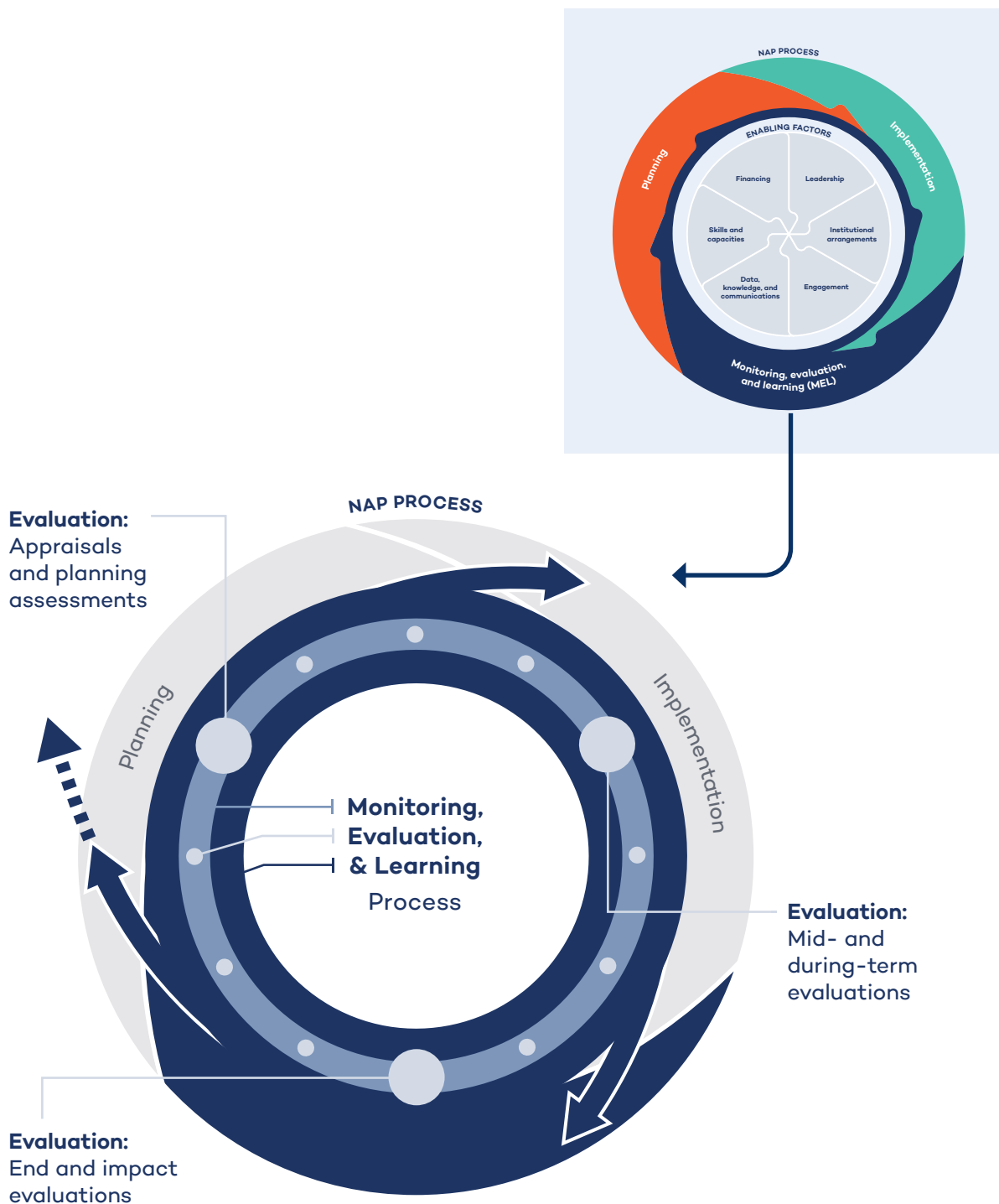
This study first presents a background and definitions for the five main components of national MEL systems for adaptation before presenting its methodology for selecting the nine countries. The findings are based on a literature review of peer-reviewed research, grey literature and policy plans, and key informant interviews (KIIs). We first show results from analyzing the case studies across the components of MEL systems before comparing them with the results of the 2014 study to show progress on MEL systems for adaptation over the past decade. We then draw recommendations for countries to strengthen national MEL systems to accelerate adaptation actions in line with recent global frameworks, such as the UAE FGCR. The recommendations are relevant for a diverse range of actors, including state and non-state actors supporting MEL systems for adaptation within countries and stakeholders engaging in discussions on the UAE FGCR.



2.0 Background

2.1 Defining MEL for Adaptation

Figure 1. The MEL of NAP processes refers to both a distinct phase and a dedicated set of activities throughout the NAP process



Source: Beauchamp et al., 2024.



The overarching aim of MEL systems is to inform policies and practices from the data and evidence generated by the iterative process of tracking, assessing, and learning throughout the national adaptation plan (NAP) and other adaptation planning processes. The information generated from MEL activities produces insights for iterative learning of what works or does not, who benefits from adaptation actions, and how those results were achieved throughout the adaptation policy, planning, and implementation processes. The different activities that countries undertake under MEL are closely connected, as shown in Figure 1 (Beauchamp et al., 2024).

Monitoring

Monitoring is the systematic tracking of implementation and performance that helps countries to understand if progress is being made and identify problems. Consequently, it informs decision making. Monitoring provides information to confirm if activities are being carried out as planned, resources are being utilized effectively, and progress is being made toward stated goals.

Monitoring involves continuous data collection, observation, and documentation to identify any deviations from the planned course and take corrective action when necessary. Most often, monitoring processes also comprise defining approaches, as well as methods and tools for data collection and analysis, including indicators and targets.

Evaluations

Evaluations use both monitoring data and information from additional sources, such as research results and external evidence, to determine the performance or success of implementation of adaptation policies, plans, and processes, per their stated goals. Whereas monitoring tracks implementation and looks at trends in performance, evaluation involves a more comprehensive and in-depth analysis of specific performance-related criteria, such as relevance, effectiveness, efficiency, coherence, equity, and sustainability. Evaluations may be carried out for adaptation policies, NAP processes, and programs or for specific aspects, projects, and initiatives linked with adaptation.

Learning

Learning in the context of MEL for adaptation is defined as the collective and deliberate process of acquiring, assessing, and disseminating new knowledge that results in changed or reinforced knowledge, attitudes, and behaviours related to climate change adaptation (adapted from Heikkila & Gerlak, 2013). This definition underscores that learning is both a process and an outcome. The process of learning through dedicated activities involving acquiring, assessing, and sharing new knowledge does not on its own constitute learning. For example, countries can do monitoring and evaluation (M&E) without learning, and the inverse is also true—countries can learn about adaptation outside of M&E activities—for example, through research and training (Dekens & Harvey, 2024). The learning process needs to lead or contribute to some form of outcome, such as a change in knowledge, attitudes, or behaviours within the iterative adaptation cycle.



MEL System

A MEL system for adaptation includes tools, responsibilities, and processes that support data collection, analysis, and the integration of findings into adaptation practices and decision making (Beauchamp, 2023). These systems provide a structured approach to assessing adaptation progress and informing planning.

MEL systems can also strengthen equity and justice in adaptation planning and implementation by enabling the assessment of how adaptation benefits are distributed across different genders, social groups, and regions. By considering systemic inequalities, inclusive MEL systems can help prioritize adaptation actions that benefit the most vulnerable communities and can address the root causes of climate vulnerability. This leads to more effective and sustainable adaptation outcomes (Intergovernmental Panel on Climate Change, 2022).

Unlike traditional M&E, MEL systems incorporate feedback mechanisms to identify necessary improvements and drive changes in tracking systems (Beauchamp et al., 2024). While M&E of projects and programs is common, this study focuses on national-level policies and programs, making project-level M&E a part of a larger system.

2.2 Components of a MEL System for Adaptation

This study describes the processes and actions that countries undertake as part of the development and implementation of their MEL systems for adaptation under five main components (see Table 1). These components have been defined in line with recent content from the NAP Global Network's *Toolkit for Monitoring, Evaluation, and Learning for National Adaptation Plan Processes* and in line with other key comparative studies on MEL systems (Beauchamp et al., 2024; Food and Agriculture Organization [FAO], & United Nations Development Programme [UNDP], 2023; Klostermann et al., 2018; Price-Kelly et al., 2015). We acknowledge that different yet aligned categorizations exist. There are the five components described in this study.

The first component considers the context of the MEL system. It first looks at the status of the system (at publication time) in terms of how far a country has gone in establishing a MEL system for adaptation, including whether MEL for adaptation is reflected in policies, whether there are operational frameworks and tools in place, and whether there are clearly defined roles and responsibilities (Leiter, 2021). This component also considers the purpose of the MEL system, because the primary purpose of the MEL system is a key determinant of its design and scope (Beauchamp et al., 2024; Leiter, 2017). MEL systems can nonetheless serve various purposes, including tracking activities and programs, assessing adaptation results, providing information to support accountability to stakeholders and partners, and producing evidence to inform adaptation planning and decision making (Beauchamp et al., 2024; Leiter, 2017; Price-Kelly et al., 2015).



Table 1. Components and sub-components of a MEL system for adaptation

Component	Sub-component	Definition
1. Context	Status	Level of development and operationalization of the MEL system and history of establishment
	Purpose	Rationale for the establishment of the MEL system
	Enabling factors	<p>Leadership: the presence of mandates and laws relevant to MEL systems for adaptation, including the codification of MEL roles and structures into policies</p> <p>Institutional arrangements: key state and non-state actors and their responsibilities, vertical and horizontal coordination, and integration of MEL for adaptation with other processes</p> <p>Engagement: state and non-state actors involved in developing the MEL system for adaptation, including defining its objectives</p> <p>Skills and capacities: human resources and efforts to strengthen their ability to effectively assess adaptation progress</p> <p>Finance: availability of financial resources required to establish and operationalize the MEL system for adaptation</p> <p>Data, knowledge, and communications: generation and use of information from the MEL system</p>



Component	Sub-component	Definition
2. Methods and approaches to MEL for adaptation	Links with adaptation plans and impact, vulnerability, and risk assessments (IVRAs)	<ul style="list-style-type: none"> • Linkages with national and other adaptation plans (e.g., national, sub-national, and sectoral adaptation plans; adaptation strategy, nationally determined contributions [NDCs], and an overarching climate action plan with an adaptation component) • Linkages between IVRAs, adaptation planning, and MEL • Use of Theories of Change
	Targets and indicators	Status of targets and indicators to assess progress linked to adaptation plans and processes and their characteristics
	Methods and tools	Practicalities of operationalizing the MEL system for adaptation, including a consideration of the data requirements; tools and methods for collecting, collating, and analyzing relevant data; approaches to disseminating results (e.g., use of reports, online platforms)
	Gender equality and social inclusion considerations	<ul style="list-style-type: none"> • Presence of GESI considerations in the approach to developing and implementing the MEL system. • Presence of GESI-specific indicators and methodologies. • Evidence of implementation of GESI considerations in monitoring, reporting, and evaluation exercises.
3. Monitoring	Evidence of adaptation monitoring	Elements that show evidence of adaptation monitoring, including the production of reports on progress in implementing adaptation actions and the related adaptation results.
	Approach to adaptation monitoring	Tools and methods used in adaptation monitoring, baseline, data requirements and sources, the frequency at which monitoring reports are produced, and the target audience.
4. Evaluation	Evidence of adaptation evaluation	Evidence of assessment of the impacts of adaptation efforts, including progress reports that detail adaptation effectiveness, adequacy, efficiency, coherence, and sustainability.
	Approach to adaptation evaluation	Tools and methods for adaptation evaluation, baseline analysis, data requirements and sources, the frequency at which evaluation reports are produced, and the target audience.



Component	Sub-component	Definition
5. Learning	Linkages between M&E outputs and adaptation decision making and planning	Evidence of incorporation of insights from the MEL system for adaptation into adaptation planning and decision making.

Source: Authors.

This component also considers the context in which the MEL system is grounded in terms of six key enabling factors necessary for its establishment and operationalization. This context includes the presence of rules and regulations that guide the establishment and operationalization of a MEL system, as well as the mandate(s) that provide the rationale for establishing a MEL system and motivate the active engagement of stakeholders (Hammill & Dekens, 2014). Institutional arrangements are also crucial, as they determine the roles and responsibilities of various actors in the MEL system, including coordination mechanisms to ensure vertical and horizontal integration in the flow of information and feedback (NAP Global Network, 2023). Finally, the enabling factors component also considers engagement in designing and operationalizing the MEL system, finance, skills and capacities, as well as data, knowledge, and communications, to effectively carry out MEL for adaptation (Beauchamp et al., 2024; Hammill & Dekens, 2014).

The second component looks at approaches used to plan, develop, and implement the MEL system. The approaches, whether in terms of linkages between plans and IVRAs or methodologies, often cut across the processes and actions used for MEL and are hence presented together under this component. For example, the presence of and linkages between the MEL system and IVRAs are also grouped under approaches and planning for the MEL system. IVRAs are crucial to understanding the vulnerability context and prioritizing adaptation actions and programs as part of national adaptation planning processes (Dekens, 2023; Organisation for Economic Co-operation and Development [OECD], 2024). It is important for the MEL system to allow countries to track, assess, and learn whether and how adaptation actions are reducing the vulnerabilities and risks identified through IVRAs.

We also considered how countries describe developed linkages between different NAPs and other relevant plans, as well as the approaches that guide the selection of appropriate processes and tools for tracking adaptation progress. This study includes how adaptation goals and objectives are connected to the MEL systems, articulating the links between adaptation actions, expected results, and assessment methods. As such, we include whether and which targets and indicators countries are using to assess plans and processes as part of their MEL system. We look at the characteristics of the indicators and whether special considerations, such as socially and geographically differentiated vulnerabilities, are addressed in the choice of indicators. The methods and tools, including data requirements and data sources, are also important practical considerations for MEL systems.

We also look at how gender equality and social inclusion (GESI) considerations are incorporated into the approaches and methods used in the MEL system. This includes the mention of GESI considerations as part of the approach used to develop and implement MEL



systems and the use of specific GESI sampling approaches, indicators, and methodologies. We have also considered the evidence of the implementation of GESI considerations in results from the MEL systems, such as disaggregated data from monitoring, reporting, and evaluation exercises. While this study describes some of the engagement processes in the development and implementation of MEL systems under the first component of “context,” we further consider if and how GESI is integrated into the methods, tools, and data.

The third and fourth components analyze M&E. For each component, we considered the evidence and activities that showed the planning and implementation of each component. This includes M&E reports and their frequency, as well as the approaches, methods, and data used for M&E. With regard to **the fifth component of learning**, we considered evidence of countries incorporating insights from the MEL system into adaptation planning and decision making. The monitoring, evaluation, and learning components reviewed in this study are described earlier in Section 1 and Table 1.

2.3 Linking MEL Systems for Adaptation Across Scales

At the national level, countries have increasingly engaged in national adaptation planning processes, including the production of NAP documents. By December 2023, 51 countries had submitted NAP documents to the United Nations Framework Convention on Climate Change (UNFCCC), and many countries had included adaptation components in their NDCs (United Nations Framework Convention on Climate Change [UNFCCC] Least Developed Countries [LDC] Expert Group, 2023). Countries have increasingly developed MEL frameworks as part of their NAP documents, albeit with differences in the extent of operationalization (Hammill et al., 2023; Leiter, 2021). For example, Tonga’s NAP document describes the forthcoming development and implementation of a 10-year M&E plan and the provision of two progress reports. Peru’s NAP document includes a further elaborated plan and approach for the MEL system, a timeline for its development, and example data sheets for two overarching indicators. Kenya’s NAP document, in turn, outlines indicators to be tracked at the national, sectoral, and county levels (see the Appendix). Relatedly, several countries have prepared stand-alone adaptation progress reports (Guerdat et al., 2023; Leiter et al., 2023) and have produced other reports for reporting on adaptation under global agreements, such as the UNFCCC.

The need to assess the effectiveness of climate adaptation efforts has long received attention under the UNFCCC, including through the 1992 Climate Convention text that requires countries to report on adaptation in National Communications (von Teichman, 2023). The Cancun Adaptation Framework, adopted at the 16th Conference of the Parties (COP 16) in 2010, bolstered mechanisms for adaptation planning and reporting by establishing the NAP process through which countries identify their medium- and long-term adaptation needs, formulate adaptation policies and programs, and assess implementation progress (Ellis & Moarif, 2015; UNFCCC LDC Expert Group, 2023).

The Paris Agreement, adopted in 2015, builds on these arrangements. The Paris Agreement established the GGA to “enhance adaptive capacity, strengthen resilience and reduce vulnerability to climate change” (UNFCCC, 2015, Art. 7). However, it took until 2023



for the UAE FGCR to be adopted by countries at COP 28 to the UNFCCC (see Figure 2). This framework will be central to the assessment of global progress toward the GGA. Parties also established at COP 28 the 2-year UAE–Belém Work Programme, through which countries will explore how to further implement the UAE FGCR, including by defining indicators for monitoring, reporting, and assessing collective progress on adaptation at the global level (UNFCCC, 2023).

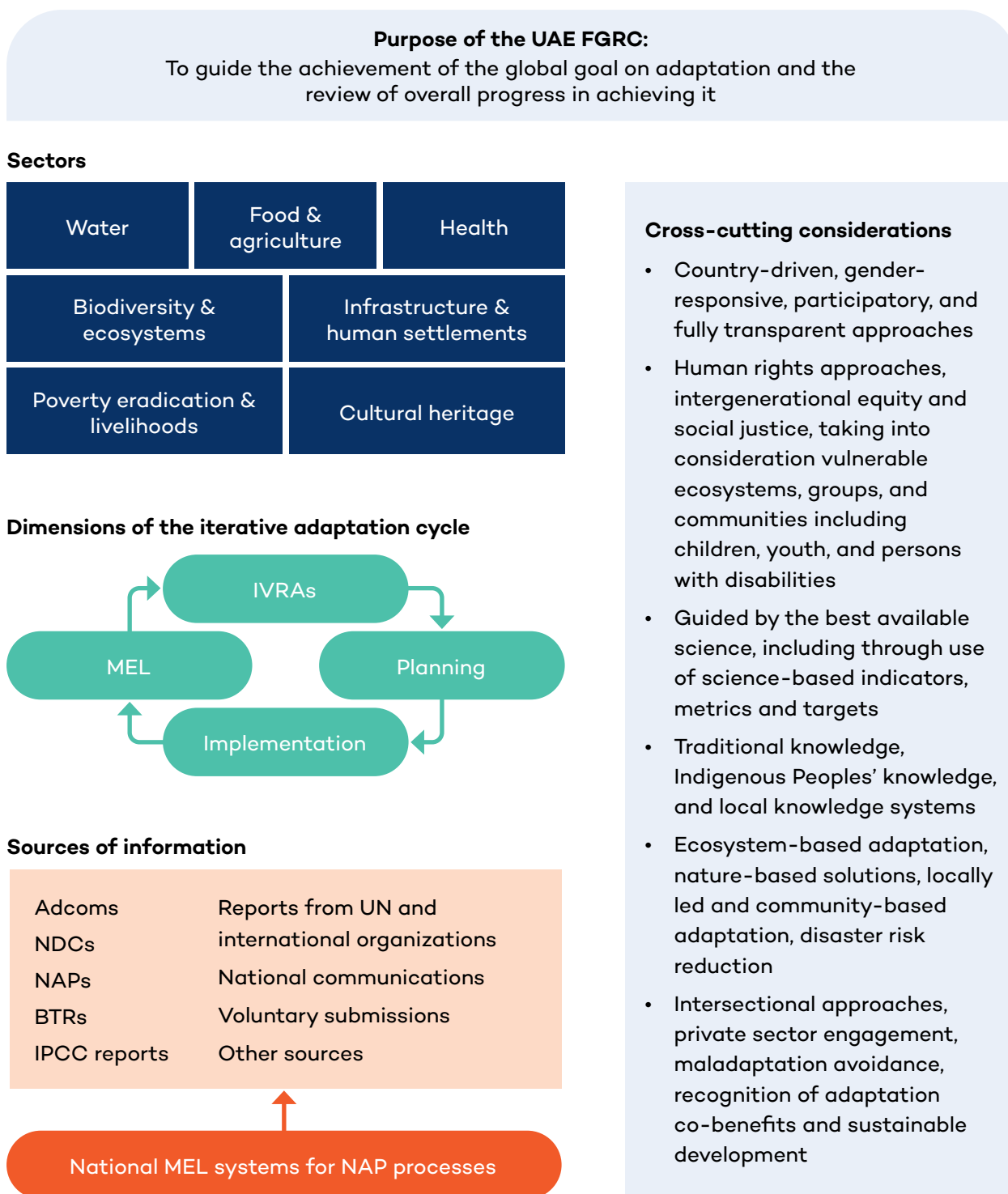
Through the Paris Agreement, countries also established the global stocktake as a periodic process for assessing collective progress in the implementation of climate actions in NDCs and NAPs. By the end of 2024, countries are expected to submit Biennial Transparency Reports (BTRs), so it is critically important that they have systems to track adaptation effectively. Together with the GGA, the Paris Agreement also established the Enhanced Transparency Framework through which countries communicate and report on their climate action commitments and implementation progress, including adaptation. Countries also use other communication-focused instruments, like National Communications and Adaptation Communications (AdComs), to communicate and report on their adaptation needs and progress. Moreover, by establishing the global stocktake as a process to evaluate collective adaptation progress and inform subsequent adaptation plans, the Paris Agreement strengthens the rationale for MEL of adaptation at the global level (Beauchamp & Józefiak, 2023).

Global efforts for MEL of adaptation are intricately linked with the evidence provided by national MEL systems. The reports and communications submitted by countries, in the form of AdComs, National Communications, BTRs, NDCs, and NAPs, provide insight into adaptation efforts and progress occurring within countries.

The critical link between national MEL systems and reporting is emphasized by the UAE FGCR's target for the adaptation cycle, which ensures that by 2030, all countries will 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” (Conference of the Parties serving as the meeting of the Parties to the Paris Agreement, 2024, Art. 10 (d)).



Figure 2. The UAE FGCR and its linkage to MEL systems



Source: Beauchamp et al., 2024.



3.0 Methodology

This study presents a review and comparative analysis of MEL systems for adaptation in nine countries. It provides descriptions and evidence of how different countries have developed and implemented their MEL systems for adaptation. This sample is diverse, representing countries in different geographic locations that have varying governance structures and levels of economic development (see Table 2).

Data was obtained for each country through two approaches: a literature review and KIIs. The literature reviewed included documents submitted to the UNFCCC (NDCs, AdComs, NAPs, and National Communications), national laws and plans, and other relevant publicly available documents, including grey and peer-reviewed literature.

KIIs conducted between September 2023 and January 2024 provided additional information, thus enriching the analysis with up-to-date information on MEL systems and experiences. The interviewees were selected based on their roles in relation to MEL for adaptation within each country, with discussions centring on themes that correspond to the components described in Table 1. A semi-structured interview format ensured that similar themes were discussed with all interviewees while allowing the flexibility required to explore interesting insights in each country.¹

For each country, information from the document review and interviews was compiled and synthesized into a country profile, which was sent to the relevant country contacts for validation (see the Appendix). While countries, in most cases, talk about M&E, the elements discussed are part of MEL, hence the use of the term across cases.

¹ Interview protocols are available upon request.



Table 2. A list of selected countries

	Country	Regional representation	Governance structure²	Level of economic development	UNFCCC classification
1	Canada	North America	Federal	High income	Annex I
2	France	Europe	Unitary/ decentralized	High income	Annex I
3	Kenya	Africa	Unitary/ decentralized	Lower-middle income	Non-Annex I
4	Namibia	Africa	Unitary/ decentralized	Lower-middle income	Non-Annex I
5	Peru	South America	Unitary/ decentralized	Upper-middle income	Non-Annex I
6	Somalia	Africa	Federal	Low income	Non-Annex I (LDC)
7	Tonga	Asia-Pacific	Unitary/ monarchy	Lower-middle income	Non-Annex I (Small Island Developing State)
8	United Kingdom	Europe	Unitary/ decentralized	High income	Annex I
9	Vietnam	Asia	Unitary/ decentralized	Lower-middle income	Non-Annex I

Source: Authors.

² See Luna Rodriguez et al., 2023, for multilevel governance definitions.



4.0 Key Findings

This section discusses the study's findings, structured to align with the components and sub-components of a MEL system. We also include the full description of each country's MEL system in the Appendix. Although the components and sub-components are presented as distinct, there are linkages and overlaps between them. Overall, the results demonstrate that while MEL systems for adaptation are works-in-progress for all the sampled countries, efforts are being made to establish and operationalize them. While there are convergences in the components of MEL systems being developed and implemented, there is notable divergence in the approaches countries take.

4.1 The Context for the MEL System

4.1.1 Status

Countries have different levels of development and operationalization in their MEL systems for adaptation (Table 3). Some countries have a longer history of tracking adaptation that has resulted in adjustments to the MEL system, while others are in the early stages of establishing a MEL system. It is noteworthy that while some countries' initial adaptation plans did not have strong MEL components, there has been improvement in subsequent plans (e.g., Canada, Kenya, and Tonga).

Among the selected countries, the United Kingdom has the longest history of MEL for adaptation, with its first report assessing adaptation published in 2010. In this first report, the Adaptation Sub-Committee of the Climate Change Committee (CCC) used a "preparedness ladder" to systematically assess adaptation efforts and provide recommendations for further action. The preparedness ladder was also used in a 2011 report, after which the CCC shifted to more detailed frameworks referred to as "monitoring maps." So far, the CCC has produced nine adaptation progress reports that have formed the basis for revisions of the United Kingdom's adaptation plans and policies, as well as its dedicated MEL system. Additionally, the United Kingdom's Department of Environment, Food and Rural Affairs (Defra) has completed three cycles of adaptation reporting and has begun a fourth cycle, with reflections at each cycle informing adjustments in the scope and approach to MEL for adaptation. This contrasts with the situations in Somalia and Namibia, where discussions about establishing a MEL system for adaptation started in 2018 and 2019, respectively, in tandem with the commencement of their NAP processes.

Nevertheless, it is noteworthy that even in countries without a comprehensive MEL system, there are sometimes existing tracking activities that could be useful for MEL for adaptation. For example, in Somalia, the Department of Monitoring and Evaluation at the Ministry of Planning, Investment, and Economic Development has been using an integrated framework to track development projects across the country. The FAO has also been implementing the Somalia Water and Land Information Management project, which aims to establish data infrastructure for natural resources and improve early warning systems. Plans are underway to hand over the ensuing data systems to the government. In Namibia, the 5-year national development plan outlines priority actions and indicators, some of which are relevant for adaptation.



Countries rarely follow a standardized approach when establishing MEL systems. National circumstances, such as the availability of resources and the extent to which adaptation is prioritized, influence how countries engage in this process. Often, countries have long been tracking adaptation before establishing a comprehensive MEL system, which is typically associated with the adoption of policies relevant to adaptation and NAP documents. For instance, in line with the Pan-Canadian Framework on Green Growth and Climate Change, the Government of Canada has been publishing annual reports that also highlight adaptation progress. However, efforts to establish a MEL system were only formally established with the adoption of the National Adaptation Strategy (NAS) in 2023. Several countries, including Kenya, Peru, and Namibia, have also been tracking adaptation for years to fulfill international reporting requirements, yet the formal establishment of a comprehensive MEL system for adaptation has taken over a decade. For example, Kenya submitted its first National Communication in 2002 and saw the Climate Change Act 2016 mandate national reporting on adaptation in 2016. Namibia, in turn, submitted its first National Communication in 2002, yet started work on its MEL system for adaptation in 2019. Another example is Somalia, which started both its National Communication reporting and its MEL systems for adaptation in 2018.

The status of MEL systems also varies within countries. It is important to consider sub-national MEL systems, given their potential to capture local adaptation experiences. With adequate coordination and integration, advances in these sectoral and sub-national MEL systems can enrich the understanding of adaptation progress within countries. In Canada, consistent with the mandates of the provincial governments to develop and implement policies, some provinces have adaptation plans and systems for monitoring progress in place. While the provinces do not report directly to the federal government, the Council of Ministers of Environment presents an opportunity for coordination between the two levels of government. There are also notable examples of sectoral MEL systems. For example, in Vietnam and Kenya, the ministries responsible for agriculture have established MEL systems for tracking adaptation efforts within the sector. Information from these sectoral systems is then integrated into the national assessment.

The establishment of MEL systems is an iterative process, with countries gradually building various components. For example, while Tonga's 2010 Joint National Action Plan (JNAP 1) did not include a MEL framework, the 2018 JNAP 2 marked a step forward with the prioritization of MEL. This was followed by the release of two documents critical to the operationalization of MEL in 2019: the *Monitoring and Evaluation System Guide* and the *Monitoring and Evaluation System Standard Operating Procedure*. The operationalization of the MEL system is demonstrated by the publication of an adaptation progress report in 2021. However, disruptions related to the COVID-19 pandemic and natural calamities have slowed this momentum, and Tonga is now in the process of reinitiating the operationalization of the MEL system. In Canada, the NAS includes an M&E framework with a "first set of indicators," which will be reviewed and refined over time. Peru has also strategically adopted a stepwise approach comprising four phases: design, which was completed in 2021 with the establishment of indicators and platforms; analysis, through which logical and physical elements are being put in place; development (programming, software creation, and capacity building); and implementation.



4.1.2 The Purpose of a MEL System for Adaptation

The rationale for establishing a MEL system for adaptation corresponds with its design and scope, with variations across countries. In some cases, the purpose given for a MEL system does not correspond with the available tools and frameworks. Therefore, this study considers “purpose” to be the way a MEL system is operationalized.

A common purpose reflected across all the sampled countries is the use of the MEL system to track progress in implementing adaptation plans and programs. For example, in Tonga, the preparation of the progress report in 2021 focused on establishing the extent to which relevant ministries had integrated JNAP 2 activities into their plans, implementation progress, and capacity needs for further implementation. Similarly, in the United Kingdom, the CCC evaluates the performance of the government in implementing the NAP, while Defra also includes information on progress in implementing sectoral adaptation plans. As such, the assessment of adaptation progress is undertaken in the context of priorities articulated in the adaptation plans and exclusively relies on data from government departments and ministries.

Other countries aim to assess the overall progress of implementing adaptation actions, thus taking a whole-of-society approach that acknowledges the contribution and role of state and non-state actors. For instance, in Kenya, government ministries and departments, the private sector, and civil society are mandated to report on their adaptation efforts and results. Consistent with this, the recent assessments of progress in the implementation of the NAP in the agriculture sector and the second National Climate Change Action Plan (PP II) relied on data from national and sub-national governmental units, civil society organizations, and the private sector to capture collective efforts in meeting the targets set out in these plans. Similarly, in Canada, territorial governments, Indigenous Peoples and their governing bodies, local and regional governments, the private sector, professional bodies, research and academic institutions, communities, and individuals have the mandate to implement adaptive actions, and there are efforts to capture their contributions in progress reports.

Overall, in each country, MEL for adaptation serves multiple purposes, including informing assessments of progress, guiding adaptation planning, and supporting accountability to national and international actors.

4.1.3 Enabling Environment

4.1.3.1 Leadership

MEL for adaptation is included in government laws and strategies in all the sampled countries except Somalia, which has neither a NAP nor a legal framework specifically addressing MEL systems for adaptation. The other eight countries all have some form of policy document guiding the establishment and operationalization of MEL system components (Table 4). For example, countries refer to M&E (Peru) or to monitoring and reporting (Tonga). These policies are predominantly NAPs and related documents that outline the processes and structures for implementing and tracking priorities. France, Kenya, Namibia, Peru, the United Kingdom, and Vietnam have additional policy instruments that articulate the mandates for various actors in the MEL system. In these countries, the MEL system is framed more broadly than an exclusive focus on monitoring the NAP’s implementation.



For example, Articles 15(5) and 19 of Kenya's Climate Change Act 2016 articulate mandates for ministries, departments, and government agencies at national and sub-national levels to report on their efforts annually (Republic of Kenya, 2016b). Private sector actors are also required to share reports on their contributions to climate action. These mandates are further expanded in Kenya's NAP and NCCAP III, which outline adaptation priorities for each sector and the corresponding mandates for state and non-state actors to implement and track progress (Republic of Kenya, 2016a, 2023). Kenya's Ministry of Environment, Climate Change and Forestry has established tools and processes to capture the adaptation efforts of various actors across the country, albeit with slow progress. The agriculture sector has established a Climate Smart Agriculture Strategy, an implementation framework, and an M&E framework and tool that align with these mandates by guiding how state and non-state actors at national and sub-national levels can report on their efforts.

Having leadership, including laws, policies and mandated frameworks, in addition to adaptation plans, is important for providing the impetus to operationalize a MEL system. Laws or policies can provide the bureaucratic or political mandate needed to kickstart work, often mandating a nodal ministry or government agency to guide that work and perhaps also mandating participation from other government entities to provide data for MEL processes. While legal frameworks are likely to outline the reporting mandates, adaptation plans are important for providing a roadmap for enforcing the mandates, including providing guidance on the tracking frameworks to be used, the required resources, and how to source them.

4.1.3.2 Institutional Arrangements

All the sampled countries have designated an administrative unit within the government to coordinate adaptation activities and MEL within the country. Typically, this unit is within the ministry responsible for the environment and/or climate change matters. For example, in Tonga and Vietnam, the Department of Climate Change coordinates adaptation reporting and has published guidelines that provide a roadmap for operationalizing the MEL system and for other government agencies to contribute. Although Somalia and Namibia do not have extensive MEL systems, both countries have designated units to lead their development. Somalia has a newly established Ministry of Environment and Climate Change, which will host the MEL system. The ministry was established in 2022 and replaced the Directorate of Environment and Climate Change, which was under the Office of the Prime Minister. In Namibia, the National Climate Change Committee and the Climate Change Unit (CCU) within the Department of Environmental Affairs have been coordinating the preparation of reports for international reporting.

Vertical and horizontal integration follows the government structure and national circumstances, which creates variation among the countries in this sample. MEL systems in most countries focus on public institutions at the national level, with limited vertical integration. In France, the National Council of Ecological Transition (CNTE) supports the National Observatory on the Effects of Global Warming (ONERC) in coordinating MEL. The CNTE is comprised of representatives from relevant government agencies, local authorities, and civil society organizations. It has also established a special commission on adaptation, which monitors adaptation progress. However, even in this system, only the ministerial focal points report on their actions and results, while the other commission members play an



oversight role. As such, the integration of sub-national authorities and non-governmental actors remains low, but efforts are being made to enhance adaptation planning and reporting across ministries and sub-national governments. However, there is no legal mandate specifically requiring adaptation reports from the private sector. In contrast, Kenya has codified the mandate for government entities at the national and sub-national levels, as well as the private sector, to report on their adaptation efforts.

4.1.3.3 Engagement

Several countries aim to adopt participatory approaches to developing and implementing their MEL systems to create ownership and transparency. Involving a wide range of stakeholders in the MEL process can improve the relevance and effectiveness of adaptation measures. For example, Peru's participatory process involves sub-national governments and Indigenous populations, and Vietnam's feedback mechanisms involve various ministries and sub-national entities. However, engaging non-governmental actors remains a challenge for many countries. There is a need for better inclusion of non-governmental organizations (NGOs), the private sector, and marginalized groups to enhance MEL systems' comprehensiveness and responsiveness to diverse stakeholder needs. For example, given its small population, Tonga's data collection efforts are concentrated on climate-relevant ministries with limited coordination with non-governmental bodies, such as the Chamber of Commerce, and key NGOs due to budget and staff limitations.

4.1.3.4 Finance, Capacities, and Skills

Financial and human capacities are crucial to the effectiveness of MEL operationalization. All the sampled countries have at least one person responsible for MEL at the national level. In some countries, such as Kenya, Vietnam, and France, there are departmental and ministerial focal points responsible for MEL activities. According to Kenya's Climate Change Act 2016, each ministry and department is responsible for providing resources to its own CCU to coordinate MEL activities in the respective ministry or department and reports to the national-level Climate Change Directorate (CCD).

Some countries are integrating the financing of their MEL system into their national budgets and government structures, which increases their sustainability and effectiveness. However, it has been difficult to capture the budgets or financial allocations for MEL for adaptation in this study.

For example, Canada has embedded the financing of its MEL system in its NAS, which is supported by various federal departments and agencies. Environment and Climate Change Canada (ECCC) leads the coordination of the NAS, which is implemented across federal, provincial, and territorial levels; similarly, budgets for the development and implementation of Canada's MEL system for adaptation are split between these same levels. Vietnam's MEL system for adaptation is supported by dedicated staff and resources within the Department of Climate Change, indicating a strong commitment to integrating MEL financing within government operations. In Peru, two positions within the Ministry of Environment focus on MEL for adaptation, though only one is funded through the national budget; the other position is funded through an internationally funded project.



Many developing countries rely heavily on international donors and external support to finance their MEL systems for adaptation. This dependency often impacts the sustainability and continuity of MEL activities. In these countries, a common approach to bridge the gap is to use external support through donor-funded projects and outsourcing services to prepare progress reports. All developing countries within the sample (Kenya, Namibia, Peru, Somalia, Tonga, and Vietnam) have received external support to develop and/or operationalize MEL. Sources of external support include the NAP Global Network, the Green Climate Fund, and international aid agencies.

4.1.3.5 Data, Knowledge, and Communications

All countries sampled have built their MEL systems based on existing data and systems, yet they have also all created new data, communications, and knowledge-sharing processes to be tailored to the context and considerations for adaptation. For example, Namibia leveraged existing data streams within the government, primarily focusing on the agriculture sector. Current MEL activities are fragmented and rely heavily on external consultants for data collection and analysis, but Namibia is in the process of establishing capacity for MEL for adaptation.

The country case studies show a range of different data, knowledge, and communications for the MEL system, with varying degrees of complexity and integration. There is a common emphasis on centralizing data collection and utilizing digital tools to manage and report on adaptation efforts. This centralization helps streamline data collection processes and ensure consistency in reporting. For example, different ministries and agencies in France have developed websites or platform-hosting data related to adaptation, like the Ministry of Ecological Transition's Drias website, which presents climate scenarios and projections (République Française & Meteo France, n.d.). France also has an internal, non-public digital tool used by ministries to update data related to adaptation actions. Similarly, Peru plans to implement an online reporting system for indicators and targets, which is currently under development and being piloted with two ministries. South Africa's Let's Respond Toolkit (Dazé, 2017) is another example of an online platform.

Nonetheless, common challenges remain, including capacity constraints, reliance on external funding, and the need for more comprehensive qualitative data collection.



Table 3. Summary of context components across countries

Status	Purpose	Context ³	
		Leadership	Institutional arrangements
Canada			
The national MEL system is partially developed. The NAS is crucial for defining elements of the MEL system, including indicators. There are examples of advanced provincial MEL systems.	Demonstrates adaptation progress across the different levels of government and non-state actors and establishes a better understanding of climate resilience. MEL is centred on the NAS.	There are no legal mandates specifically for adaptation. MEL activities are based on the NAS. However, there exist other legal frameworks guiding reporting on information relevant to MEL for adaptation.	Adaptation implementation and MEL incorporate state and non-state actors. The ECCC is the national coordinating entity. It ensures vertical integration of the provinces and other territorial jurisdictions through the Canadian Council of Ministers of the Environment. Indigenous communities also play an active role in adaptation implementation and tracking.
France			
The national MEL system is advanced and has been used to assess the implementation progress of the National Adaptation Plan (PNACC).	Provides information on how much the government is implementing the PNACC.	The law of February 2001 provides a legal mandate for coordinating adaptation planning, implementation, and MEL. The MEL system is mostly based on the PNACC.	ONERC, through the CNTE, coordinates adaptation implementation and MEL. Reporting is primarily done by government entities, with non-state actors only coming in to provide oversight. Horizontal integration between ministries is more developed than vertical coordination.
Kenya			
The national MEL system is under development, although one for the agriculture sector is in place and in the process of being rolled out.	Collates information on adaptation actions of state and non-state actors at national and county levels.	The Climate Change Act 2023 articulates the institutional structure for MEL, reporting frequency, and approaches.	The CCD at the Ministry of Environment, Climate Change and Forestry coordinates reporting from ministries, county governments, the private sector, and civil society. CCUs coordinate reporting within ministries, state departments, and counties and forward reports to the CCD.

³ Here, we focus on only two of the six enabling factors that are most relevant for comparison and summary.



Status	Purpose	Context ³	
		Leadership	Institutional arrangements
Namibia			
There is no extensive MEL system for adaptation; work on it has started as part of the NAP process.	N/A	The National Climate Change Policy of 2011 defines an initial structure for MEL for adaptation.	The National Climate Change Committee, with representation from various ministries and the CCU, coordinates adaptation implementation and monitoring.
Peru			
The national MEL system is under development.	Assesses NAP progress and adaptation implementation, including the cost-effectiveness of adaptation measures.	The 2018 Framework Law on Climate Change (Law Number 30754) and a subsequent 2021 Ministerial Resolution (Number 096-2021-MINAM) outline institutional mandates for MEL.	The Ministry of Environment coordinates MEL activities. Reporting focuses on the national level, but there are efforts to include regional governments.
Somalia			
There is no extensive MEL system for adaptation; its establishment has started as part of the NAP process.	N/A	There is no legal framework specific to MEL for adaptation.	The newly established Ministry of Environment and Climate Change will coordinate activities in the MEL system once established.
Tonga			
The national MEL system is in place; operationalization had stalled but efforts to revive it are ongoing.	Assesses progress in implementing JNAP 2.	There is no legal framework specific to MEL for adaptation. MEL activities are based on the NAP.	The JNAP Secretariat coordinates MEL for adaptation and collaborates with the National Planning Division to collect information from relevant implementing ministries. Horizontal integration is more important than vertical integration.



Status	Purpose	Context ³	
		Leadership	Institutional arrangements
United Kingdom			
The national MEL system is operational.	Assesses progress in implementing the adaptation plans and collates evidence of adaptation actions within public institutions.	The Climate Change Act (2008) details mandates for MEL, including reporting frequency and institutional structures.	Sectoral adaptation tracking is coordinated by Defra through the Adaptation Reporting Power and is based on reports from relevant public organizations. The CCC uses data from relevant public institutions to assess key indicators of progress in NAP implementation. Sub-national reporting is less prevalent.
Vietnam			
The MEL system is under development. The MEL system for monitoring sectoral actions is in place.	Assesses the implementation progress of the NAP and other plans relevant to adaptation.	Decision 148/QD-TTg of 2022 provides the legal mandate for MEL for adaptation, also operationalized through the NAP.	The Department of Climate Change collects data from relevant national ministries to assess adaptation progress. People's Committees in the 63 provinces are also mandated to engage in MEL for adaptation.

Source: Authors' compilation.

4.2 Approaches for the MEL System

4.2.1 Links With Adaptation Plans and IVRAs

IVRAs are fundamental to developing an adaptation rationale, informing adaptation priorities, and potentially as the basis for assessing adaptation progress. Most of the sampled countries have undertaken sectoral and/or national vulnerability assessments as part of adaptation planning (Table 4). This aligns with a recent study of measurement systems for adaptation, in which 80% of sampled OECD countries reported to have developed a national or sectoral IVRA (OECD, 2024).

The linkages between IVRAs, adaptation planning, and MEL are often implicit. In most countries, the MEL system is designed to monitor progress in implementing prioritized adaptation actions and predefined targets, which are presumed to correspond to the risks identified in the IVRA. Notable exceptions are the United Kingdom, Canada, and Vietnam, which explicitly articulate a logical framework that establishes these linkages. In the United



Kingdom, the CCC uses monitoring maps that establish a link between sectoral and national adaptation outcomes and the various priority actions. Based on this, the CCC assesses how well the actions undertaken within the reporting period help the country prepare for climate risks. Canada's NAS establishes an adaptation cycle where vulnerability and risk assessments inform the adaptation plan and implementation strategy.

A review of implementation progress through indicators and metrics then informs adjustments in the plan before embarking on another cycle of risk assessment and planning. In Vietnam, the MEL logical framework illustrates a bottom-up structure where key indicators of action, risk reduction, and improvements in adaptive capacity are synthesized at project, provincial, and sectoral levels to determine the overall effectiveness of the NAP. Both Kenya's NCCAP III and the United Kingdom's National Adaptation Programme use Theories of Change to link the plans and/or IVRAs with components of their MEL system. Kenya uses a Theory of Change to develop indicators on the basis of the NAP's macro-level adaptation actions and the adaptation vision, while the United Kingdom's monitoring maps articulate the contextual priority actions and plans, enablers, desired outcomes, and overarching adaptation goal.

4.2.2 Indicators and Targets

All sampled countries—except Namibia and Somalia, which lack an extensive MEL system—have defined a set of indicators for assessing adaptation progress. These indicators are defined based on the adaptation priorities articulated in national and sectoral adaptation plans. Countries' indicators vary in their characteristics and number. For example, Canada has defined 13 overarching indicators for assessing progress in the implementation of its NAS. This is only an initial list, which will be reviewed and refined with time. These indicators are tagged to one of the five thematic areas of action and to timelines, and each has targets. The list includes a mix of qualitative and quantitative indicators, as well as process and outcome indicators. France's MEL system uses 100 indicators to assess adaptation progress embedded within an online tool used by ministerial focal points to report on their activities. Tonga's JNAP 2 results framework includes 104 indicators aligned with the ambition to strengthen the country's resilience by 2035.

It is also noteworthy that while Namibia does not have a MEL system, the government is already tracking relevant indicators that could form the basis for defining adaptation indicators. For example, Namibia's Fifth National Development Plan contains a list of indicators, some of which could be used to assess adaptation progress—for example, the percentage decrease in food-insecure individuals (see Appendix). Such an approach to developing MEL for adaptation would also be consistent with Namibia's Climate Change Policy of 2011, which makes provisions for drawing on indicators contained in the development plan.

4.2.3 Methods and Tools for the MEL System

Since MEL systems are typically designed to assess adaptation progress across the country, most countries have designed tools to collate evidence on the relevant indicators from data that is already collected from various government entities and, to a lesser extent, non-state



actors (e.g., Kenya and Canada). Various tools are used to collect data, including the use of digital tools (e.g., France and Peru), questionnaires and information templates (e.g., the United Kingdom and Tonga), or mixed methods that include workshops, surveys, and online tools (e.g., Kenya).

4.2.4 GESI Considerations in Approaches, Methods, and Tools

All countries reviewed except France make specific notices of GESI issues as part of their NAPs, processes, and actions. However, only Kenya and Vietnam have specified GESI-specific indicators as part of their MEL systems for adaptation. Peru and Tonga make specific mentions of GESI considerations in their MEL system, including the need for data disaggregation of indicators, but do not have disaggregated or specific indicators. Canada and the United Kingdom make only general mentions of GESI considerations in the MEL system and for data disaggregation. Overall, no country has a systematic approach to or integrates GESI considerations into their MEL system for adaptation, and there is yet no evidence of the implementation of GESI indicators found in monitoring, reporting, and evaluation exercises

Table 4. Approaches to MEL systems for adaptation across countries

Links with plans and IVRAs	Indicators and targets	Methods and tools	GESI considerations
Canada			
Sectoral and thematic IVRAs are central to the NAS and the Federal Action Plan. Adaptation planning and MEL are based on the adaptation cycle.	The NAS provides a framework with indicators and timelines for tracking implementation progress.	Data produced by government departments and agencies is synthesized. Methodologies specifically for tracking NAS indicators are under development.	General mentions of GESI considerations. No implementation or data yet.
France			
Adaptation planning is based on a national assessment of climate impacts. There is no explicit conceptual link.	Assessing adaptation progress is based on 100 indicators with defined targets.	Ministry focal points use an online tool to provide information on their adaptation actions and results.	No mentions nor evidence of GESI considerations. No implementation or data yet.



Links with plans and IVRAs	Indicators and targets	Methods and tools	GESI considerations
Kenya			
Adaptation planning is based on a national assessment of climate risks. A Theory of Change links the NAP and the MEL system.	The NAP, NCCAP, and agriculture sector strategy outline indicators for assessing implementation progress. The NAP provides high-level indicators, allowing actors to map their contributions based on indicators they define in their plans.	Desk reviews, interviews, and surveys. The agriculture sector has established an online reporting tool.	Mentions specific GESI considerations in plans and objectives for disaggregating specific data. No implementation or data in progress reports or indicators.
Namibia			
The National Climate Change Strategy and Action Plan outlines current and projected climatic risks. The Fourth National Communication uses a vulnerability index to show the adaptation needs of sectors and sub-national administrative units.	There are no indicators specific to adaptation. The National Development Plan has indicators relevant to MEL for adaptation.	N/A	Mentions specific GESI considerations in plans, as well as in monitoring and assessments. No implementation or data yet.
Peru			
An IVRA was conducted as part of the NAP process. MEL focuses on assessing NAP progress as well as adaptation action more broadly, largely through a cost-benefit link.	The NDC and NAP define 152 indicators with associated targets.	The Ministry of Environment (MINAM) has prepared a reporting template. An online platform for collecting data from relevant ministries is currently being piloted.	Mentions specific GESI considerations in plans and links with a gender action plan. No implementation or data yet.
Somalia			
None	N/A	N/A	Mentions general GESI considerations in plans. No implementation or data yet.



Links with plans and IVRAs	Indicators and targets	Methods and tools	GESI considerations
Tonga			
Sectoral IVRAs have been conducted, but there is no national IVRA. There is no explicit conceptual link to MEL.	A M&E standard operating procedure sets process and output sets indicators for the JNAP 2.	A questionnaire with a set of questions that aim to establish the extent of implementation of adaptation actions and quarterly plans of relevant ministries.	Mentions specific GESI considerations in plans, as well as objectives for disaggregating specific data. No implementation or data yet.
United Kingdom			
Each NAP has been preceded by a national IVRA. Adaptation tracking is based on sectoral monitoring maps that resemble Theories of Change, which outline policies and plans, adaptation enablers, and expected adaptation outcomes and goals.	A series of indicators is used to assess NAP progress.	Templates from Defra allow various public organizations to provide key elements of adaptation, including risks and actions.	General mentions of GESI considerations. No implementation or data in progress reports or indicators.
Vietnam			
The NAP is informed by an assessment of climate risks and trends. There have been efforts to undertake sectoral IVRAs. There is a focus on identifying key indicators that capture the actions of provinces and ministries, improvements in adaptive capacity, and risk reduction, as well as assessment of overall progress at the national level.	The NAP identifies 72 indicators clustered into six groups. Indicators have high-level targets and range between outcome, output, process, and impact indicators.	An online platform allows ministries and sub-national government bodies to provide data.	Dedicated gender-focused indicators. Mentions specific GESI considerations in plans and links with a gender action plan. No implementation or data reported yet.

Source: Authors' compilation.



4.3 Monitoring and Reporting

Compared to the evaluation and learning components of MEL, monitoring appears to be the most advanced component across countries in this sample. Monitoring is essential for taking stock of adaptation efforts undertaken by various actors and their immediate results.

All sampled countries have published multiple reports detailing progress in the implementation of adaptation priorities (Table 5). All countries, including Somalia and Namibia, have submitted adaptation reports to the UNFCCC. These reports include National Communications with sections on adaptation and AdComs. In addition to these international reports, some countries—for example, France, Kenya, Tonga, and the United Kingdom—have published progress reports detailing the implementation of adaptation plans. These reports often outline sectoral and national vulnerabilities, adaptation programs and activities implemented during the reporting period, and, in most cases, adaptation needs and priorities moving forward.

The stated timelines for monitoring adaptation progress differ by country. Furthermore, in most cases, the production of the monitoring reports is contingent upon the availability of resources, indicating the challenge for countries to continuously monitor adaptation. For example, Tonga's JNAP 2 M&E Standard Operating Procedure directs the JNAP Secretariat to produce quarterly and annual progress reports. Quarterly reports focus on process indicators that aim to establish how many ministries are mainstreaming JNAP 2 priority actions into their programs and capacity needs. However, since the adoption of JNAP 2 in 2018, only one progress report has been produced. In the United Kingdom, Defra publishes reports on sectoral adaptation plans every 5 years, while reports from the CCC are published every 2 years. In France, the CNTE publishes annual reviews of progress on NAP implementation and publishes opinions with recommendations for the next steps. The reports are based on data from ministerial focal points. These annual reports are also a reference point during mid-term and end-of-term reviews.

4.4 Evaluation and Reporting

For the evaluation component of MEL, assessment of adaptation progress goes beyond taking stock of activities by employing methods that establish the impact of those activities in reducing climate change vulnerability and enhancing resilience and adaptive capacities. Although less common in practice than monitoring, there are notable examples of countries undertaking evaluation, with variations in their approaches.

In the United Kingdom, the adaptation progress reports produced by the CCC have aspects of evaluation, as the reports aim to assess the government's performance in helping the country address climatic risks. Here, evaluation is based on the direction of change in the various results indicators in the context of trends in climate vulnerabilities. Each thematic area is assessed based on whether the necessary adaptation policies have been adopted and the implementation status of priority actions. These biennial reports also provide recommendations for advancing progress toward the goals articulated in the 5-year adaptation program.



Kenya and France take a different approach, linking progress reports and evaluations to assess the performance of programs and investments with their NAP's stated objectives. While Peru is not yet at the evaluation stage, its NAP frames evaluation in terms of cost-benefit analysis. Through this lens, the benefits of adaptation actions would be weighed against economic expenditures to assess the success of particular initiatives.

Table 5. Types of reporting done by countries based on MEL activities

Presence of adaptation monitoring elements in progress reports	Presence of adaptation evaluation elements in progress reports	Examples	Approach
Canada			
Yes	No	National Communication, AdCom	Synthesizing information on projects and programs from federal departments. Highlighting implemented adaptation actions and programs.
France			
Yes	Yes	PNACC 1 and PNACC 2 mid-term and end-of-term reports (both M&E)	Analyzing annual data from ministerial focal points. Focus on the status of implementing actions outlined in the PNACC and evaluating progress toward set targets.
Kenya			
Yes	Yes	National Communication, NCCAP II progress report, NAP progress report for the agriculture sector	Desk review, workshops, interviews, and surveys. Focus on the status of implementing actions outlined in the NAP and NCCAP III and report on progress from monitoring data toward set targets.
Namibia			
Yes	No	National Communication, AdCom	Desk review of projects. Outlining adaptation actions and programs implemented during the reporting period.



Presence of adaptation monitoring elements in progress reports	Presence of adaptation evaluation elements in progress reports	Examples	Approach
Peru			
Yes	No	National Communication	Outlining sectoral and national adaptation actions.
Somalia			
Yes	No	National Communication, AdCom	
Tonga			
Yes	No	JNAP 2 progress report	Collecting data from implementing ministries through a questionnaire. Focuses on the activities undertaken in the previous quarter, activities planned for the next quarter, and capacity needs.
United Kingdom			
Yes	Yes	Sectoral reports compiled by Defra and biennial adaptation progress reports published by the CCC	Synthesizing evidence from public organizations. Focuses on taking stock of risks and actions prioritized by public organizations and evaluating progress in implementing the NAP and the extent to which implementation strengthens capacities to adapt to climate change.
Vietnam			
Yes	No	National Communication	Outlining completed and ongoing adaptation actions and programs.

Source: Authors' compilation.



4.5 Learning

The learning component is determined by the presence of evidence where insights from M&E are integrated into adaptation planning and decision making. The most prominent manifestations of learning are in France and the United Kingdom. In France, once evaluation reports are published, the government organizes environmental conferences where stakeholders discuss the recommendations and chart the best course of action. These reports, together with stakeholder consultations, were central to the formulation of France's second NAP by informing its scope and approach.

Similarly, in the United Kingdom, the CCC produces adaptation progress reports, providing a set of recommendations for each thematic area with a designated government agency that is responsible for each recommendation and timelines for implementation. These recommendations have been considered in the subsequent adaptation planning and implementation processes. The design of Defra's fourth cycle of tracking adaptation also considers the recommendations from the third round and the stakeholder consultations. The subsequent progress reports also note the recommendations not addressed during the reporting period.

In other countries, while the progress reports include recommendations and stated intent to use the evidence from M&E to inform policies and programs, it is uncertain how this happens in practice.



5.0 Progress Made in MEL Systems Over the Past Decade

This study has examined MEL systems for adaptation to climate change across nine countries that vary in their geographic locations, governance structures, and levels of economic development. The results show that countries in both the Global South and North are working to establish and operationalize systems for tracking adaptation progress.

Developing and implementing MEL systems is iterative, and countries gradually integrate more components into their systems. While demonstrating the importance of the five principal components of MEL systems, this study shows variations across countries in the way they are operationalized. As such, MEL systems and the processes to establish them are unique to each country. For example, while some countries started by defining a legal framework for MEL, others had already undertaken several cycles of adaptation tracking before establishing the national MEL system. Therefore, MEL systems should be contextual and strategic, paying attention to existing circumstances and capacities, as opposed to following a standardized blueprint (Dekens, 2021; Njuguna et al., 2023).

The findings show that all countries reviewed have initiated work and have at least partially functional MEL systems for adaptation. Operationalization, however, focuses on monitoring indicators and progress reporting, while activities around evaluation and learning are less systematic. These results echo the findings from recent studies on national MEL systems for adaptation by the FAO and UNDP (2023) and the OECD (2024).

This study was also realized as an update and extension of a previous study on national efforts in MEL systems across 10 countries, *Monitoring and Evaluating Adaptation at Aggregated Levels: A Comparative Analysis of Ten Systems* (Hammill & Dekens, 2014; referred to herein as “the 2014 study”). Progress on MEL systems for adaptation has been significant over the past decade. When compared with the status of aggregated M&E systems included in the 2014 study, we observe six areas of progress. Over the past decade of evolution of MEL systems for adaptation, countries have accomplished the following tasks.

1. Moved from frameworks to (partially) operational MEL systems.

While several of the MEL systems are still under development, all countries nonetheless already use their MEL systems—or part of them—to monitor and report on adaptation.

In 2014, many countries sampled were in the early stages of developing MEL systems. Countries’ efforts were largely exploratory, focusing on creating frameworks and initial policies for adaptation tracking. Additionally, reporting mechanisms for adaptation at the international level were undeveloped—with the Paris Agreement not yet established. Transparency was recognized as important, but practical measures to achieve it were still being developed. Many countries struggled to produce regular and comprehensive adaptation progress reports. The focus was more on establishing the need for reporting than the actual practice.

By 2024, there is evidence of substantial progress and that reporting and transparency had improved. Many countries moved from initial exploratory phases to more established and



operational MEL systems that support the production of progress reports and other types of reporting. Today, countries use MEL systems to produce detailed progress reports that meet international standards and fulfill requirements under frameworks such as the Paris Agreement and the Sustainable Development Goals. The role of MEL systems in enhancing transparency is more pronounced, and countries are demonstrating progress to stakeholders and aligning national efforts with global climate agendas.

For example, in 2014 France had only begun to recognize the importance of transparent reporting but lacked a fully developed framework. By 2024, France started using an online tool for its MEL system, allowing ministerial focal points to report on adaptation actions and progress.

2. Improved coordination for integration across government actors.

In 2014, many MEL systems for adaptation were fragmented, with limited integration between national and sub-national levels and unclear linkages between adaptation plans and IVRAs. Countries were still in the process of developing frameworks that effectively connected national and sub-national levels, limiting vertical integration in MEL. Efforts were top-down, with limited feedback from local levels to national policy-makers. Similarly, efforts to work on the MEL systems were often siloed. Ministries worked independently rather than collaboratively.

In 2024, coordination within and between country governments has improved. This comes hand in hand with dedicated and often mandated institutional arrangements to support adaptation and NAP processes and, consequently, their MEL systems. For example, Kenya's Climate Change Act 2016 mandates reporting from national and county governments, creating a structured flow of information from the local to the national level. This has improved the coherence of adaptation efforts across different governance levels. In Vietnam, the Department of Climate Change coordinates adaptation efforts across various national ministries and provincial governments. Another example is Tonga's JNAP 2, which includes mechanisms for integrating local adaptation actions into national policies and its MEL system. The JNAP Secretariat coordinates adaptation efforts and collects data from relevant ministries, creating a structured flow of information from the local to the national level. In Somalia, the newly established Ministry of Environment and Climate Change is tasked with coordinating adaptation efforts across other ministries and actors to develop a extensive MEL system.

3. Started to acknowledge GESI considerations.

The analysis of the literature for this study shows that the integration of GESI considerations into MEL systems for adaptation was mostly absent a decade ago. The 2014 study rarely mentions GESI considerations. In 2024, all countries except France recognized the need for a GESI lens in the MEL system, even if it is in general terms, such as in Canada and the United Kingdom.

Progress today is still limited, with only Vietnam having specified gender and social inclusion-specific indicators as part of its MEL system for adaptation. However, several countries that have yet to finalize the development and implementation of their MEL systems for adaptation



emphasize specific linkages with gender-specific adaptation actions and state the importance of data disaggregation.

Similarly, while all countries stress the need and the intent to engage with multiple stakeholders, few systematically and sustainably engage with different actors outside of the government. Maintaining consistent engagement and commitment from stakeholders over time is challenging. For example, building the capacity of and the resources for vulnerable groups to engage in the development and implementation of MEL systems, including during the planning and data collection stages, is not always possible.

4. Updated MEL systems in line with adaptation plans.

Almost all countries have significantly refined their MEL systems. In 2014, Kenya was just beginning to conceptualize its MEL framework, and the United Kingdom had only recently started developing more detailed adaptation tracking mechanisms. Now the two countries have updated their national plans, with a continued mandate and description of processes for MEL for adaptation.

For example, since 2014, Kenya has adopted a NAP that operationalizes adaptation priorities in the NCCAP and assesses progress. Kenya also now has a Climate Change Act that formalizes adaptation tracking, including designating the roles of state and non-state actors. Consequently, Kenya's agriculture sector has established a strategy, implementation framework, and tools for tracking adaptation efforts (see also FAO & UNDP, 2023). Kenya has also published several progress reports.

Similarly, since the 2014 study, the United Kingdom's CCC has fully established its adaptation monitoring framework, and there are efforts underway to continuously adapt it to information needs. Defra and the CCC have also used the MEL system to produce progress reports, which have informed adaptation plans and the further refinement of these systems.

5. Deepened linkages between adaptation plans and MEL.

From findings in the 2014 study, there was already an acknowledgment of the need for continuous learning and feedback mechanisms a decade ago. However, practical implementation was limited. MEL systems were often seen as supplementary to adaptation efforts rather than integral components of adaptation planning and execution.

Today, this study shows that there is a greater emphasis on formalizing MEL systems. This can be seen through the legal mandates for MEL systems for adaptation; the comprehensive frameworks linking monitoring, evaluation, reporting, and learning; and the dedicated institutional arrangements. Results from this study highlight a deeper integration of MEL systems into national adaptation planning and execution. There is a stronger emphasis on using MEL systems to actively inform policies and practices. For example, Canada published its NAS with plans for its MEL system to track progress across various levels of government and integrate findings. Both Kenya and the United Kingdom use Theories of Change to draw linkages between IVRAs, adaptation plans, and components of their MEL systems.



6. Acknowledged that ongoing challenges remain to deepen evaluation, learning, and sustaining resources.

In 2014, key challenges included limited financial and human resources, a lack of clear legal mandates, and fragmented institutional arrangements. These issues hindered the development and operationalization of MEL systems. There was a need for greater stakeholder engagement, and better integration of MEL systems across different levels of governance was emphasized. Evaluation exercises were primarily executed as part of donor requirements for bilateral projects rather than evaluative assessments of NAP processes. Learning was also rarely acknowledged, with the processes and activities related only to M&E systems.

Today, while there has been progress, this study highlights ongoing challenges, such as the need for sustained financial and technical support, especially in developing countries. Capacity building remains crucial. Integration and coordination between national and sub-national levels have improved but still require further strengthening to ensure comprehensive adaptation tracking and reporting.

While there is a new emphasis on learning and a better understanding of how to use evaluations at the national level (Beauchamp et al., 2022), countries still fall short of fully implemented, deliberate, and systematic evaluation and learning activities.



6.0 Recommendations for Strengthening MEL Systems for Adaptation

The trend in developing and implementing MEL systems shows that countries have increasingly developed and implemented MEL systems as part of their national adaptation plan processes and that they increasingly hold a critical space as part of NAP documents.

Adaptation actions occur primarily at the local, sub-national, and national levels, and MEL systems for adaptation should primarily serve the purpose of informing those contextualized decisions. Nonetheless, global processes such as the UNFCCC's Enhanced Transparency Framework and the Paris Agreement's UAE FGCR remain drivers for reporting based on national adaptation progress, for which national MEL systems are crucial. Given the extent and the fast pace of work on national MEL systems across the sampled countries, this study underscores the importance of the UAE FGCR drawing on existing structures and data from national MEL systems to inform the assessment of progress toward the GGA.

Based on this study, we outline immediate actions that countries should consider to strengthen their MEL for adaptation. These recommendations also consider how countries can better leverage and align their national MEL systems with informing global reporting processes such as the UAE FGCR. The recommendations are relevant for a diverse range of actors, including state and non-state actors supporting MEL systems for adaptation within countries and stakeholders engaging in discussions on the UAE FGCR.

Recommendations

Balance the different accountability purposes served by MEL systems.

Countries should design their MEL systems to produce information that can be used for various purposes, even if they have one core objective, such as tracking NAP implementation or international reporting. Data collection methods can be designed to not only take stock of actions that are linked to NAPs but also to capture the efforts of other actors who may not have a formal mandate to implement NAPs. Countries should also strategize how the information can be integrated into other policy processes beyond NAPs. To achieve the underlying objective of assessing the effectiveness and adequacy of adaptation efforts, MEL systems need to assess the outcomes and impacts of adaptation efforts. This same information also needs to be tracked for international reporting. It is therefore more impactful if countries focus on national progress reporting as opposed to tracking adaptation solely to meet international reporting obligations. Although experiences from Namibia show that a lack of capacity can hinder this approach, other countries, such as Kenya, Tonga, and the United Kingdom, are already linking progress reporting on adaptation with UNFCCC instruments such as NAPs, National Communications, or AdComs (Guerdat et al., 2023). These linkages can be expected to grow with the forthcoming BTR exercises.



Build on existing processes and structures, and then gradually add fundamental components.

Countries should take a pragmatic approach, starting by taking stock of existing processes and structures and then identifying capacity needs to fully operationalize adaptation tracking (Dekens, 2021; Njuguna et al., 2023). Even though countries like Namibia and Somalia lack extensive MEL systems, they have other tracking and reporting mechanisms for sustainable development that could be built on to establish MEL systems for adaptation. This approach would ensure alignment between different sectors that pertain to adaptation, such as agriculture, water, and health, with dedicated MEL systems for adaptation and with international reporting obligations. This approach can harness existing resources at national, sub-national, and sectoral scales and avoid additional reporting burdens (Craft & Fisher, 2018; Guerdat et al., 2023). As such, ongoing discussions on the UAE FGCR should draw on the rapidly growing evidence on the status of MEL systems across countries (e.g., FAO & UNDP, 2023; Guerdat et al., 2023; Leiter, 2021; Njuguna et al., 2023) and strive to ensure that the design of MEL systems is cognizant of national circumstances.

Look beyond indicators.

There is more to an effective MEL system than defining indicators. Indicators are an important element for tracking adaptation but are only useful if there are institutional structures, resources, and processes that support data collection and learning (Leiter & Pringle, 2018). Therefore, while the UAE–Belém Work Programme focuses on establishing indicators and quantifiable metrics to support the implementation of the UAE FGCR, it is essential for countries to consider the broader application of mixed methods and the use of evaluations to assess progress. Evaluations help identify gaps in the performance of adaptation actions and highlight areas for improvement where indicators cannot. Evaluations can also facilitate stakeholder engagement and ownership in the development of evidence by involving various actors in the assessment process. This collaborative approach ensures that diverse perspectives are considered in a way that quantitative indicators cannot capture.

Invest in understanding social dynamics in adaptation effectiveness.

Several countries outline gender equality and/or social inclusion as an important lens in adaptation planning processes, yet there is limited evidence of countries also dedicating approaches and methods that integrate GESI considerations into their MEL systems. Even in Vietnam, the only country with dedicated GESI indicators, there is still no published data on the disaggregated impacts and effectiveness of adaptation actions emerging from MEL systems today. MEL systems also mostly focus on quantitative data, which can miss nuanced social dimensions. Integrating qualitative data that captures the experiences and needs of vulnerable groups is essential but challenging. Countries should invest to ensure MEL systems capture social dynamics and reach vulnerable and marginalized groups without undermining them. Ensuring engagement with specific ministries, agencies, and NGOs working on GESI issues in the development of the MEL systems is critical to achieving this goal. Incorporating qualitative data collection methods will also help to obtain more nuanced evidence on what works for whom. Countries must plan an appropriate budget for achieving these activities from the onset.



Learning must be an integral part of MEL for adaptation.

Tracking efforts are only worthwhile if they also lead to adjustments in adaptation to climate change. Although learning was not the strongest component in the studied MEL systems, there are examples of how countries are using insights from adaptation M&E to inform adaptation planning and decision making. This includes France, Kenya, and the United Kingdom's use of evaluations and progress reports to feed back into the next cycles of adaptation plans. At the global level, the global stocktake is fundamental for evaluating progress in achieving the Paris Agreement goals, including the GGA. The findings from this synthesis should be considered in the subsequent planning cycle and catalyze more ambitious commitments and implementation through the NDCs. However, given that the stocktake provides a general overview at the global level, it is necessary for countries to internally reflect on the adequacy and effectiveness of their adaptation actions and make necessary adjustments to their adaptation plans and programs.

Use the GGA and global processes as an opportunity to strengthen national and sub-national MEL systems.

It is crucial to acknowledge the linkages between the UAE FGCR and national MELs so that efforts to operationalize the framework can be done in tandem with specific activities to strengthen national and sub-national MEL systems. As highlighted in this study, developing countries often rely on external support to prepare mandated reports such as BTRs, AdComs, and National Communications (see also Guerdat et al., 2023). Similarly, the UAE FGCR can act as a guideline and incentive for countries to strengthen their MEL systems. However, countries should not replace their existing national and sub-national MEL systems. This remains true as more indicators and methods of MEL planning and operationalization come out of the UAE-Belém work program.

Countries should see the UAE FGCR as complementary to their existing system rather than use it for top-down application. As countries set or review their targets as part of the NAP process and other strategies, they can create a coherent MEL system that reflects both local priorities and global commitments.

This alignment can first help ensure that national efforts contribute to the GGA and can inform the UAE FGCR and the global stocktake through reporting. Second, aligned national and global MEL systems can, in turn, support countries in producing information that helps integrate insights from global assessments into national NAP processes and MEL systems (Beauchamp & Gebreyes, 2023). Last, national reporting mechanisms can be instrumental in incentivizing governments to fulfill their adaptation commitments, leading to more ambitious actions that reduce vulnerability and enhance resilience and adaptive capacities across scales (Karlsson-Vinkhuyzen et al., 2018).



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Appendix A. Diverse National Monitoring, Evaluation, and Learning Systems in Nine Countries

A1 National MEL System for Adaptation in Canada

A1.1 Policy Context

A1.1.1 Background and Status

Canada's monitoring, evaluation, and learning (MEL) system for adaptation is anchored in the National Adaptation Strategy (NAS), adopted in 2023. In addition to outlining a vision for adaptation in Canada, the NAS establishes a framework for measuring adaptation progress at the national level (Environment and Climate Change Canada [ECCC], 2022). As articulated in the NAS, the MEL system aims to assess collective adaptation progress, showcase the actions that are working, inform adjustments to plans and priorities, and build a better understanding of resilience in Canada.

Conversations on MEL started with the adoption of the Pan-Canadian Framework on Green Growth and Climate Change in 2015, where adaptation is one of the four core pillars. While the Pan-Canadian Framework did not define a MEL system for adaptation, there were annual reports that included a section on adaptation (Government of Canada, 2022; Lesnikowski & Leiter, 2022). In 2017, the federal government established an Expert Panel on Climate Change Adaptation and Resilience Results with a 6-month mandate to develop indicators for tracking adaptation (Lesnikowski & Leiter, 2022). There are continuing efforts to develop the framework outlined in the NAS further as new indicators, partnerships, and data collection methods, including qualitative and other ways of knowing, are explored.

The eighth National Communication (NC8) to the United Nations Framework Convention on Climate Change (UNFCCC) notes additional legal frameworks and strategies that establish tracking efforts relevant to adaptation. The Federal Sustainable Development Act of 2008 and the Federal Sustainable Development Strategy (2022–2026) oblige the Minister of Environment and Climate Change to produce reports on sustainable development in Canada every 3 years. This is done through Federal Sustainable Development Strategy progress reports, annual reporting on Departmental Sustainable Development Strategies, the Canadian Environmental Sustainability Indicators, and updates to departmental web pages (ECCC, 2024). Reporting on adaptation also occurs through other federal reporting processes, including annual departmental plans and departmental results reports.

A1.1.2 Key Actors in Canada's MEL System for Adaptation

Climate change issues are regarded as environmental matters whose jurisdiction spreads across federal, provincial, and territorial governments. As such, the federal government, the 10 provinces, territorial governments, Indigenous Peoples and governing bodies, local and



regional governments, private sector, professional bodies, research and academic institutions, communities, and individuals have acknowledged the need for coordinated adaptation action, which is addressed throughout the NAS and is a core tenet of its implementation. The NAS is the primary document guiding adaptation planning, implementation, and tracking in Canada. It is operationalized through three key mechanisms: the Government of Canada Adaptation Action Plan, which was released together with the NAS in 2023 and outlines federal measures to support NAS implementation; bilateral action plans being developed between the federal government and territories and the federal government and provinces; and work being developed with Indigenous partners through Indigenous Climate Leadership.

ECCC is the lead for the NAS and is responsible for coordinating its implementation and assessing progress (ECCC, 2023b, p. 50; Parry et al., 2022). Other federal departments and agencies—including Crown-Indigenous Relations and Northern Affairs Canada, Health Canada, Indigenous Services Canada, Infrastructure Canada, Natural Resources Canada, and Public Safety Canada—play a role in implementing programs and activities that align with the NAS.

ECCC ensures vertical linkages by working with provincial and territorial jurisdictions through the Canadian Council of Ministers of the Environment, thus supporting the multilevel governance of adaptation (ECCC, 2023a, 2023b). Given the shared jurisdictional responsibility for climate change, the provinces and territories can also develop adaptation laws, plans, and programs and assess progress. For instance, British Columbia and Saskatchewan both have adaptation plans and MEL systems in place (Government of Canada, 2022). There are variations in the extent to which these subnational MEL systems are established and operationalized, in part due to variations in capacities, economic profiles, geographies, priorities, and adaptation needs between the provinces.

Although there are differentiated responsibilities between levels of government, there is no reporting hierarchy. This means that provinces and territories do not report to the federal government specifically on adaptation. As explained in the key informant interviews (KIIs) for this study, during the preparation of reports—for instance, National Communications—the federal government works with the provinces and territories, Indigenous Peoples, municipalities, and others to present progress on climate actions across Canada.

A1.2 Approaches to MEL for Adaptation

A1.2.1 Links With Adaptation Plans and Impact, Vulnerability, and Risk Assessments (IVRAs)

Canada's NAS is based on an adaptation cycle that covers various elements, including assessment of risk, identification of priority actions, and assessment of progress, which informs adjustments (Figures A1 and A2). The development of the NAS and the Federal Action Plan was informed by a series of sectoral and thematic climate risk assessments conducted between 2016 and 2022 (Figure A3). The risk assessments were led by various organizations, including Natural Resources Canada, ECCC, and Health Canada. As a manifestation of the linkages between climate risk assessment, adaptation planning, and MEL, priority adaptation actions



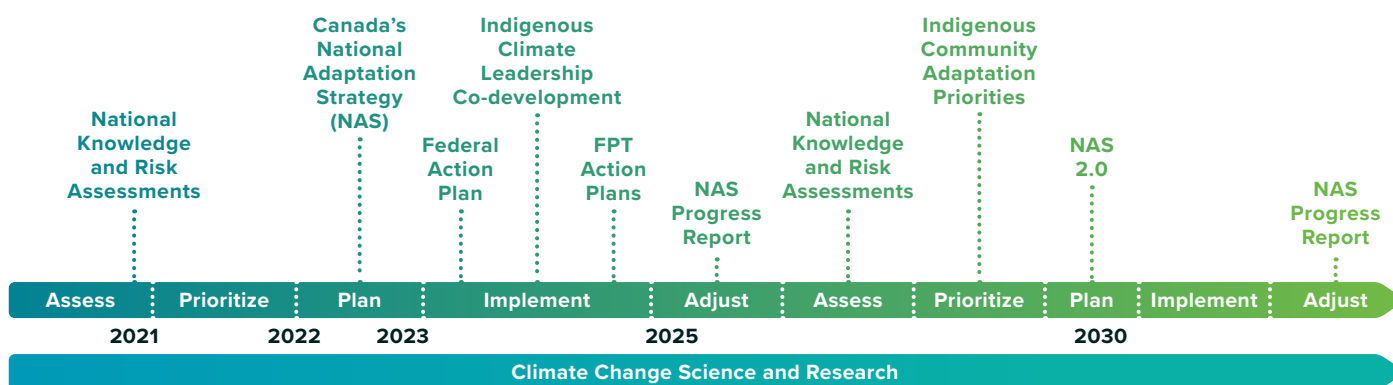
and the corresponding indicators are organized along five thematic areas: disaster resilience, health and well-being, nature and biodiversity, infrastructure, and economy and workers.

Figure A1. Adaptation cycle for Canada’s National Adaptation Strategy



Source: ECCC, 2023a, p. 13 (reprinted with permission).

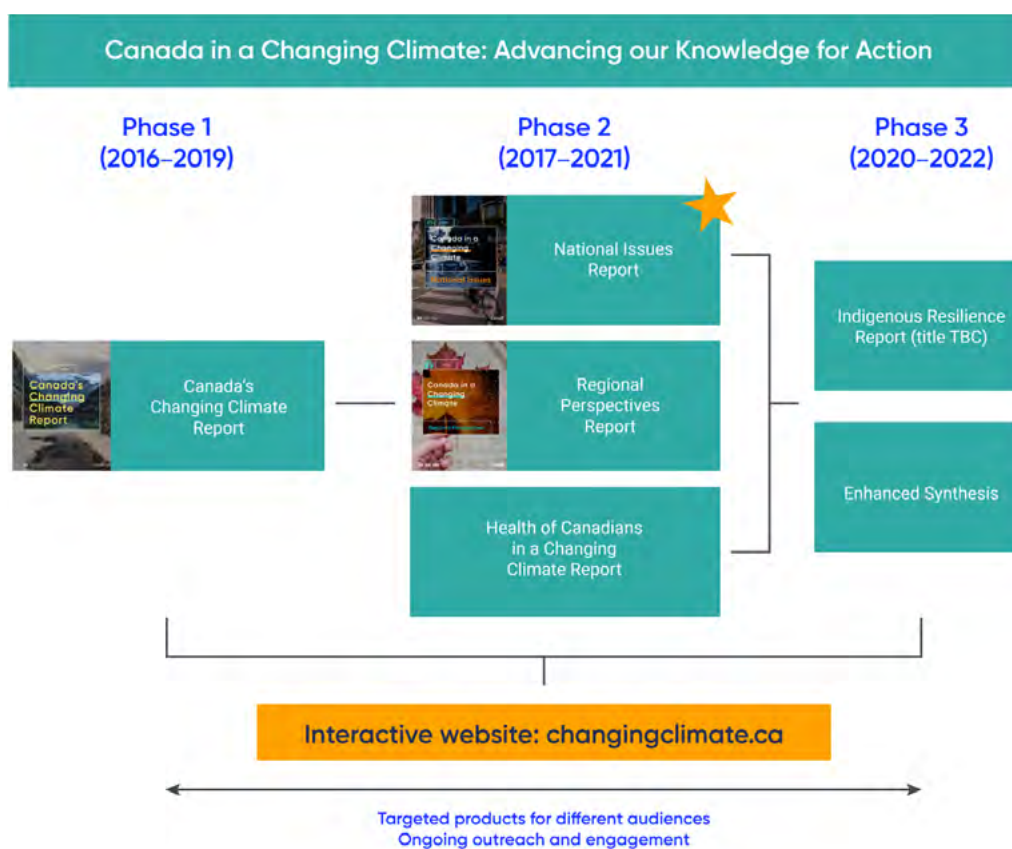
Figure A2. NAS adaptation cycle timeline



Source: ECCC, 2023a, p. 34 (reprinted with permission).



Figure A3. Timelines for the national knowledge assessments



Source: Warren & Lulham, 2021, p. 10 (reprinted with permission).

A1.2.2 Indicators, Targets, and Methodologies

The NAS includes a list of 13 indicators. This “first set of indicators” anticipates the need to review and improve the indicators based on changing climatic risks and adaptation priorities. These indicators could be characterized as process indicators (e.g., the number of long-term drinking water advisories for public systems on reserve, the percentage of public and municipal organizations that factored climate change adaptation into decision-making processes for infrastructure) and impact indicators (e.g., the ratio of harvested acreage to planted acreage, the status of key fish stocks). While these indicators are linked to NAS thematic areas, not all of them have associated targets. As explained by the official interviewed for this study, the selection of these indicators recognizes the complexities inherent in adaptation, data availability, and the ability to measure different levels of results (input, output, and outcome indicators). For the 13 indicators, the federal government has further developed a methodology for collecting data to leverage existing partnerships and data that is already held by the federal government. This data is produced by various government departments and agencies, including Statistics Canada, meaning that the federal government can report on adaptation without drawing from the other orders of government.

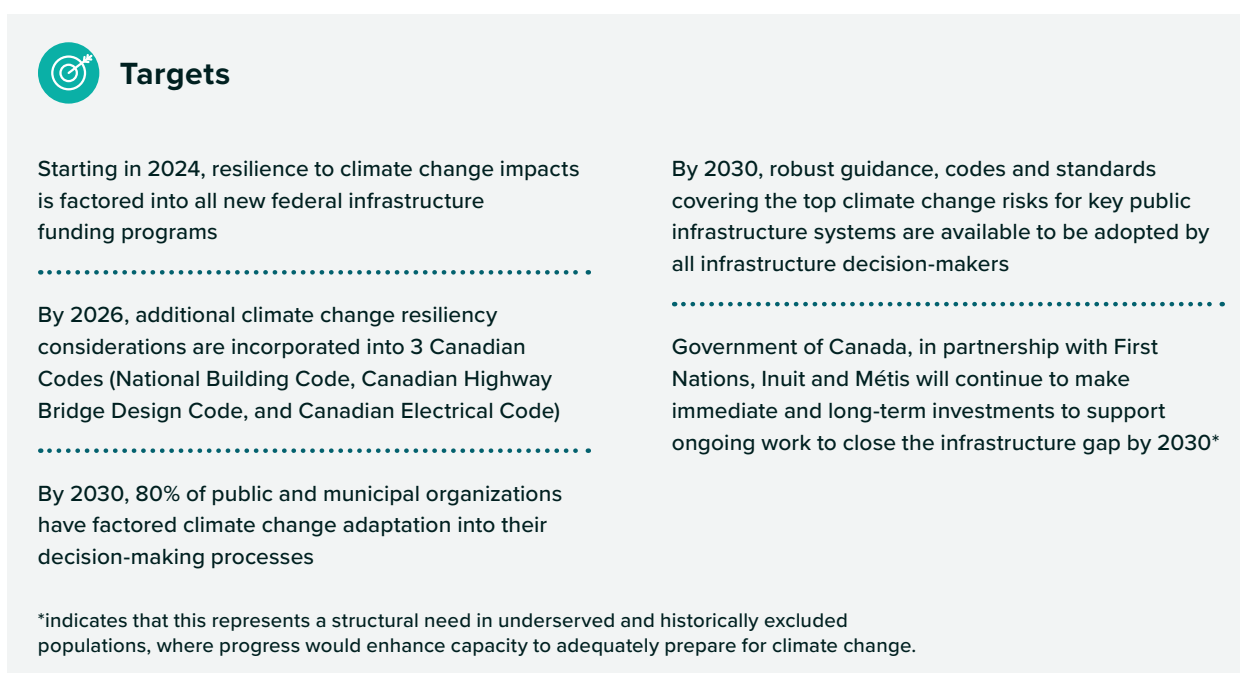
Each of the five thematic areas has corresponding goals and objectives, with timelines for achieving them ranging between 2024 and 2040 (Figure A4). The NAS contains an additional



set of objectives and targets for the foundational elements—including knowledge and understanding, tools and resources, and governance and leadership—that underpin effective adaptation and support resilience across the five NAS systems.

There are other relevant indicators developed to track other policies, such as the Federal Sustainable Development Strategy. This strategy outlines 13 goals with designated federal ministries and organizations responsible for implementing them. Relevant targets include “develop[ing] departmental measures to reduce climate change risks to asset services and operations by 2022” and “resolv[ing] all long-term drinking water advisories on public systems on reserve by March 31, 2021” (ECCC, 2024).

Figure A4. Targets for the system on infrastructure



Source: ECCC, 2023a, p. 27 (reprinted with permission).

A1.2.3 Gender Equality and Social Inclusion Considerations

Canada’s NAS and Adaptation Communication (AdCom) mention a lens for gender equality and social inclusion (GESI) in adaptation actions and knowledge, especially with regard to Indigenous Peoples. There is a mention of the importance of disaggregating indicators by equity factors in the NAS’s monitoring and evaluation (M&E) plan. There is no further evidence of the integration of GESI considerations in the MEL systems’ approaches and methodologies at this time.

A1.3 Monitoring

Despite its MEL system being under development, Canada has produced several progress reports on adaptation. For instance, under the Pan-Canadian Framework on Clean Growth and Climate Change, the federal government has published four annual reports



(2017–2020) detailing adaptation actions and their implementation status (Government of Canada, 2022). The federal government also assesses progress in the implementation of the Federal Sustainable Development Strategy and has produced a report showing the extent of progress for each indicator (Environment and Natural Resources Canada, 2021), including adaptation indicators.

Canada has also submitted its AdCom (in 2021) and a document that doubles as its NC8 and 5th Biennial Report (submitted in 2022). While the AdCom provides a high-level summary of adaptation efforts up to 2020, the National Communication provides a more detailed account of adaptation actions and plans implemented up to 2018 (ECCC, 2022, p. 3). Such reports are produced by the federal government and aligned with UNFCCC reporting requirements, with input from other orders of government, Indigenous partners, and others.

The NAS commits to publishing a progress report midway through the NAS policy cycle. Reporting on federal adaptation programming already occurs through other federal reporting processes, including annual departmental plans and departmental results reports.

As an example of adaptation monitoring at the provincial level, Saskatchewan's *Climate Resilience in Saskatchewan* report illustrates the trends and progress in meeting the province's 25 resilience measures (Table A1). It is important to note that some of the indicators are more related to emissions reduction. Saskatchewan produced four annual reports between 2019 and 2022.



Table A1. Saskatchewan indicators and targets for measuring resilience

Community Preparedness				
17. Flood mapping completed for communities at risk of flooding and where benefits validate the costs.	By 2030, 100 per cent of communities at risk of flooding have completed modern flood-mapping, where costs are commensurate with the benefits.	In 2021-22, five communities had access to modern maps, an increase of one from the previous year.	Increased	
18. Number of wildfire community preparedness completed for at-risk northern communities.	By 2030, all 84 at-risk communities have wildfire community preparedness plans completed.	In 2021-22, two wildfire community preparedness plans were completed, resulting in 68 at-risk communities (81 per cent) with plans.	Increased	
19. Total hectares of Saskatchewan Crown land with wildfire fuel management work complete.	By 2028, 2,248 hectares adjacent to communities.	As of March 31, 2022, the Saskatchewan Public Safety Agency has completed fuel management for 1,394 hectares of Crown land in the provincial forest. This is an increase of 197 hectares from the previous year.	Increased	
Human Well-Being				
20. Average municipal water consumption per capita and total municipal water consumption, as a measure of water use efficiency.	Decrease municipal water consumption per capita and total municipal water consumption (increased water use efficiency).	Per capita, municipal water use increased in 2021, with residents using an average of 335 litres per person per day, compared to 326 litres per day in 2020.	Maintained	
21. Saskatchewan's Healthy Beaches Program.	At least 95 per cent of water samples taken from suitable beaches in Saskatchewan are within the healthy limits for pathogens (<i>E. coli</i>) and microcystin (cyanobacteria).	In 2022, <i>E. coli</i> was within acceptable safety limits in more than 95 per cent of water samples taken from participating beaches, and microcystin was within acceptable safety limits in more than 98 per cent of water samples.	Maintained	
22. Number of active surveys at suitable habitat sites for Lyme disease and other tick-borne diseases.	Beginning in 2022, conduct at least 55 surveys across samples from at least 50 sites annually to monitor the risk of vector-borne illnesses influenced by a changing climate.	In 2022, 58 surveys were conducted at 53 sites for Lyme disease and other tick-borne diseases. No black-legged ticks (<i>Ixodes scapularis</i>) were detected during active surveys in 2022.	Maintained	

Source: Ministry of Environment, 2023, p. 6 (reprinted with permission).

A1.4 Evaluation

Compared to monitoring, the evaluation component is less advanced. For example, Canada's NC8 describes the sectoral and regional adaptation efforts undertaken during the reporting period, but there is not much information with regard to the effectiveness of those actions. As the NAS M&E framework continues to be developed, it is expected that the process for evaluation will be more clearly defined. Progress on NAS implementation and achievement of targets and objectives will be components of the NAS progress report.

A1.5 Learning

As described through the policy cycle (Figures A1 and A2), the intent is to establish a cyclical approach in the design and implementation of the NAS, whereby the various components will be revised based on emerging evidence. The adaptation cycle depicted in the NAS identifies an adjustment period where lessons learned are incorporated into program and policy updates. The first NAS progress report will be the first opportunity to incorporate learning into the NAS.



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A2 National MEL System for Adaptation in France

A2.1 Policy Context

A2.1.1 Background and Status

France has a MEL system for adaptation in place, as evidenced by various activities and processes. Although France lacks a legal framework that comprehensively outlines the establishment and operationalization of a MEL system, several policy documents and laws reinforce the role of the National Observatory on the Effects of Global Warming (ONERC) in coordinating adaptation planning, implementation, and assessment of progress. ONERC was established by the law of February 2001 (Ministry of Ecological Transition and Territorial Cohesion, 2024a), and its adaptation mandate was extended by the 2004 Climate Plan (Nachmany et al., 2015; ONERC, 2007).

While the 2006 National Adaptation Strategy provides overarching adaptation principles and strategic recommendations for action, the national adaptation plan—le Plan National d'Adaptation au Changement Climatique (PNACC)—outlines specific sectoral actions. PNACC also guides the M&E of adaptation actions, thus becoming the central document guiding the establishment and operationalization of a MEL system for adaptation.

Two PNACC cycles have been completed, and the third is scheduled to be adopted in 2024.

PNACC-1 (2011–2015) mandates ONERC within the Directorate General for Energy and Climate Directorate General for Energy and Climate to monitor adaptation actions yearly based on indicators defined in PNACC-1. PNACC-1 also directs the Directorate General for Energy and Climate to convene an Adaptation Plan Evaluation Committee comprised of civil service representatives tasked with implementing PNACC-1, representatives from the Grenelle Environment Monitoring Committee specializing in adaptation issues, and representatives from the scientific community (Ministry of Ecological Transition and Territorial Cohesion, 2011, p. 19). This evaluation committee is responsible for producing mid-term and end-of-term evaluation reports detailing the results achieved, including those at the local level, and making recommendations.

PNACC-2 (2018–2022) draws on a review of experience in implementing PNACC-1. PNACC-2 seeks to incorporate more actors by designating the National Council of Ecological Transition (CNTE) to coordinate annual monitoring of its implementation. CNTE is also responsible for selecting the relevant adaptation indicators and recommending amendments to the adaptation plan.

A2.1.2 Key Actors in France's MEL System for Adaptation

ONERC is the main institution responsible for MEL for adaptation, a mandate that is fulfilled through the CNTE. The CNTE has 50 members, reflecting elements of vertical and horizontal integration. It includes two ex-officio members: the president of the Economic, Social, and Environmental Council and the General Commissioner for Sustainable Development. The other 48 members represent six colleges with eight members each: a college of elected officials ensuring the representation of local authorities; a college ensuring



the representation of inter-professional employee union organizations at the national level; a college ensuring the representation of employer organizations; a college ensuring the representation of environmental protection associations and foundations or organizations recognized as being of public utility carrying out environmental protection activities; a college of associations representing civil society; and a college of parliamentarians. Other relevant public organizations are also invited to participate in CNTE meetings (Ministry of Ecological Transition and Territorial Cohesion, 2024b). The CNTE meets every 2 months and publishes its agenda as well as biannual reports on adaptation progress. In line with the CNTE's mandate to establish specialized commissions, a permanent commission responsible for monitoring the implementation of the second national plan for adaptation to climate change, reporting to the CNTE on progress and challenges, has been established—hereafter referred to as the CNTE Specialized Commission on Adaptation (Ministry of Ecological Transition and Territorial Cohesion, 2017).

PNACC-2 has fostered more active involvement of overseas territories—by 2019, half of the territorial strategies included projects relevant to adaptation (Ministry of Ecological Transition and Territorial Cohesion, 2022). However, as noted in the mid-term review report and one of the KIIs, there is a need to improve coherence between sub-national plans (e.g., between municipal and regional plans) and support their operationalization. To bolster these efforts, regional observatories and climate expert groups have been established to integrate downscaled knowledge into adaptation planning. While there is no direct reporting from the regional governments to the national level, some of the documents are still accessible to the public and implementation information is channelled through the ministries.

Legally, there are no clear connections between MEL for adaptation by the government and the private sector. So far, there are only two formal requirements for the private sector—Article 173-VI of the 2015 law on Energy Transition for Green Growth, which requires companies to publish information on integrating climate risks into environmental, social, and governance objectives, and Article 12 of the 2023 law transposing the 2022 Corporate Sustainability Reporting EU Directive, which requires them to report on adaptation to climate change. Some large public and semi-public companies (e.g., for energy and transport) have plans in place because they need to consider the long-term impacts on infrastructure. It is more difficult for smaller companies and businesses to develop such plans, even though they are vulnerable to climate change. Difficulty in accessing information hinders the review of implementation progress, especially by the finance and banking sectors (Ministry of Ecological Transition and Territorial Cohesion, 2022).

A2.2 Approaches to MEL for Adaptation

A2.2.1 Links With Adaptation Plans and IVRAs

PNACC-2 is the main document defining France's adaptation vision and guiding adaptation tracking. PNACC-2 is based on an analysis of climate change impacts and stakeholder consultation to establish priority actions.



A2.2.2 Indicators, Targets, and Methodologies

France uses a series of indicators to demonstrate the impacts of climate change and monitor the implementation of adaptive actions. The 100 indicators used in the MEL system were developed with views from experts and research organizations and are updated regularly (ONERC, 2018). There are 29 indicators of the impacts of climate change in six domains: extreme events such as temperature and precipitation, mountains, coastlines and marine environment, biodiversity, agriculture, and health. The rest of the indicators are related to implementation, results, and budgets spent on adaptation, which are used in the M&E of adaptation progress.

Concerning data requirements and methods, France's MEL system for adaptation relies on data from the implementing ministries, with each ministry providing information on actions and results of action in areas within their jurisdiction. This is done through the digital adaptation monitoring tool. The 100 indicators mentioned before are embedded in this digital tool. The digital tool and corresponding interfaces are only open to the ministries and government agencies that use the tool to update data associated with the implementation of PNACC-2 actions, notably work plans, budgets, and progress in the implementation of actions and sub-actions. The tool has been evolving based on feedback from the users (Ministry of Ecological Transition and Territorial Cohesion, 2022). However, as noted in the PNACC-2 mid-term evaluation report and one KII, the indicators used and the digital tool only provide quantitative data, highlighting the need for complementary qualitative information and analyses. Also, while PNACC-2 offers specific sectoral areas of action, corresponding targets are not defined in the plan.

A2.2.3 GESI Considerations

As noted during one of the two KIIs conducted for this study, gender and social inclusion are not a major focus in adaptation planning and assessment. Differentiated vulnerability is mostly in relation to overseas territories, which are highly vulnerable. There is no further evidence of the implementation of GESI considerations in the MEL systems' indicators or data disaggregation at this time.

A2.3 Monitoring

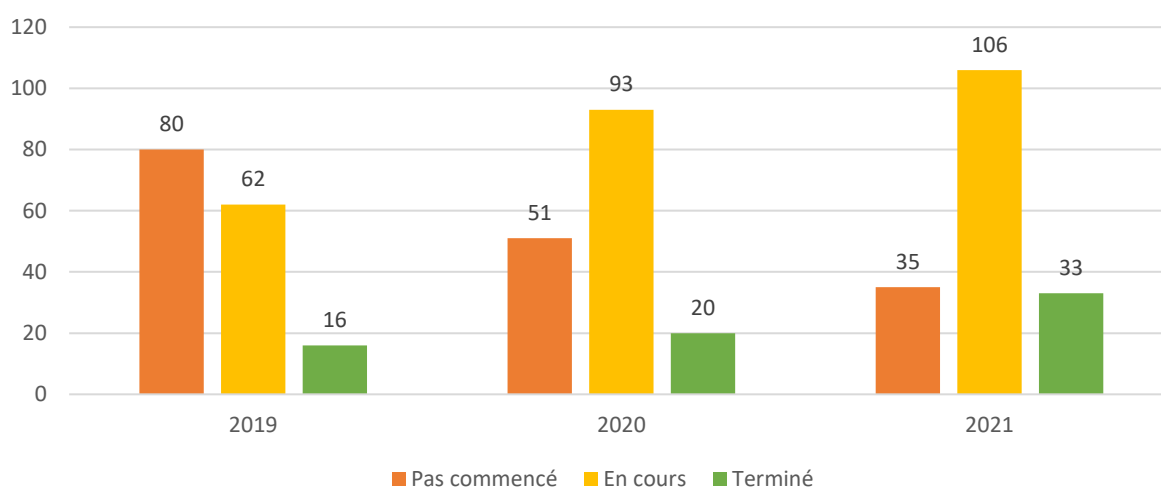
Monitoring follows a biannual planning and reporting cycle and is constituted by two interconnected processes. Twice a year, ministerial coordinators/focal points provide information on their actions and results via the digital adaptation monitoring tool. The CNTE Specialized Commission on Adaptation uses this data to develop annual progress reports on the implementation of the national adaptation plan. There are also quarterly meetings between the ministerial coordinators and the CNTE Specialized Commission on Adaptation. In the first quarter, ministerial coordinators present the work program and budget for the year. In the second quarter, the CNTE Specialized Commission on Adaptation reviews the work program and provides feedback. In the third quarter, coordinators of territorial actions, interested members of the CNTE Specialized Commission on Adaptation, local authorities, and decentralized state services hold a coordination meeting. In the fourth quarter, there is an annual review meeting between the ministerial coordinators and the CNTE Specialized



Commission on Adaptation. Based on this annual review, the CNTE Specialized Commission on Adaptation produces an opinion on the implementation progress, which it submits to the overall CNTE membership for approval.

The PNACC-2 mid-term review published by the Ministry of Ecological Transition shows 3-year implementation progress, distinguishing action areas that have not started, are in progress, and have been completed (Figure A5).

Figure A5. Implementation progress of sub-actions in the nature and environment sector



Source: Ministry of Ecological Transition and Territorial Cohesion, 2022 (reprinted with permission).

Note: Pas commencé = not started; en cours = in progress; terminé = completed.

A2.4 Evaluation

For each of its national adaptation plans (i.e., PNACC-1 and PNACC-2), France has conducted mid-term and end-of-term evaluations. For PNACC-1, the mid-term evaluation was coordinated by the Directorate of Energy and Climate, while the end-of-term evaluation was by the General Council for the Environment and Sustainable Development.⁴

Evaluations draw on information available on the digital monitoring tool as well as the annual progress reports (Ministry of Ecological Transition and Territorial Cohesion, 2022). For instance, the PNACC-2 mid-term evaluation report includes both qualitative and quantitative assessments of adaptation progress. Quantitative evaluation is based on a comparison of annual results, which allows progressive illustration of implementation progress while indicating the number of priority activities completed.

⁴ These reports are publicly available at <https://www.ecologie.gouv.fr/adaptation-france-au-changement-climatique#e2>.



However, evaluation reports only provide information on the immediate results of activities and not an evaluation of the effectiveness or adequacy of actions in responding to current and future climate risks (Anisimov et al., 2019).

A2.5 Learning

Learning in the context of adaptation tracking and planning is supported by a series of M&E reports, whose findings are considered in subsequent decisions. There are also environmental conferences during which relevant actors reflect on the recommendations of progress reports and provide guidance on further actions. For instance, one of the key recommendations from the 2014 Environment Conference was to strengthen France's adaptation strategy. Consequently, the General Council for the Environment and Sustainable Development was mandated to evaluate PNACC-1. The findings of the evaluation were presented to ONERC and later submitted to CNTE.

This end-of-term evaluation of PNACC-1, and the subsequent 2016 Environment Conference, called for greater participation of stakeholders in adaptation planning and implementation, leading to the launch of a consultative process to develop PNACC-2. Consultations were convened by working groups on six components: governance and management, knowledge and information, prevention and resilience, adaptation and preservation of environments, vulnerability of economic sectors, and strengthening of international action. Recommendations from these consultations were published (ONERC, 2017) and taken through interministerial consultations in 2017 and 2018 to consider how they could be operationalized. These consultations resulted in a list of priority actions assigned to 12 ministries with a schedule and budget, as outlined in PNACC-2. The report also called for developing nature-based solutions, planning the spatial restoration of the coastline, amplifying the dynamics of local and territorial consultation and co-construction to reconcile competing uses of increasingly limited resources, and drastically limiting the artificialization and sealing of soils. As such, compared to PNACC-1, PNACC-2 gives greater priority to nature-based solutions (Ministry of Ecological Transition and Territorial Cohesion, 2022).

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A3 National MEL System for Adaptation in Kenya

A3.1 Policy Context

A3.1.1 Background and Status

The legal basis of the MEL system for adaptation in Kenya is anchored in the Climate Change Act 2016.⁵ Article 15 (5) of the 2016 act mandates all state departments in ministries and other national government entities to integrate climate action into their policies, designate a Climate Change Unit (CCU) to coordinate mainstreaming efforts, and regularly monitor and review their performance in climate action. The respective departments or public entities are responsible for allocating the human and financial resources required to maintain its CCU's functions. Similarly, Article 19 of the Climate Change Act 2016 requires county governments to mainstream climate change in their County Integrated Development Plans and report on implementation progress. Article 16 obliges the private sector to undertake climate actions and prepare reports as guided by the Cabinet Secretary responsible for climate change matters. Other national policies, such as the National Climate Change Framework Policy (2018), the National Climate Change Action Plans (2013–2017, 2018–2022, and 2023–2027), and the National Adaptation Plan (NAP) 2015–2030, further support this mainstreaming approach to climate action and MEL.

The purpose of monitoring and reporting is to assess progress in building adaptive capacity and resilience and ensure that lessons learned support the improvement of the Government of Kenya's sector plans and programs (Republic of Kenya, 2016a, 2018a).

In line with the legal obligations for assessing progress in climate action, several efforts have been made to establish and operationalize a MEL system for adaptation in Kenya. The Ministry of Environment, Climate Change, and Forestry has been spearheading the development of an integrated monitoring, reporting, and verification (MRV+) system to facilitate MEL for mitigation, adaptation, and finance. However, this MRV+ system remains under development. Some of the challenges that have halted progress include incomplete operationalization of the organizational structures articulated in the Climate Change Act 2016 and limited financial and technical capacities to implement and monitor adaptation (Climate and Development Knowledge Network, 2018; Murphy & Owino, 2019). There are also initiatives to establish sectoral MEL systems for adaptation, notably in the agriculture and energy sectors.

Kenya has prioritized climate-smart agriculture as the approach for delivering climate action priorities in the agriculture sector. The Ministry of Agriculture and Livestock Development has developed the Kenya Climate Smart Agriculture Strategy, Implementation Framework, and corresponding M&E framework. These documents have provided the foundation for developing an online tool through which state and non-state actors can report on their climate actions that are relevant to the agriculture sector. The tool is fully developed but not yet in use. Stakeholder engagement was fundamental to the development of the M&E framework

⁵ The Climate Change Act 2016 was amended in 2023 to mainly provide provisions for carbon markets and update institutional structures accordingly (Climate Change (Amendment) Act 2023).



for the agriculture sector, with state and non-state actors providing input into the definition of a joint vision for adaptation tracking and prioritization of indicators (Food and Agriculture Organization, & United Nations Development Programme, 2023; Republic of Kenya, 2021a). The Ministry of Agriculture and Livestock Development has also established multistakeholder platforms at the national and county levels of government to enhance coordination in climate action and reporting.

A3.1.2 Key Actors in Kenya's MEL System for Adaptation

Kenya follows a mainstreaming approach where each department within government and other public entities are expected to integrate national adaptation priorities into their policies and plans and regularly report on implementation progress. Since Kenya has a devolved governance structure, organizational structures at the national and county levels of government are crucial for MEL for adaptation and, in particular, for vertical and horizontal integration.

Vertically, each of the 47 county governments is mandated to designate a CCU, which submits an annual progress report to the County Assembly through the County Executive Committee Member. A copy of the progress report is submitted to the Climate Change Directorate (CCD) in the Ministry of Environment, Climate Change, and Forestry.

In line with Article 9 of the Climate Change Act 2016, the CCD is the coordinating unit responsible for collating information from all reporting and implementing units at national and county levels. The CCD prepares national adaptation progress reports for national and international reporting. As such, the CCD undertakes a biennial review of the National Climate Change Action Plan (NCCAP) and reports to the national Climate Change Council, which evaluates the performance of climate change duties and functions of the implementing entities.

Horizontally, each public entity and ministry at the national level is obliged to have a designated CCU, which submits an annual report on climate change duties and functions, including adaptation, to the Climate Change Council. The council then evaluates the performance of the department or public entity and publishes an evaluation report, which is submitted to the National Assembly for “review, discussion and debate” (Art. 15 (9)). Within six months, the National Assembly is required to provide recommendations to the Climate Change Council, the ministry, or the CCD.

However, this organizational structure and the reporting procedures are not fully operational, and tracking of adaptation has so far relied on requesting data from ministries, county governments, and the private sector at the time of preparation of reports (see Section 3). This is done through outsourced consultancy services with both internal and external financial support.

A3.2 Approaches to MEL for Adaptation

A3.2.1 Links With Adaptation Plans and IVRAs

Kenya has several strategies and plans that guide implementation, including a NAP, the NCCAPs, an updated nationally determined contribution (NDC), and sectoral plans and



policies. These plans are informed by an assessment of experienced and projected climatic risks. While there is no single national IVRA, 45 counties have done participatory IVRAs through partner funding, which have been used to develop county climate change action plans. Based on this context, MEL for adaptation then focuses on tracking progress in implementing those plans. Indicators specified as part of the NAP document are derived from an adaptation Theory of Change that is based on the macro-level adaptation actions and the adaptation vision stated in the NAP.

A3.2.2 Indicators, Targets, and Methodologies

Many of the policy documents guiding adaptation outline indicators for assessing implementation progress. For instance, the NAP outlines indicators to be tracked at the national, sectoral, and county levels (Table A2). These are designed to be high-level indicators to account for the 15-year implementation timeline. The indicators in the other policy documents contribute to and operationalize the high-level indicators of the NAP.



Table A2. Indicators for monitoring the NAP

ADAPTATION INDICATORS		
National	Sector	County
<ul style="list-style-type: none"> • Human development index • Percentage of climate related national loss and damage in the public and private sectors • Population living below the poverty line • National vulnerability index 	<ul style="list-style-type: none"> • Number of sectors planning, budgeting and implementing climate change adaptation actions • National and county performance contracting systems integrating climate change adaptation targets • Amount of loss and damage from climate hazards per sector • Amount of private sector financing for adaptation 	<ul style="list-style-type: none"> • Number of counties that have integrated climate change adaptation in their CIDPs • Number of counties budgeting and implementing adaptation programmes; • No of national and county level programmes/projects incorporating ecosystem-based adaptation and community-based adaptation approaches • Number of households with timely access to climate information • Number of infrastructure development cases/application using climate smart designs (energy, ICT, transport) • Number of people reached through climate change adaptation public awareness campaigns • Number of public servants trained on climate change adaptation • Number of functional climate change coordination structures • Percentage of population requiring humanitarian assistance

Source: Republic of Kenya, 2016a, p. 49 (reprinted with permission).

NCCAP II (2018–2022) included indicators for each strategic objective, many with corresponding quantified targets. These indicators and targets form the basis for the assessment of implementation progress, which was done as part of the exercise for preparing the NCCAP III. The NCCAP III (2023–2027) updated and expanded the MEL system significantly. The MEL components included in the NCCAP III now include expected outcomes of climate change adaptation actions for eight priority areas, as well as expected results to be achieved by June 30, 2028, for prioritized actions (Table A3).



Table A3. Subset of indicators for the food and nutrition security sector

Priority action	Expected results by 2028	Adaptation/ mitigation
1. Increase crop productivity through improved irrigation	<p>Acreage under irrigation increased from 202,000 ha to 486,000 ha.</p> <p>Production efficiency from irrigated fields increased from 50% to 90%.</p>	Adaptation
2. Diversify livelihoods to adjust to a changing climate	<p>2,500,000 farmers (of which at least 30% and 10% should be women and youth, respectively) adopt new adaptive crop varieties.</p>	Adaptation
3. Increase adoption of sustainable land management	<p>Acreage of land under sustainable land management and restoration of degraded land increased:</p> <ul style="list-style-type: none"> • Area under integrated soil nutrient management increased by 2,500,000 ha. • Farm area under conservation agriculture increased from 53,200 ha to 100,000 ha by incorporating minimum/no-tillage. • Soil and water conservation measures used on 1,000,000 ha of farmland by 2,500,000 farmers (of which at least 30% and 10% should be women and youth, respectively). • The agricultural land area under farm trees increased by 200,000 ha. 	Adaptation/ mitigation

Source: Republic of Kenya, 2023, p. 92 (reprinted with permission).

Specifically for the agriculture sector, the M&E framework outlines indicators organized around the goals, outcomes, and expected outputs of the Kenya Climate Smart Agriculture Strategy (Table A4).



Table A4. Examples of indicators in the Kenya Climate Smart Agriculture M&E framework

The aim of Outcome 1 is to demonstrate existence of a sustainable system for achieving coordinated, coherent, and cooperative governance of climate-resilient, low-carbon growth in the agricultural sector through improved inter-ministerial and county government coordination; through deepening partnerships between state and non-state actors; and through improved linkages between actors in the agricultural research system, advisory services, and producers.		
OUTCOME 1 Institutional coordination of CSA policy and implementation strengthened	INDICATOR 1.1 Total amount of finances invested in CSA	K Sh
	INDICATOR 1.2 Existence of functional CSA coordination mechanism at the national and county levels	Descriptive
	INDICATOR 1.3 Presence of up-to-date CSA policies and strategies in place at both national and county levels of governance	Descriptive
	INDICATOR 1.4 Existence of functional research-extension-farmer linkages mechanisms	Descriptive
OUTPUT 1.1 Strengthened coordination and partnership between state and non-state actors	INDICATOR 1.1.1 Change in frequency of joint CSA coordination and partnership forums	Descriptive
	INDICATOR 1.1.2 Number of harmonized CSA policies	N
	INDICATOR 1.1.3 Number of counties that have mainstreamed national CSA related policies	N
	INDICATOR 1.1.4 Number of collaboration agreements/commitments related to CSA between the institutions	N
	INDICATOR 1.1.5 Existence of approved joint agricultural-sector CSA programming and financing mechanism	Descriptive
	INDICATOR 1.1.6 Number of jointly developed CSA related policy briefs	N
	INDICATOR 1.1.7 Number of joint CSA programmes implemented by national and county governments	N
	INDICATOR 1.1.8 Amount of funding allocated to joint CSA programs by state and non-state actors	Ksh
OUTPUT 1.2 Strengthened farmer-research-extension linkages	INDICATOR 1.2.1 Change in number of farmer-research-extension forums held	N
	INDICATOR 1.2.2 Composition of stakeholders involved in farmer-research-extension linkage	Descriptive
	INDICATOR 1.2.3 Number of user-driven CSA research technologies developed	N
OUTPUT 1.3 Enhanced enabling environment for CSA	INDICATOR 1.3.1 Existence of up to date CSA policies, strategies, guidelines, and regulations	Descriptive

Source: Republic of Kenya, 2021a, p. 11 (reprinted with permission).

A3.2.3 GESI Considerations

Mentions of gender and social inclusion are included in the NAP and the NCCAP III, including the need for gender considerations in the MEL system for gender disaggregation in data collection and analysis, among others. The NCCAP III calls for a MEL system that includes gender-disaggregated data and gender indicators. In addition, NCCAP III identifies children and youth as a priority area for action. It sets out specific enabling actions to facilitate the participation of children and youth in implementing the action plan and expected results against which to measure progress. The NCCAP III includes a handful of GESI-specific and GESI-disaggregated indicators, such as (see Table A5)



- the number of dairy farming households, by gender, supported in adopting climate-resilient technologies, innovations, and management practices;
- the number of youth-led hubs established to promote the adoption of climate-smart agriculture practices; and
- the number of women and youth groups created to promote deliberate gender-responsive actions to improve the participation of women and youth in applying appropriate technologies.

Yet there is no evidence of GESI consideration from reports or data from the indicators at this time.

Table A5. Example key performance indicator under Kenya’s MEL system for the NCCAP III

Priority Action	Expected Outputs/Outcomes	Key Performance Indicators	Responsible Institutions	Targeted Groups	Source of Funds	Total	Indicative Budget (KES millions)				
							23/24	24/25	25/26	26/27	27/28
	1,0002 farmer-facing SMEs (cooperatives and CBOs), with at least 30% women- and 10% & youth-headed, supported to install milk coolers and meat chilling facilities. 400,000 pastoral HH, with at least 30% women- and 10% youth-headed, adopt Livestock Identification and Traceability system (LITS). Adoption of LITS supports offtake 1,000,000 TLUs in 23 counties, to enhance access domestic and export livestock and livestock products markets.	No. of dairy farming HHs, by gender, supported to adopt TIMPs No. of cooperatives/CBOs with installed milk coolers and milk chilling equipment % reduction in post-harvest losses of livestock products (milk and meat) No. of pastoral HHs adopting LITS No. of TLUs registered under the LITS No. of counties implementing LITS				10,000	2,130	2,150	2,200	2,200	1,320
						320	100	80	60	50	30
Enhance contribution of youth to food and nutrition security	Ten youth-led agri-hubs established to promote adoption of climate smart agriculture practices. 100,000 youth farmers across the country practicing climate-smart agriculture.	No. of youth-led hubs				6.538	0.654	1.635	1.961	1.961	0.327

Priority Action	Expected Outputs/Outcomes	Key Performance Indicators	Responsible Institutions	Targeted Groups	Source of Funds	Total	Indicative Budget (KES millions)				
							23/24	24/25	25/26	26/27	27/28
Increase gender-responsive affordable water harvesting-based livelihood resilience programmes	Promote deliberate gender-responsive actions to improve participation of women and youth in applying appropriate technologies. Drill and equip 465 boreholes and install 510 greenhouses.	No. of women and youth groups	State Department for Irrigation State Department for Water and Sanitation NIA County governments	Women and youth	GoK DPs	1,454	90	100	200	532	532

Source: Republic of Kenya, 2023, p. 153 (reprinted with permission).

A3.3 Monitoring and Evaluation

The Government of Kenya has produced several reports based on an assessment of adaptation actions and progress within the country. The most recent reports include a National Communication to the UNFCCC in 2015, the second implementation status report on the implementation of the NCCAP II in 2021, and the first report on the implementation of the national adaptation plan (NAP) in the agriculture sector in 2022. These reports provide information on the results achieved and how they compare to the targets (Table A6), thus demonstrating consideration of both the monitoring and evaluation dimensions. However, the



reports do not include an evaluation of the effectiveness or adequacy of actions in responding to climatic risks.

The preparation of these reports was based on desk reviews and interviews. Government organizations, civil society organizations, and the private sector were also invited to provide information relevant to the assessment.

NCCAP III notes that Kenya’s MRV+ system will continue to be implemented in a phased approach and includes a priority enabling action to “Establish the Monitoring, Evaluation and Learning (MEL) component of the MRV+ system to report on adaptation actions and benefits, including identification and measurement of adaptation indicators (including collection of baseline information and development of gender-disaggregated data and gender indicators)” (Republic of Kenya, 2023). The expected result is a fully functional MEL system for adaptation in place by June 30, 2027.

Table A6. Indicators, targets, and results achieved in the food and nutrition security sector

Actions	Expected Results by 30 th June 2023	Results Achieved as of June 2020 (Cumulative)
<p>2. Increased crop productivity through improved irrigation</p>	<ul style="list-style-type: none"> ▪ Acreage under irrigation increased from 202,000 to 486,000 Ha. ▪ Production efficiency from irrigated fields increased from 50% to 90%. 	<ul style="list-style-type: none"> • Area under irrigation increased by 5,013 Ha.
<p>3. Improve productivity in the livestock sector through the implementation of CSA interventions</p>	<ul style="list-style-type: none"> ▪ Improved productivity of pastoralists: <ul style="list-style-type: none"> ▪ 10,000 Ha of rangelands reseeded in 23 ASAL counties; ▪ Annual ASAL’s water harvesting and storage increased by 25%, from 16 to 20 Million M³ via small dams and water pans, and 700M³ through large multipurpose dams; and ▪ Animal disease control and surveillance improved. ▪ Number of customers/beneficiaries/farmers accessing climate-oriented livestock insurance increased from 18,000 to 105,750. ▪ Efficiency in dairy management improved for 267,000 households. ▪ Manure management improved through the adoption of biogas technology by 80,000 households and at least 200 abattoirs. 	<ul style="list-style-type: none"> ▪ 1,969 Ha of rangelands re-seeded. ▪ Annual ASALs water harvesting and storage capacity improved by 1,130,000 M³ from the 38 water pans, 6 subsurface dams constructed and 73 bore holes and shallow wells in 11 ASAL counties. ▪ Over 10,086,752 head of cattle were vaccinated in 30 counties in 2019/2020. ▪ 13 million doses of vaccines completed in 2018-2019 ▪ 18,012 farmer households insured 90,060 head of cattle. ▪ 1,297 households adopted improved management of manure.
<p>4. Improve productivity in the fisheries through implementation of CSA interventions</p>	<ul style="list-style-type: none"> ▪ Insurance packages piloted and developed for the fisheries sub-sector. ▪ Aquaculture production increased: <ul style="list-style-type: none"> ▪ No. of cages for fish farming increased from 3,450 to 8,000. ▪ No. of fishponds increased by 16,000. ▪ No. of farmers using low carbon (reticulating) aquaculture systems increased from 20 to 180. 	<ul style="list-style-type: none"> ▪ 41,496 fishers adopted Insurance products for the sector. ▪ 793 fish farming cages established. ▪ 11,300 fishponds established. ▪ No of farmers using low-carbon (recirculating) aquaculture systems increased by 140.

Source: Republic of Kenya, 2021b, p. 12 (reprinted with permission).



A3.4 Learning

The progress reports provide information on the status of implementation and include recommendations for further action. Lessons learned from the implementation of NCCAP 2018–2022 were collected through progress reporting and stakeholder consultations and informed the preparation of NCCAP 2023–2027.

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A4 National MEL System for Adaptation in Namibia

A4.1 Policy Context

A4.1.1 Background and Status

Namibia's National Climate Change Policy of 2011 (NCCP) provides a legal mandate for adaptation planning, implementation, and M&E. It recognizes that MEL for adaptation is relevant to ensuring that adaptation responds to national, regional, and local circumstances. NCCP designates the Ministry of Environment, Forestry, and Tourism (MEFT) and the Meteorological Services of Namibia as the agencies responsible for regular and ad hoc monitoring of climate action.

Currently, there is no comprehensive MEL system for adaptation; monitoring activities are fragmented, focusing on specific sectors and projects or ad hoc assessments for international reporting, such as the AdCom and National Communication. These ad hoc assessments are typically done by outsourcing data collection and analysis services from consultants, with the Climate Change Unit at MEFT overseeing the process. Although the government committed to building in-house adaptation tracking capacities following the submission of the first three National Communications, the stakeholder consultations revealed that capacity gaps were much larger than anticipated. The government therefore resorted once again to outsourced services to produce the fourth National Communication (NC4) (submitted in 2020) and, subsequently, an AdCom (submitted in 2021).

Namibia is in the process of simultaneously developing NAP and MEL systems. While the NAP process started in 2019, the development of the MEL system for adaptation started in 2022 (NAP Global Network, 2022; Republic of Namibia, 2022). According to the KII conducted for this study, the MEL system for adaptation will draw on the existing data streams within the government. As such, the development of the MEL system started with assessing existing M&E systems and developing a baseline report with indicators for the agriculture sector. This work is supported through the Green Climate Fund's Readiness Programme and the NAP Global Network.

In 2023, MEFT also commenced preparation of Namibia's first Biennial Transparency Reports and fifth National Communication (UNDP, 2023) in partnership with the United Nations Development Programme (UNDP) through a 4-year project funded by the Global Environment Facility. As part of this process, the project aims to strengthen institutional and technical capacities to track climate action.

A4.1.2 Key Actors in Namibia's MEL System for Adaptation

MEFT is the official government agency acting as the national focal point of the UNFCCC. Its responsibilities include

coordinating and implementing climate change activities, including the preparation of both National Communications and Biennial Update Reports to enable the country to meet its international reporting obligations. This is done through the Climate Change Unit (CCU) established within the Department of Environmental Affairs. (UNDP & Global Environment Facility, 2019)



According to Namibia's NC4 and the NCCP, the National Climate Change Committee (NCCC) oversees the implementation of climate change policies and advises the cabinet on various issues, including reporting obligations. The NCCC is made up of representatives of various ministries, the Office of the Prime Minister, and other stakeholders, including from the private sector and non-governmental organizations (NGOs) (Republic of Namibia, 2020, 2021). Being a formalized and multisectoral committee, the NCCC supports the CCU by advising and guiding it in sector-specific and cross-sector implementation and the coordination of climate change activities. For instance, during the preparation of the NC4, which was submitted to the UNFCCC in 2020, the NCCC provided oversight while the CCU coordinated. Namibia's AdCom notes that the NCCC has been replaced by the National Committee on the Rio Conventions. The experience in developing AdComs and National Communications has influenced adaptation planning in Namibia, including providing an imperative to establish a comprehensive MEL system.

In the NCCP, the roles of the private sector and other non-governmental actors, such as NGOs and community-based organizations, are framed with reference to implementation and resource mobilization but not as part of the national MEL and reporting system.

A4.2 Approaches to MEL for Adaptation

A4.2.1 Links With Adaptation Plans and IVRAs

Namibia's National Climate Change Strategy and Action Plan (NCCSAP) 2013–2020 includes a climate risk assessment highlighting the regions and sectors affected by climatic hazards. This provides the rationale and foundation for prioritized adaptation actions. Similarly, the NC4 provides a detailed account of current and projected climatic risks and impacts on sectors and constituencies (an administrative unit in Namibia). The climate risk assessment in the NC4 uses a vulnerability index that considers the exposure to hazards, sensitivity, and the adaptive capacity of sectors and constituencies.

In the absence of an operational MEL system for adaptation or a NAP, it is challenging to describe how these climate risk assessments and the subsequent adaptation priorities inform adaptation tracking.

A4.2.2 Indicators, Targets, and Methodologies

While there are no established indicator sets or methodologies for tracking adaptation, the NCCP commits to adopting indicators used in the National Development Plans (NDPs) and MEFT Strategic Plan. Additional indicators will also be developed. The results framework of the fifth NDP uses 131 indicators organized around its four strategic goals (Republic of Namibia, 2017). The indicators relate to the inputs and activities in the wider frame of sustainable development, as well as outputs and outcomes. Each indicator has associated annual targets and the government entity responsible for providing data.

A4.2.3 GESI Considerations

There is no evidence of the implementation of GESI considerations in the MEL systems' indicators or data disaggregation at this time.



A4.3 Monitoring and Evaluation

Namibia has produced progress reports, notably four National Communications and an AdCom. The preparation of the NC4 is based on a review of information on programs and projects within the country. Information on these projects and programs was obtained from online resources and websites of UN agencies, multilateral development banks, bilateral development agencies, and international and national NGOs. The NC4 presents information on adaptation actions undertaken during the reporting period (2014–2019), including information on progress in the implementation of the National Climate Change Strategy and Action Plan. However, there is no evaluation of the adequacy or effectiveness of actions in responding to climate change. The AdCom mainly outlines planned sectoral adaptation actions.

A4.4 Learning

Adaptation M&E is just starting, which means there is limited evidence of learning.

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A5 National MEL System for Adaptation in Peru

A5.1 Policy Context

A5.1.1 Background and Status

Peru's MEL system for adaptation remains under development. Peru has an ongoing focus on MEL, framed as an integral part of their approach to adaptation (Government of Peru, 2021a, pp. 286–297; 2021b). MEL in Peru is supported by a legal mandate through the 2018 Framework Law on Climate Change (Law Number 30754), 2019 Regulation of the Framework Law on Climate Change (Supreme Decree N° 013-2019-MINAM), and a subsequent 2021 Ministerial Resolution (N° 096-2021-MINAM). The 2018 Framework Law designates the Ministry of Environment (MINAM) as the national chief authority for coordinating MEL for adaptation and NAP processes, and national-level ministries are obligated to contribute to MEL for adaptation (Government of Peru, 2021a). Once the MEL system is fully established, they will be mandated to report data and information to the MINAM.

Peru's NDC was created in 2015. The following year, officials within the MINAM began conversations on updating the NDC and considered simultaneously creating a MEL system for adaptation. However, due to time and capacity constraints within the MINAM, MEL-focused work was paused while the NDC was given priority. However, as explained during the KII conducted for this study, these conversations among officials within the MINAM were important in establishing a focus on MEL for adaptation and disaster risk reduction. In 2019, the preparation of a roadmap for a MEL system for adaptation began, following the 2019 Regulation of Law that created the Monitoring System for Adaptation and Mitigation within three components: M&E for adaptation, MRV for mitigation, and financing. After the NDC was updated in 2020, Peru's NAP—with the support of the NAP Global Network—was published in 2021.

Certain resources are dedicated to MEL in Peru. Currently, two positions within the MINAM focus on this work, though only one is funded through the national budget; the other position is funded through an internationally funded project. Resources are constrained, though the German development agency Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ), the Climate Technology Centre Network, the Global Environment Facility, Swiss Cooperation, and the Global Green Growth Institute have contributed to this work.

A5.1.2 Key Actors in Peru's MEL System for Adaptation

The MINAM will manage the MEL system once it is established. National-level ministries will report data and information to the MINAM. As noted in the NAP and the 2016 National Communication, Peru has been undergoing a process of decentralization, perhaps with implications for MEL. While data collection is currently conceptualized only at the national level, the government official interviewed for this study noted that sub-national governments would be included in the MEL system with the possibility of including municipalities in the future. There are also plans to incorporate Indigenous populations into MEL reporting, though how that might occur remains undefined.



The official interviewed for this project characterized Peru's MEL system as a combination of top-down and bottom-up, noting that much of the system is based on directives from the MINAM; they also stated that the process of identifying adaptation measures is participatory. All stakeholders responsible for NDC implementation will be fully engaged in this system, as will those implementing adaptation actions. However, the design of the MEL system currently centres around national-level ministries and regional governments, and the role of other stakeholders remains to be seen during the implementation of the MEL system.

There are four sectoral prototypes at the pilot stage, and they are expected to be key inputs for the final design of the MEL system. Sub-national governments are also expected to develop, implement, and report the progress of adaptation measures defined in their climate change strategies (regional governments) and local climate change plans (local governments). Local governments must report to each regional government, and each regional government reports the progress in the implementation of adaptation measures to MINAM each year.

The NAP emphasizes the need for transparency and flexibility with MEL (Government of Peru, 2021a, p. 289), aligning with transparency and participatory principles of the law. M&E will generate timely information on the progress of the implementation of adaptation measures and their outcomes, allowing broad and systematic transparency and accountability. Likewise, the feedback and learning process can be a means for improving the design and planning process, as well as identifying new measures for the following NDC cycle. In 2024, four M&E tools will be published, along with which processes and methods will be set up. National and sub-national authorities are providing feedback on these tools before they are issued. MEL objectives will be based on data, indicators, and targets collaboratively defined mainly with sectoral authorities responsible for NDC implementation, sub-national governments in charge of regional implementation, and non-state actors implementing adaptation actions.

The M&E preliminary design includes five modules: (i) a data management module, (ii) a progress module, (iii) a climate-related risk module, (iv) a medium- and long-term assessment module, and (v) reports. The functional structure operates under the premise of continuous feedback for improvement and learning.

Once the MEL system is implemented, it is expected to operate on a 5-year cycle for assessing adaptation, as specified in the NAP and the NDC, with financial expenditures for adaptation assessed yearly. As explained by the official interviewed for this study, MINAM officials might change these timelines based on feedback and practicalities.

A5.2 Approaches to MEL for Adaptation

A5.2.1 Links With Adaptation Plans and IVRAs

A risk assessment was conducted as part of the NAP, and sectoral vulnerability assessments were conducted. These assessments and other relevant information will be integrated into the MEL system. Specifically, the climate-related risk module incorporated in the M&E system will collect all information from these assessments.



A5.2.2 Indicators, Targets, and Methodologies

In the NAP, monitoring processes are broadly outlined and defined in terms of planning, doing, checking, and acting (Government of Peru, 2021a, p. 294). MEL is conceptualized in four phases: analysis (establishment of indicators and identification of current platforms and related systems); design (logical and physical design); development (programming, software creation, and capacity building); and implementation. The first phase was completed in 2021; the second and third phases are ongoing; and MINAM intends to complete the last phase by 2025.

The NDC (aligned with the NAP) outlines 92 specific adaptation measures, with some defined indicators. Overall, there are 13 strategic actions, 46 products, and 84 adaptation measures connected with 152 indicators. These indicators are associated with targets and are framed as a link between monitoring and evaluation. Links between inputs, measures, and product and impact indicators are outlined. Impact indicators are intended to measure effectiveness, and product indicators are intended to measure results.

A5.2.3 GESI Considerations

These indicators include the incorporation of social aspects, such as gender and intercultural and intergenerational concerns. This is measured, for example, by the percentage of adaptation measures that close identified gender gaps or that support Traditional Knowledge. An online system to be used for reporting information on indicators and targets is currently under development and being piloted with two ministries. There is no evidence of the implementation of GESI considerations in the MEL systems' indicators or data disaggregation at this time.

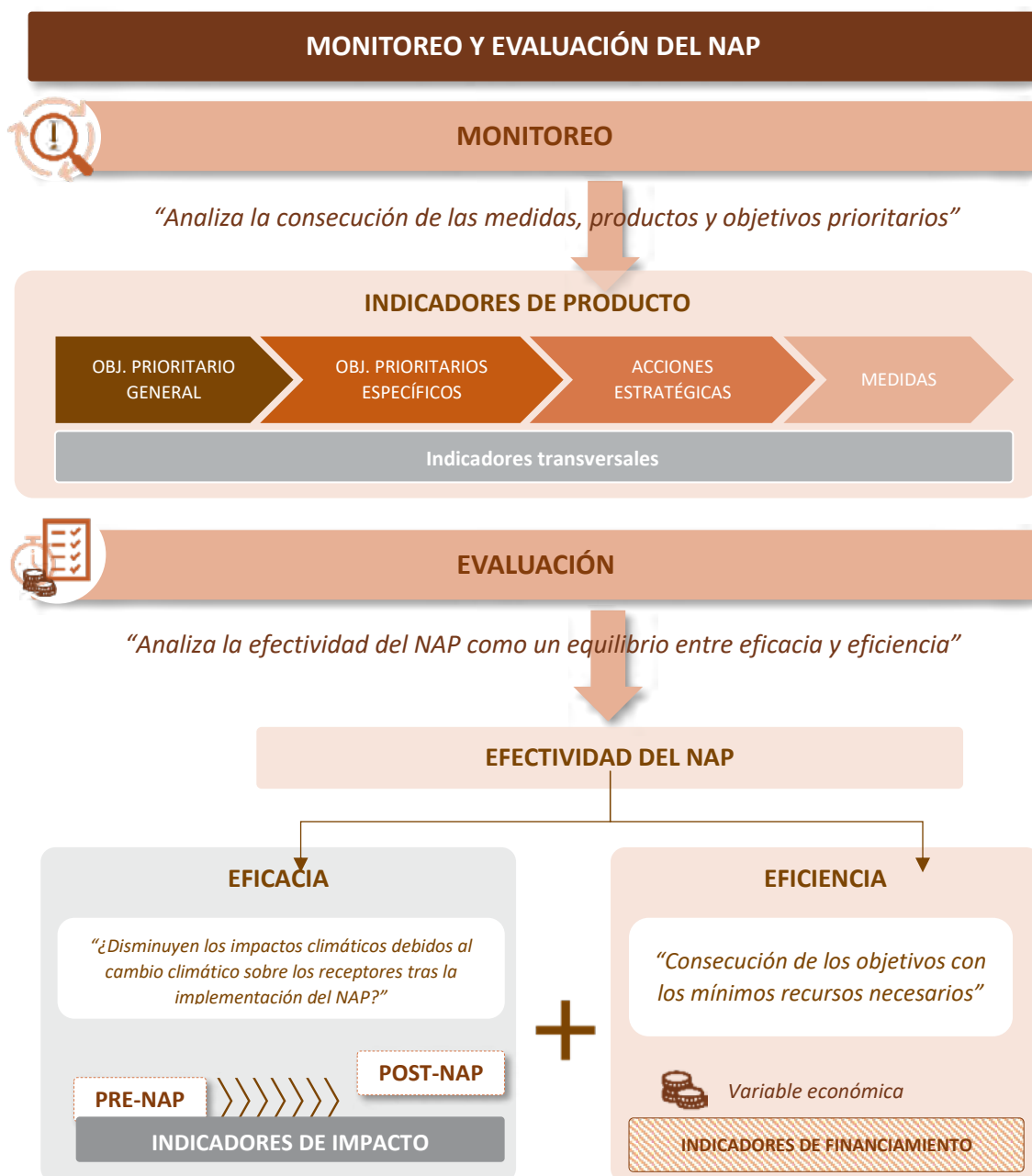
A5.3 Monitoring

Given that the MEL system is still under development, systematic monitoring has not yet been implemented. However, ministries and regional governments have reported on the progress of adaptation measures in 2021 and 2022 through sheets prepared by MINAM. A summary of this information was delivered to Congress. Within the NAP, monitoring is framed as monitoring adaptation actions and NAP processes. Like the overall MEL system, monitoring is coordinated by the MINAM, and monitoring activities will be conducted by climate-relevant sectors, sub-national governments, and non-state actors. In the NAP, monitoring is framed primarily through product indicators and “indicators of results,” which are built by adaptation measure indicators. Monitoring is also framed to track resource and financial efficiency. Monitoring processes and their relationships with other aspects of MEL are illustrated in Figure A6.

It is noteworthy that Peru has submitted three National Communications to the UNFCCC. NC3 highlights progress in the implementation of adaptation actions. This assessment is organized by national and selected sectoral adaptation objectives. In 2024, Peru is planning to submit its fourth National Communication as well as an AdCom, which will include the whole progress on M&E, as well as progress and needs on adaptation.



Figure A6. The MEL system for the NAP



Source: Government of Peru, 2021a, p. 291 (reprinted with permission).

A5.4 Evaluation

Like with monitoring, evaluation has not yet happened because the MEL system is still under development. There have been no progress reports or reviews on evaluation. However, as outlined in the NAP, evaluation is meant to assess the NAP, as well as adaptation actions, directly. Evaluation aims to analyze the effectiveness of NAP, striking a balance between efficiency and effectiveness (see Government of Peru, 2021a, p. 296). In 2024, MINAM is planning to launch guidelines for MEL for adaptation.



A5.5 Learning

Given the current stage of the MEL system, there is not yet evidence of how lessons from adaptation assessments have been integrated into policy decisions and planning. However, the official interviewed for this project stated that reports will likely be yearly and that efforts will be made to make work more systematic, helping to create the conditions for learning. Further, in line with the five aforementioned modules, learning through continuous feedback is ideally implicit. The interviewee was optimistic about the future of the MEL system, and they specifically spoke about how they have considered learning to be an integral part of their work.

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A6 National MEL System for Adaptation in Somalia

A6.1 Policy Context

A6.1.1 Background and Status

Currently, there is no MEL system for adaptation in Somalia, and the country's NAP remains under development. There is also no legal framework to guide the design and operationalization of a MEL system. Nevertheless, there is a notable and relevant basis for broader M&E in the country, although not specific to adaptation. Such work is situated within the Department of Monitoring and Evaluation, in the Ministry of Planning, Investment and Economic Development (MoPIED). This department monitors work conducted by the government and non-governmental partners, primarily focusing on development-focused projects. This M&E framework was adopted in 2018, though it has since been strengthened following the release of the country's second National Development Plan in 2020. In 2023, the MoPIED published the National Integrated Monitoring and Evaluation Framework.

This framework details indicators and methodologies for M&E, including how national-level ministries, sub-national states, and other government agencies will participate in the system. The system's level of substantive implementation is unclear; it seems to be nascent but is hampered by capacity limitations (UNDP, 2021). However, this system could help to establish an adaptation-focused MEL system, which could be complementary to or build on this existing M&E system (Federal Government of Somalia, 2022a, pp. 32–33). Overall, though, there are barriers to such work in the country, including relatively weak government institutions, as well as historical and ongoing conflict. Further, personnel and funding resources are scarce for this work.

The need for a MEL system for adaptation is noted in Somalia's 2013 National Adaptation Programme of Action and 2022 AdCom, though neither document offers much detail. Also published in 2022, the country's NAP framework document describes in more depth the need for MEL for adaptation, suggesting, for example, the need to develop indicators and create an iterative MEL process. Created by Somalia's former Directorate of Environment and Climate Change, the NAP framework was supported by the NAP Global Network with funding from the international development offices of Canada, Germany, Ireland, the United Kingdom, and the United States.

There are ongoing efforts to create more cohesive adaptation plans in Somalia, as well as a national-level adaptation-focused MEL system. For the ongoing development of Somalia's NAP, the Green Climate Fund has committed to fund the country's NAP Readiness Project, with the UNDP serving as the implementing partner. As part of this work, a consultant has been working specifically on developing a MEL system that will be part of the NAP. The NAP is expected to be released in 2024.

A6.1.2 Key Actors in Somalia's MEL System for Adaptation

Once developed, Somalia's MEL system will be housed within the Ministry of Environment and Climate Change. This ministry is quite new—it was established in late 2022, replacing the Directorate of Environment and Climate Change mentioned above. Beyond this, the



institutional structure of MEL is not clear, though other climate-relevant ministries will likely be involved (including those focused on planning and finance). Once implemented, the MEL system for adaptation will ideally involve vertical linkages, collecting information from both national-level ministries and sub-national states (Federal Government of Somalia, 2022b).

A6.2 Approaches to MEL for Adaptation

A6.2.1 Links With Adaptation Plans and IVRAs

There have not yet been any climate risk or vulnerability assessments conducted, though such an assessment might be included in the NAP. Somalia's NDC outlines a set of proposed sectoral adaptation actions, but there is no corresponding monitoring framework. As such, it remains to be seen whether there will be clear linkages between climate risk assessments, adaptation planning, and MEL.

A6.2.2 Indicators, Targets, and Methodologies

No indicators have been developed for MEL for adaptation, though it is noted in the NAP framework that indicators will need to be created early in the NAP planning process. Targets and methodologies are also not yet clear. There is limited guidance in the NAP framework on how those indicators might be chosen. How certain social factors, such as gender, might be present in indicators is not yet clear. The National Integrated Monitoring and Evaluation Framework does, however, include indicators on gender, which might be reflected in the MEL system for adaptation, and the AdCom notes the need for adaptation that is gender responsive and inclusive (Federal Government of Somalia, 2022a, p. 33–34). Respondents interviewed as part of this study noted the need to consider peacebuilding in MEL for adaptation processes.

A6.2.3 GESI Considerations

There is no evidence of the implementation of GESI considerations in the MEL systems' indicators or data disaggregation at this time.

A6.3 Monitoring

While there has been some piecemeal monitoring as part of individual adaptation projects, no monitoring yet exists as part of a national-level system. However, Somalia's 2022 AdCom describes progress on adaptation. The document notes ideal aspects of monitoring, including the establishment of an accessible online system for reporting adaptation action. The NAP framework also emphasizes the need for an online reporting system, and the document describes how a prototype database has been developed through support from the Global Water Partnership. However, the system will need to be further developed before it can be used by "sector agencies, state-level agencies, and other government stakeholders as well as the public" (Federal Government of Somalia, 2022a, p. 32).

The existing M&E system within the MoPIED could prove to be a useful platform for MEL for adaptation, though that existing system suffers from a lack of reliable data and baselines as well as "[w]eakly aligned goals, indicators and targets" (UNDP, 2022b).



A6.4 Evaluation

Like with monitoring, how evaluation might occur as part of a national MEL for adaptation system is yet unclear, though the need for evaluation is noted in the NAP framework and AdCom.

A6.5 Learning

There has not yet been any opportunity for learning to occur, and it is not clear what form learning might take once the MEL system is established.

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A7 National MEL System for Adaptation in Tonga

A7.1 Policy Context

A7.1.1 Background and Status

Tonga has a MEL system for adaptation in place, which has evolved simultaneously with adaptation planning. The first Joint National Action Plan on Climate Change and Disaster Risk Management (JNAP) was published in 2010 and did not include an MEL framework. This was identified as a priority for the second JNAP (JNAP 2), which was published in 2018 and designed to function through to 2028. JNAP 2 includes a short section on MEL (Government of Tonga, 2019, p. 48) and describes the need to design and implement a MEL system early in the JNAP 2 implementation process, hire a dedicated MEL officer, and publish two progress reports as well as annual reviews. While these plans are described in JNAP 2, there is no legal mandate for MEL for adaptation in Tonga.

In 2019, the Department of Climate Change, within which the JNAP Secretariat is housed, released two documents building on the need for MEL mentioned in JNAP 2: the *Monitoring and Evaluation System Guide (M&E System Guide)* and the *Monitoring and Evaluation System Standard Operating Procedure (SOP)*, both developed through the United States Agency for International Development Climate Ready Project. The System Guide provides a high-level overview of the MEL system in Tonga, including connections with regional and international goals such as the Sustainable Development Goals and the Paris Agreement. It also briefly describes the MEL system's indicators and methods. The SOP goes into more detail, discussing how MEL should be operationalized, the governance structure for the MEL system, the types and roles of indicators, where data will be sourced, and how information will be analyzed (Government of Tonga, 2019). Support for the development of MEL for adaptation in Tonga came through USAID, GIZ, and the NAP Global Network.

MEL activities began following the publication of the *M&E System Guide* and *SOP*. The JNAP Secretariat began working with relevant national-level ministries and the National Planning Division (NPD) to collect data necessary to monitor adaptation and produce the first JNAP 2 progress report and review described in JNAP 2. Data was to be collected from ministries every quarter. However, this monitoring work only occurred for two cycles before the COVID-19 pandemic interrupted work and paused all MEL activities. Currently, the JNAP Secretariat is beginning to restart monitoring efforts. Staff within the JNAP Secretariat are planning workshops for relevant ministries to reintroduce the need for MEL for adaptation and explain how work will be restarted. However, staff turnover, limited resources, and the never-filled MEL officer position have meant that progress on MEL is slow (Government of Tonga, 2018).

A7.1.2 Key Actors in Tonga's MEL System for Adaptation

MEL is a task of the JNAP Secretariat, situated in the Department of Climate Change, within the Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change, and Communication. As noted previously, JNAP 2 describes the need for a



MEL officer, though this position has never been filled. Instead, work to date has been carried out by two to three people within the JNAP Secretariat, all of whom also have other primary responsibilities. Funding is precarious, and the positions of the overall M&E officers are not institutionalized within the Tongan government; rather, these positions are funded through international donors.

The MEL system is relatively flat, with little vertical integration beyond the national level. This reflects Tonga's small population and government. While there is some level of sub-national governance in Tonga, most processes occur at the national level. The JNAP Secretariat primarily works with national-level government entities on monitoring, carrying out this work with the NPD, as described above. The JNAP Secretariat collects data from 22 focal points in 11 climate-relevant ministries. There is limited coordination with private sector and non-governmental bodies such as the Chamber of Commerce and Industry as well as NGOs, though it is not clear if any data is collected from them. Given the small size of the country and government, horizontal linkages between ministries and sectors are informal, though straightforward.

Tonga's MEL system is top-down in the sense that plans and directives for MEL come from the JNAP Secretariat. It is not clear if much collaboration went into developing MEL objectives or how future changes to the MEL system might be collaboratively informed. Outputs, such as the JNAP 2 progress report, are publicly available, as are documents such as the *M&E System Guide* and *SOP*, indicating transparency. The *SOP* also notes that some outputs should be specifically geared toward the public and local communities (Government of Tonga, 2019), though it is not clear if such publications have been produced.

The role of marginalized groups in the MEL process is not clear. Gender is mentioned as a consideration in JNAP 2, and some indicators incorporate gender as outlined in the *M&E System Guide* and *SOP*. The JNAP 2 progress report notes a need for increased focus on gender and other forms of social inclusion (Government of Tonga, 2021, p. 25).

A7.2 Approaches to MEL for Adaptation

A7.2.1 Links With Adaptation Plans and IVRAs

It is not clear how climate risk or vulnerability assessments inform MEL for adaptation in Tonga. JNAP 2 notes the need for a climate risk assessment, and some sector-specific assessments have been conducted. However, it is not clear how these or a broader assessment might inform monitoring or MEL more broadly.

A7.2.2 Indicators, Targets, and Methodologies

The NPD is an important partner for the JNAP Secretariat in monitoring adaptation efforts. Building on a pre-existing monitoring system for other government functions, the JNAP Secretariat has been able to add a questionnaire to the existing questionnaire distributed by the NPD. These questionnaires are administered by the NPD, and the JNAP Secretariat then receives responses to their questionnaires directly from the NPD.



As previously stated, the MEL system's primary outputs will be two JNAP progress reports over the 10-year implementation period of JNAP 2 with additional annual reviews. Originally, the JNAP Secretariat planned to collect data for the system every quarter, though it has now been agreed that the frequency was too high. The JNAP Secretariat is now planning on collecting data twice per year.

Implementation of the MEL system is defined along six themes: cooperation, financing, resilience-building action, capacity development, knowledge management, and mainstreaming. There are 22 resilience targets, divided into 25 sub-objectives and 92 activities. While JNAP 2 suggests some engagement with non-governmental entities and communities for collecting data, in practice, data collection seems limited to questionnaires distributed to climate-relevant ministries. As previously stated, 11 ministries and 22 focal points contribute to this process.

MEL work in Tonga has, in practice, focused primarily on process indicators to understand whether the 92 activities identified in JNAP 2 are occurring (in terms of full, partial, or non-implementation). Outcome indicators have not yet been established, in part because baseline data is lacking. While there is interest within the JNAP Secretariat in establishing outcome indicators, these do not seem to have evolved since the *M&E System Guide* and *SOP* were published in 2019, shortly after which MEL efforts were paused due to the COVID-19 pandemic.

A7.2.3 GESI Considerations in Methods

Some attention is given to gender and social inclusion in the JNAP 2 progress report. It captures a specific target on “Gender and Social Inclusivity” under its plan, with 10 associated activities. It states the objective to include gender-disaggregated community data as part of geospatial assessments and mentions gender analysis as part of priorities in knowledge management in the JNAP 2's MEL system. There is no further evidence of the implementation of GESI considerations in the MEL systems' approaches and methodologies at this time.

A7.3 Monitoring

Two cycles of data for the MEL system for adaptation were reported to the JNAP Secretariat by the NPD between the publication of the *M&E System Guide* and *SOP* in 2019 and the onset of the COVID-19 pandemic in 2020. This was used to create the JNAP 2 progress report in 2021. To develop this report, the JNAP Secretariat, through the NPD, circulated a questionnaire to ministries assigned specific activities for the implementation of JNAP 2. The questionnaire covered the following key questions as outlined in the JNAP 2 progress report (Government of Tonga, 2021, p. 3):

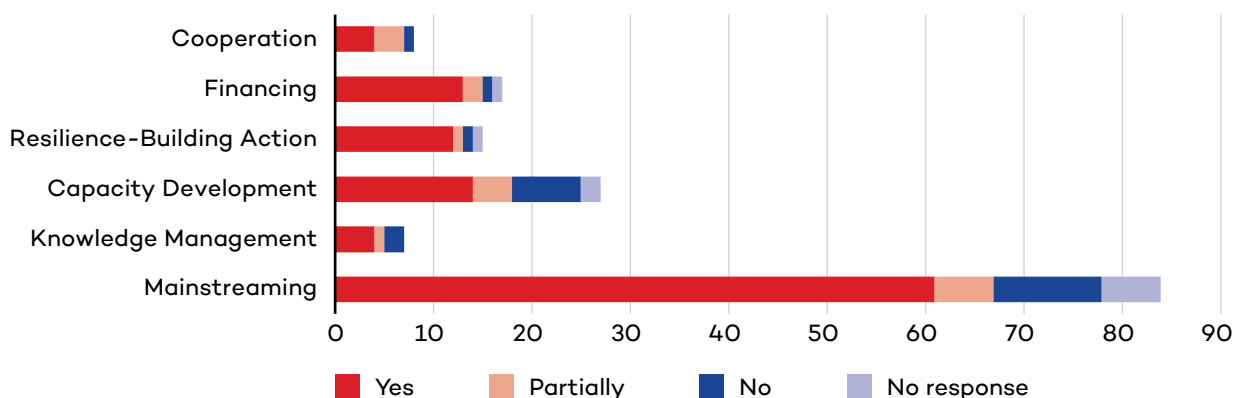
- To what extent have JNAP 2 activities been integrated into the ministry's corporate planning and reporting process?
- What progress has been made in activity implementation in the last 3 months?
- What is the implementation status of all JNAP 2 activities?
- What capacity issues need to be addressed to facilitate the implementation of JNAP 2 activities in the next 3 months?



- What lessons and opportunities can be drawn from this reporting period?

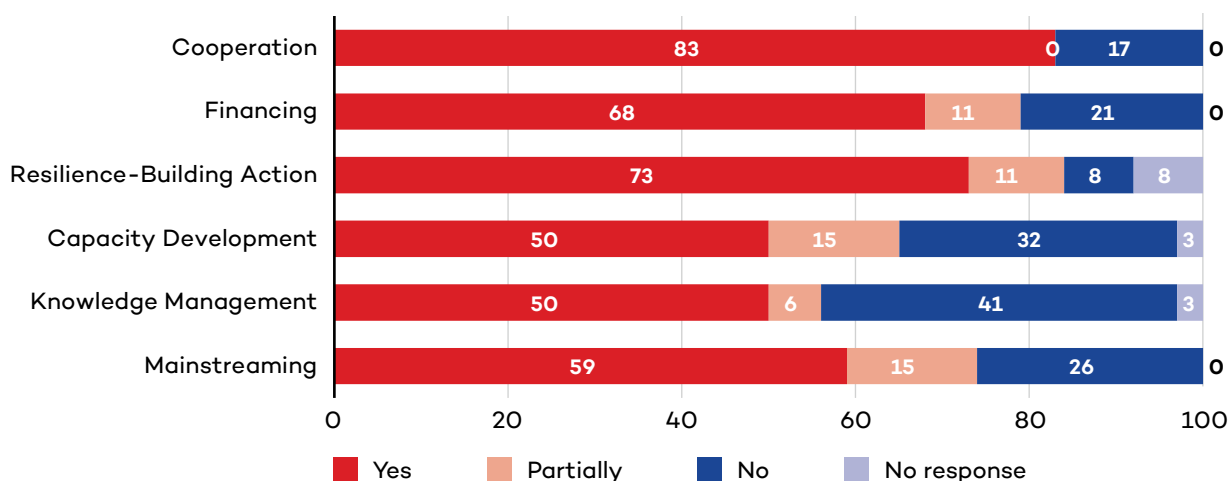
The JNAP Secretariat then collated and analyzed responses to these questions. As shown in Figures A7 and A8, monitoring aimed to assess the implementation status of JNAP 2 activities based on three-scale criteria.

Figure A7. Progress in integrating JNAP 2 activities into the ministry’s corporate planning and reporting process (theme 1)



Source: Government of Tonga, 2021, p. 10 (reprinted with permission).

Figure A8. Percentage of progress in JNAP 2 activities in the past three months by objective



Source: Government of Tonga, 2021, p. 12 (reprinted with permission).

Tonga has also submitted three National Communications to the UNFCCC. The third (NC3) details overall vulnerability across the country, as well as sector-specific vulnerabilities. It then outlines the adaptation actions and programs implemented during the reporting period and adaptation options to support continuous responses to climate action.



A7.4 Evaluation

While the JNAP 2 progress report and NC3 evaluate the extent to which targets and activities have been implemented, they do not provide information on evaluating the effectiveness or adequacy of efforts to reduce climate risks.

A7.5 Learning

The JNAP 2 progress report and NC3 provide forward-facing suggestions and recommendations.

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A8 National MEL System for Adaptation in the United Kingdom

A8.1 Policy Context

A8.1.1 Background and Status

Section 59 of the Climate Change Act (2008) obliges the Climate Change Committee (CCC), an independent advisory body, to prepare reports on the progress made in the implementation of the United Kingdom's NAP. The act also establishes the Adaptation Reporting Power (ARP) through which the Department for Environment, Food and Rural Affairs (Defra) Secretary of State can direct public and statutory organizations to prepare reports detailing the current and projected impacts of climate change relevant to their area of jurisdiction, proposals for adapting to climate change, and progress toward implementing the policies and proposals set out in previous reporting periods (Department for Environment, Food and Rural Affairs 2023b, p. 127). The Climate Change Acts of Northern Ireland (2022), Scotland (2009), and the Environment Act (2016) of Wales also provide a legal framework for adaptation planning and progress monitoring as a devolved function. These acts require the establishment of adaptation programs in these jurisdictions and mandate the CCC to assess implementation progress.

To operationalize the provisions of these Acts of Parliament, the CCC has established an Adaptation Monitoring Framework. The framework outlines the rationale for tracking adaptation, the approach, including the assessment criteria, and a roadmap for improving adaptation tracking in the United Kingdom. Defra has also taken measures to guide reporting from relevant public organizations, including organizing consultations to inform the scope and approach to adaptation reporting. Generally, the MEL system in the United Kingdom aims to enhance the understanding of the level of preparedness of key sectors to adapt to climate change and support the mainstreaming of climate risk management into the activities of reporting organizations (CCC, 2023b; Defra, 2023b). As described during the KIIs conducted for this study and as is evident in the various progress reports, the approach to MEL for adaptation is based on a periodic assessment of adaptation by tracking policies and plans in place, finance, and activities undertaken by relevant public agencies and departments during the assessment period, as well as laying a roadmap for further adaptation efforts.

A8.1.2 The Evolution of the United Kingdom's MEL System for Adaptation

The evolution of the MEL system is informed by recommendations from the CCC based on its experience with tracking adaptation progress and by feedback from public consultations, which are led by Defra. As such, the MEL system for adaptation has evolved, especially concerning the scope, approach to adaptation tracking, frequency, and enforcement of the legal requirements to report. This ensures fitness for purpose and alignment with the capacities and priorities of the country (Defra, 2023b).

The CCC published its first assessment of adaptation progress in 2010. Since then, the MEL has shifted from risk assessment and planning to an assessment of progress toward predefined



outcomes (CCC, 2023a, 2023b). The CCC has also increasingly consolidated its framework for assessing adaptation progress, including efforts to better integrate indicators.

Within the ARP, in preparation for the fourth assessment cycle, Defra launched a consultation process in 2023 to get feedback on proposed changes in the reporting arrangements. The consultation process, which was open to all members of the public and government organizations, was facilitated through an online portal, and some responses were received via email. The responses and analysis were organized around 33 questions covering topics such as agreement with the objectives and principles of the fourth cycle of reporting, reporting requirements, alignment with other reporting requirements, reporting approach and scope, and cross-cutting and cascading risks (Defra, 2023a). The recommendations from this consultation informed the strategy for the fourth cycle of adaptation reporting, which will end in 2024. Similar to the previous cycles, the fourth reporting cycle will remain voluntary, with plans to make it obligatory for sectoral organizations to report on adaptation in the fifth cycle (Defra, 2023b).

A8.1.3 Key Actors in the United Kingdom's MEL System

Two primary mechanisms make up the MEL system for adaptation in the United Kingdom.

The first is the sectoral monitoring of adaptation efforts led by Defra. Defra is responsible for coordinating adaptation planning and MEL for adaptation through the ARP, which operates on a 5-year cycle. Relevant public organizations are responsible for assessing adaptation and reporting to Defra. These organizations include road and rail organizations, harbour authorities, water companies, energy generators, and public bodies, such as the Environment Agency and Forestry Commission, among others (Defra, 2021). Vertical integration within sectors depends on how the sector is structured. Currently, local authorities are not required to report. However, in the fourth reporting cycle, through the ARP, Defra plans to enhance engagement with local authorities in adaptation reporting (Defra, 2023b, p. 136). It plans to co-design a piloting process where 35 local authorities cognizant of the existing risk management practices and responsibilities will be invited to report. The pilot will be reviewed at the end of 2024 to determine the inclusion of local authorities in subsequent adaptation reporting cycles. This plan aligns with the 2023 adaptation progress report recommendation to include local authorities in adaptation reporting. Consideration of aspects such as gender and social inclusion depends on the priorities of the particular department or devolved unit.

The CCC leads the second mechanism. It conducts an overall assessment of the extent to which the government is meeting the priorities set out in the NAP using data from various government agencies and departments. These assessments follow a 2-year cycle, and the reports are presented to Parliament. To undertake a national assessment of adaptation progress, the CCC consolidates evidence of adaptation actions and results for each thematic area. This data comes from organizations that are mandated to implement NAP actions, including those in the energy, water, transport, health, heritage, environment, and financial sectors. For instance, the Environment Agency, the Geospatial Commission, the Meteorology Office, and National Highways monitor risks such as floods and drought. Defra, the Animal and Plant Health Agency, and the Centre for Environment, Fisheries and Aquaculture Science are responsible for providing information on species populations, while the Department of



Transport monitors the effects of climate change on ports. The CCC then analyzes data from all the relevant organizations to provide a detailed account of progress in each thematic area and the overall national progress. Since the assessment under this mechanism is limited to the NAP, the consideration of particular aspects, such as gender inclusion, is contingent upon their inclusion in the NAP priorities.

A8.2 Approaches to MEL for Adaptation

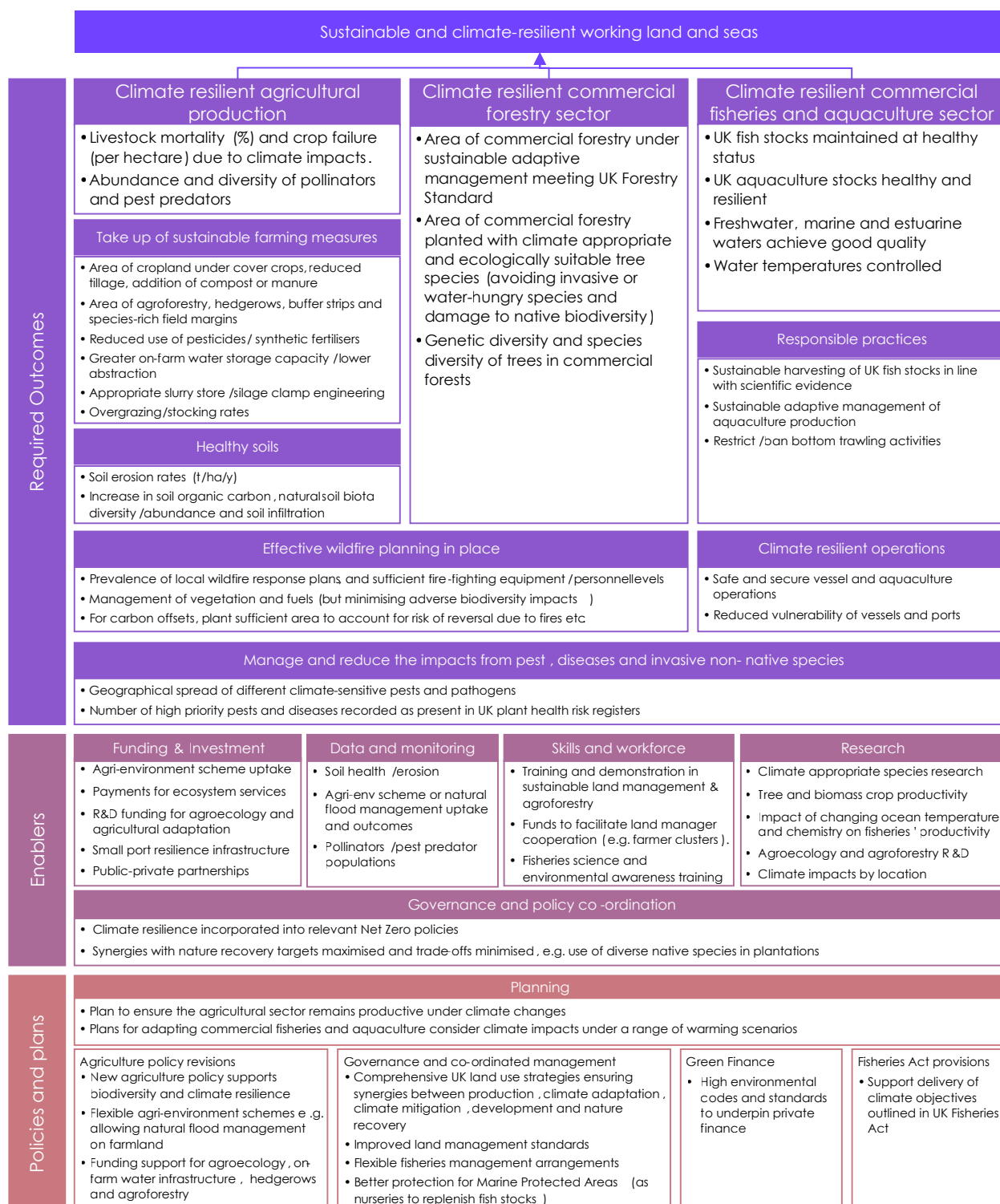
A8.2.1 Links With Adaptation Plans and IVRAs

Adaptation and assessment of adaptation progress in the United Kingdom are anchored in climate change risk assessments (CCRAs), and the corresponding priority actions are articulated in the NAP. CCRAs consider the level of risk and if it is being managed. They also establish if there is a need to prioritize particular risks during the subsequent 5-year NAP. As such, CCRAs help to prioritize risks based on urgency, while MEL contributes to a better understanding of how those risks are managed. CCRAs are conducted every 5 years. The first CCRA was conducted in 2012, and the corresponding NAP was established in 2013. The second cycle started with a climate risk assessment in 2016 and the adoption of a second NAP in 2018. The third CCRA was conducted in 2022, and the third NAP was published in 2023. A fourth CCRA is planned for 2027, with the adoption of a fourth NAP in 2028.

Currently, the CCC uses “monitoring maps” to assess adaptation progress. Akin to Theories of Change, these monitoring maps articulate the contextual priority actions and plans, enablers, desired outcomes, and the overarching adaptation goal (Figure A9). In line with the sectoral approach to adaptation planning, implementation and tracking, each thematic area for adaptation has a defined monitoring map.



Figure A9. “Monitoring map” for the working land and seas thematic area



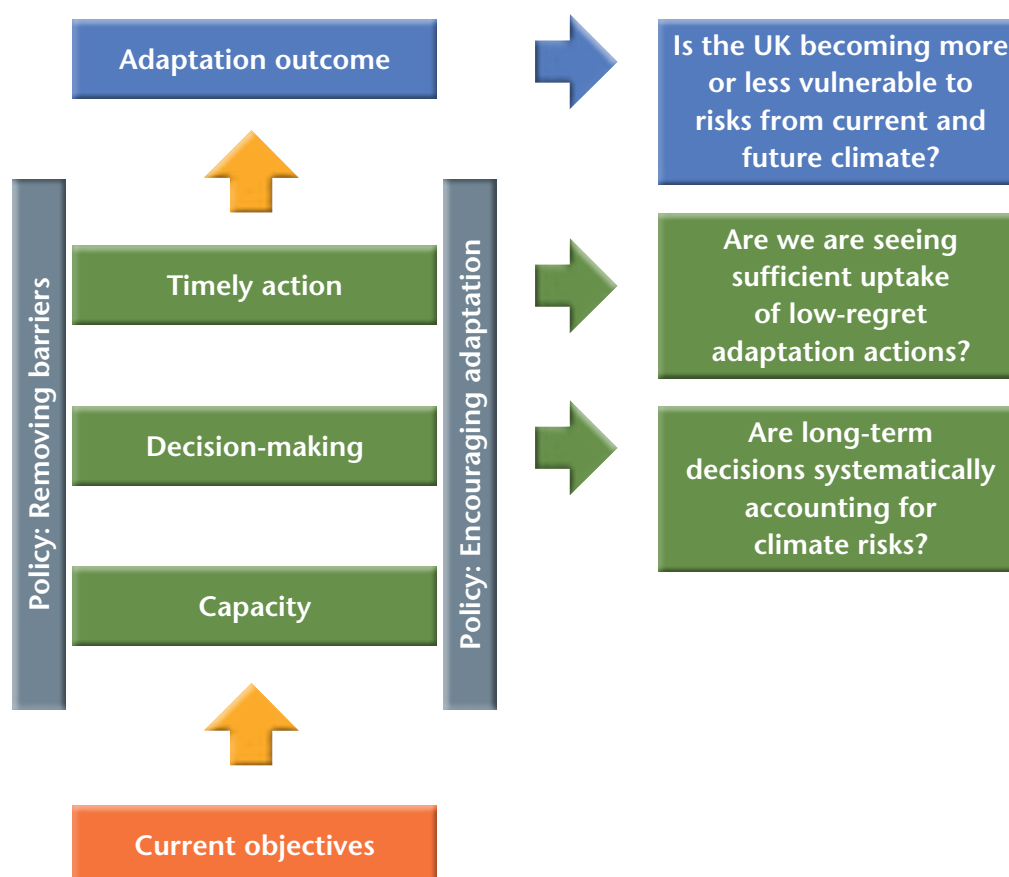
Source: CCC, 2023b (reprinted with permission).

In 2010 and 2012, the CCC’s assessment of adaptation progress was based on a “preparedness ladder” (Figure A10) that considered the desired adaptation outcomes and



actions to achieve the outcomes, including efforts to remove barriers to adaptation, improve adaptive capacities, structured decision making, and policy to support adaptation.

Figure A10. Preparedness ladder



Source: Climate Change Committee—Adaptation sub-committee, 2011 (reprinted with permission).

A8.2.2 Indicators, Targets, and Methodologies

To standardize reporting, Defra provides templates through which relevant sectoral organizations provide information. The templates allow organizations to provide information on their corporate governance and risk profile, as well as measures to address the identified risks. The templates are not prescriptive but are instead guidelines showing the minimum amount of information to be reported, thus giving organizations flexibility in the format they use to provide information.

The CCC uses a suite of indicators to assess adaptation. As described during one of the KIIs conducted for this study, the indicators fall into four categories:

- risk-based indicators that monitor hazards and how they change (e.g., droughts and storms);
- indicators of exposure to climate change (e.g., the number of houses built in floodplains, the number of people susceptible to temperature changes in the future);



- indicators of adaptation actions that capture efforts made to limit exposure (e.g., insurance for houses in flood plains), funding and capacity building, as well as output indicators that assess immediate results (e.g., extent of coastline rehabilitated); and
- impact indicators that monitor the effectiveness of actions.

The 2021 updated list of indicators shows that there are 132 indicators. Some of these are proxy indicators, as they were selected based on data availability from relevant organizations. Examples of such indicators include biodiversity indicators monitored by Defra. A second source of indicators is the in-house indicators developed with expertise from consultants for the CCC who undertake literature reviews. A third subset of indicators is developed through bespoke research designed to understand specific adaptation concerns and develop indicators. This category of indicators is more forward-looking, as the indicators focus on future risks (e.g., changes in peatlands and how they affect water security).

The analysis for the CCC's adaptation progress reports is done in-house by the central adaptation team and adaptation sector leads within the secretariat. Stakeholder interviews with government departments, agencies, and, in some cases, NGOs are conducted as part of the assessment process. Excerpts of the report are sent to government policy teams for fact-checking, but the report's findings are confidential until published. In some cases, the CCC uses findings from the reports produced under the ARP in its assessments of progress. For example, when considering whether airports are making progress on adaptation, the relevant ARP reports would be reviewed to complement other data available and provide an overall assessment.

A8.2.3 GESI Considerations

Some attention is given to gender and social inclusion within this system. It is captured, for example, in target number 17, with its 10 associated activities. There is no further evidence of the implementation of GESI considerations in the MEL systems' approaches and methodologies at this time.

A8.3 Monitoring and Evaluation

Every 5 years, Defra publishes reports on the adaptation actions of all the mandated organizations, which detail the priority risks and the efforts they are undertaking to respond. The reports from the three rounds of reporting are available online.

Every 2 years, the CCC produces a report detailing experienced and projected climatic risks and an evaluation of the adequacy of adaptation actions across the United Kingdom.

The evaluation considers each thematic area and two components: policies and plans, as well as delivery and implementation. The first component of policies and plans considers the existence of relevant policies and plans, the level of ambition, and whether there is a corresponding M&E program. Each thematic area is evaluated based on a four-point scale (Figure A11). For example, the 2023 progress report flags agriculture as one of the key sectors without an adaptation strategy.



The second component, on delivery and implementation, uses indicators to assess progress toward the outcomes identified in the monitoring map of each adaptation thematic area. For this component, the CCC draws on datasets collected by different government agencies to get a comprehensive picture of progress across the United Kingdom (CCC, 2023b). Evaluation of this component is based on four criteria, depending on data availability (Figure A12).

Figure A11. Scoring criteria for policies and plans

Score	Criteria
Credible policies and plans	<p>Policy milestones:</p> <ul style="list-style-type: none"> • are almost entirely achieved or in place • are comprehensive and appropriately ambitious • include monitoring and evaluation
Partial policies and plans	<p>Policy milestones:</p> <ul style="list-style-type: none"> • are achieved or in place for key milestones but some gaps remain • cover most important elements, could be more ambitious • include some monitoring and evaluation
Limited policies and plans	<p>Policy milestones:</p> <ul style="list-style-type: none"> • are partially achieved or in place with some key milestones missing • cover some important elements, could be more ambitious • include some monitoring and evaluation
Insufficient policies and plans	<p>Policy milestones:</p> <ul style="list-style-type: none"> • are mostly not achieved, only minor policies in place • lack important elements, do not cover key areas or lack ambition • have minimal monitoring and evaluation

Source: CCC, 2023b (reprinted with permission).

The CCC synthesizes observations on these two components to provide an overall evaluation of each thematic area. Figure A13 provides an example of the water supply sector. Progress across the thematic areas informs the CCC’s conclusion on the overall adequacy of adaptation efforts in the United Kingdom.



Figure A12. Scoring criteria for delivery and implementation

Score	Criteria
Good progress	Indicators are moving in the right direction or being maintained at a high level
Mixed progress	Some indicators are moving in the right direction, others are stagnant at a low level or moving in the wrong direction
Insignificant progress	Indicators are stagnant at a low level or are moving in the wrong direction
Unable to evaluate	Limited or no available data

Source: CCC, 2023b (reprinted with permission).



Figure A13. 2023 performance summary of the water supply sector

	Delivery and implementation	Policies and plans	Summary
Outcome 1: Reduced demand	Insufficient progress	Credible policies and plans	<ul style="list-style-type: none"> Credible plans are in place to reduce demand, including new statutory targets for per capita consumption and a requirement to demonstrate resilience to a 1 in 500 year 'extreme' drought in the next round of water resource plans. New Ofwat allocation of £100 million for demand reduction in next price review, mandatory water efficiency labelling confirmed and Government's roadmap for more water efficient buildings published. Insufficient progress in reducing demand relative to targets.
Outcome 2: Improved system performance	Mixed progress	Credible policies and plans	<ul style="list-style-type: none"> New statutory Environment Act targets for leakage and water company plans are required to demonstrate resilience to flooding and coastal change. Limited progress in reducing leakage relative to targets. No large-scale interruptions to water supply due to weather have been reported, but more data is needed to better monitor this.
Outcome 3: Increased supply	Mixed progress	Limited policies and plans	<ul style="list-style-type: none"> No new reservoirs have been built in the UK in the last 30 years but new schemes are emerging. Emerging draft regional water resource plans show positive progress in more joined up planning between water companies and large water users. However, they propose few new interconnections of water resources between regions and the demand-supply gap in 2050 is bigger than previously estimated.
Outcome 4: Interdependencies identified and managed	Insufficient progress	Insufficient policies and plans	<ul style="list-style-type: none"> Adaptation Reporting Power reports demonstrate limited progress on interdependencies by some water companies but gaps in reporting remain, including on supply chain risks.
<p>Relevant risks from CCRA3: Risks to infrastructure networks (water, energy, transport, ICT) from cascading failures (I1); Risks to infrastructure services from river, surface water and groundwater flooding (I2); Risks to infrastructure services from coastal flooding and erosion (I3); Risks to subterranean and surface infrastructure from subsidence (I7); Risks to public water supplies from reduced water availability (I8); Risks to health from poor water quality and household supply interruptions (H10).</p>			

Source: CCC, 2023a, p. 114 (reprinted with permission).

A8.4 Learning

Learning appears to be a central aspect of M&E in the United Kingdom. First, under the ARP, multiple sectoral activities focus on assessments and producing evidence to inform sectoral policies and actions. Here, respective government agencies are also expected to report on adaptation progress and how they are improving their efforts. NAP3 also aims to integrate more reflection processes where officers can continuously discuss the challenges and opportunities and how to improve adaptation. Second, the adaptation policy cycle in the United Kingdom seems designed to produce evidence of risk (climate risk assessments), plan for adaptation (NAP and sectoral plan), implement, track (CCC independent assessment of



progress and sectoral monitoring), and then go back to implementation and planning. Third, the CCC produces adaptation progress reports that provide a set of recommendations for each thematic area, with a designated government agency responsible for implementation and timelines. These recommendations have been considered in the subsequent adaptation planning and implementation processes. The design of the fourth cycle of tracking adaptation also considers the recommendations from the third round and the stakeholder consultations. The subsequent progress reports also note the recommendations not addressed during the reporting period.

In addition to evaluating progress on the implementation of the NAP, the CCC proposes to establish a more systematic way of evaluating progress in implementing recommendations provided in the previous adaptation assessment cycles (CCC, 2023a, 2023b).

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A9 National MEL System for Adaptation in Vietnam

A9.1 Policy Context

A9.1.1 Background and Status

Vietnam's MEL system for adaptation is relatively new, though significant attention has been given to its development and operationalization. Overall, the system is intended to assess and analyze adaptation actions, as well as relevant plans and policies, including Vietnam's NAP. Development of the NAP began in 2018 and was approved by Vietnam's Prime Minister in 2020. The MEL system was designed in 2021 and approved by the Prime Minister in 2022 as Decision 148/QD-TTg "Promulgating the national-level climate change adaptation monitoring and evaluation system." This decision makes MEL for adaptation a legal mandate and outlines the responsibilities of various government bodies for MEL. In 2022, the *Monitoring and Evaluation Manual for Climate Change Adaptation Activities in Vietnam* (hereafter, the M&E Manual) was published by the Ministry of Natural Resources and Environment (MONRE) (Tue et al., 2023a).

Support for work on the NAP and the MEL system has come from external sources as well, including the NAP Global Network and the British and German international development offices. MEL for adaptation in Vietnam has dedicated staff and resources, indicating the institutionalization of MEL into existing governance structures. This includes staff within the Department of Climate Change (DCC) focused on MEL. In addition, other ministries and sub-national units have staff who focus on environmental tasks and are mandated to carry out MEL work.

There are also efforts to develop sectoral MEL frameworks, notably in the agriculture sector. This sectoral framework is aligned with the NAP and the Sustainable Development Goal targets and seeks to contribute to the national MEL system (FAO & UNDP, 2023). The development of the framework started with a review of existing tools and indicators followed by consultations with state and non-state stakeholders at the national and sub-national levels.

A9.1.2 Key Actors in Vietnam's MEL System

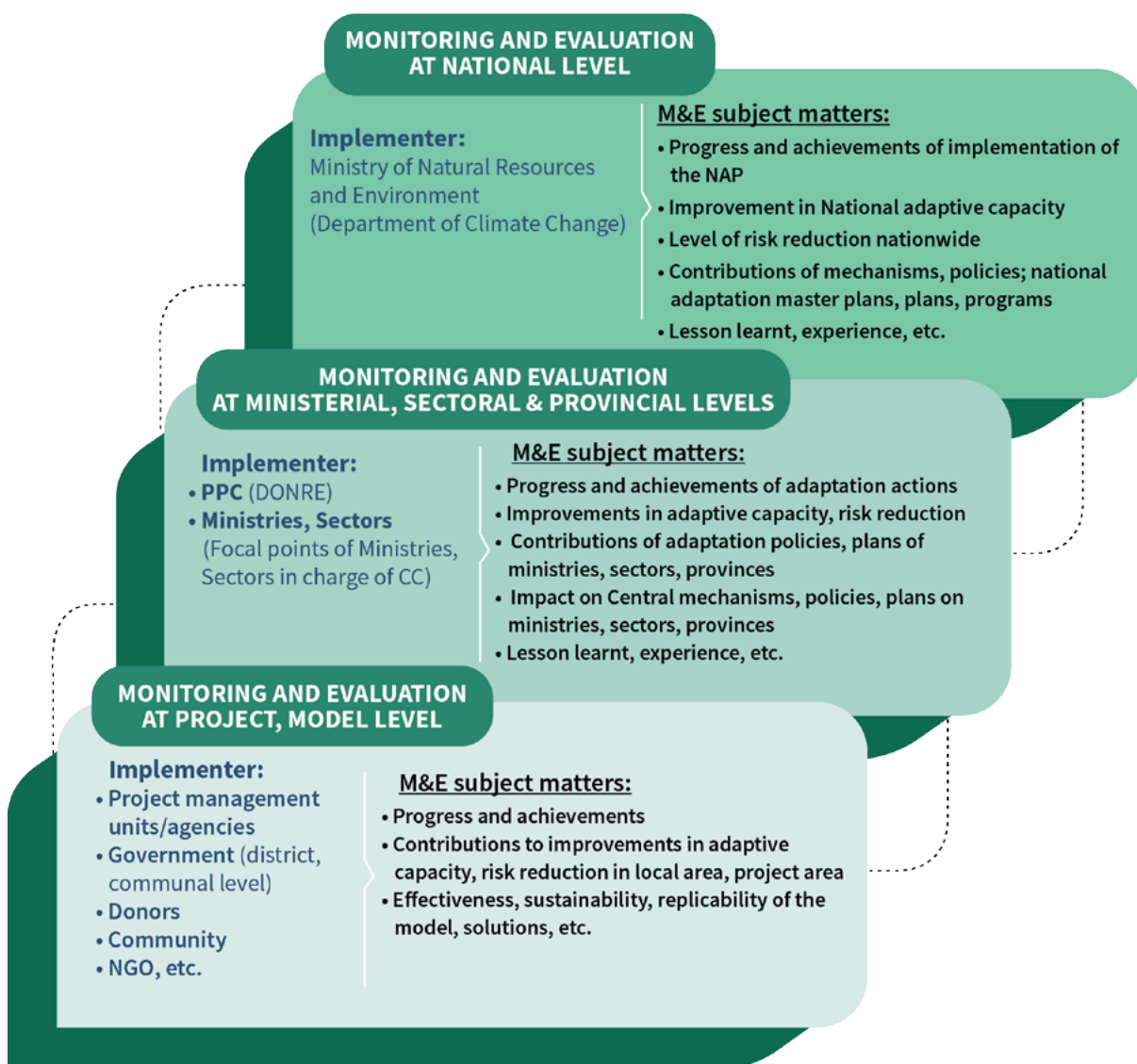
MONRE is the nodal authority for MEL in the country, as outlined in Decision 148/QD-TTg, and the DCC, positioned within the MONRE, carries out the MEL work. The DCC is tasked with collecting data from other national climate-relevant ministries, who themselves might collect data from subministerial units. Further, authorities from the country's 63 provinces—namely, People's Committees—are mandated to participate in the MEL system. Figures A14 and A15 illustrate the governance structure of the MEL system, and Figure A16 illustrates the MEL system and the relationship between in-process objectives and intended results.

Vietnam's MEL system is both top-down and bottom-up, indicating vertical integration. National governance of the system is the responsibility of the MONRE and the DCC, where objectives for the MEL system are defined. However, during the design of the MEL system, there were mechanisms for feedback from ministries and sub-national entities, and additional feedback will be collected when the first cycle of reporting ends. Climate-relevant



ministries also participated in creating indicators and were tasked with making some of their own. Engagement with non-governmental entities, including the private sector and NGOs, is limited, as is direct engagement with marginalized or particularly vulnerable populations. Horizontal and sectoral integration is weaker than vertical integration.

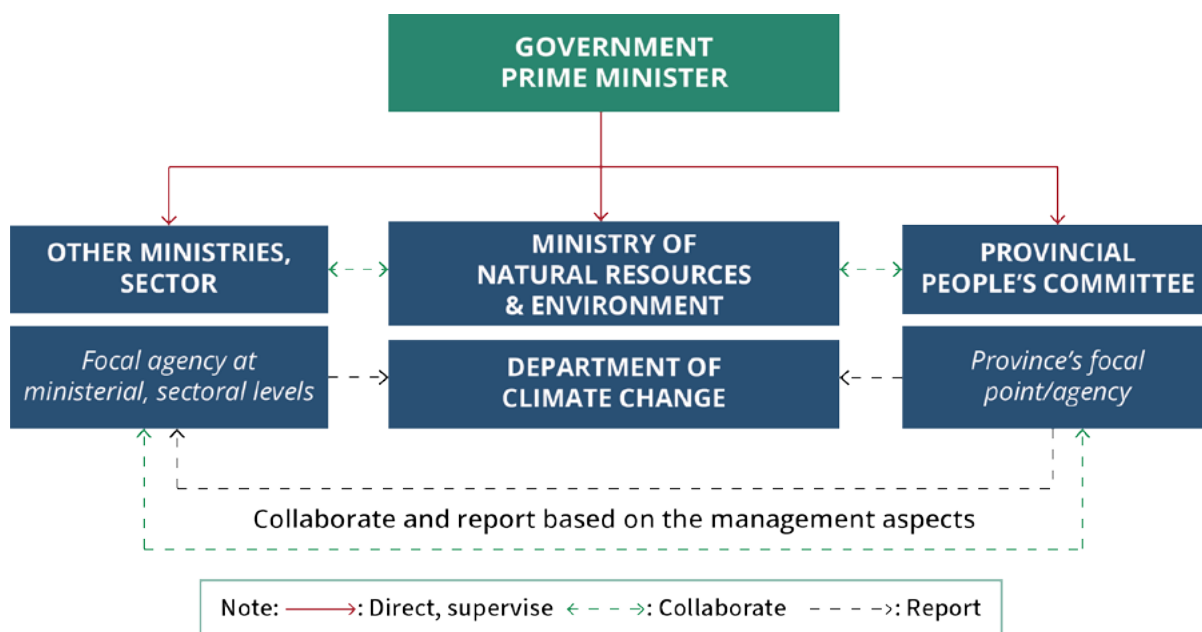
Figure A14. M&E Framework and focal points at all levels



Source: Socialist Republic of Vietnam, 2022, p. 75 (reprinted with permission).

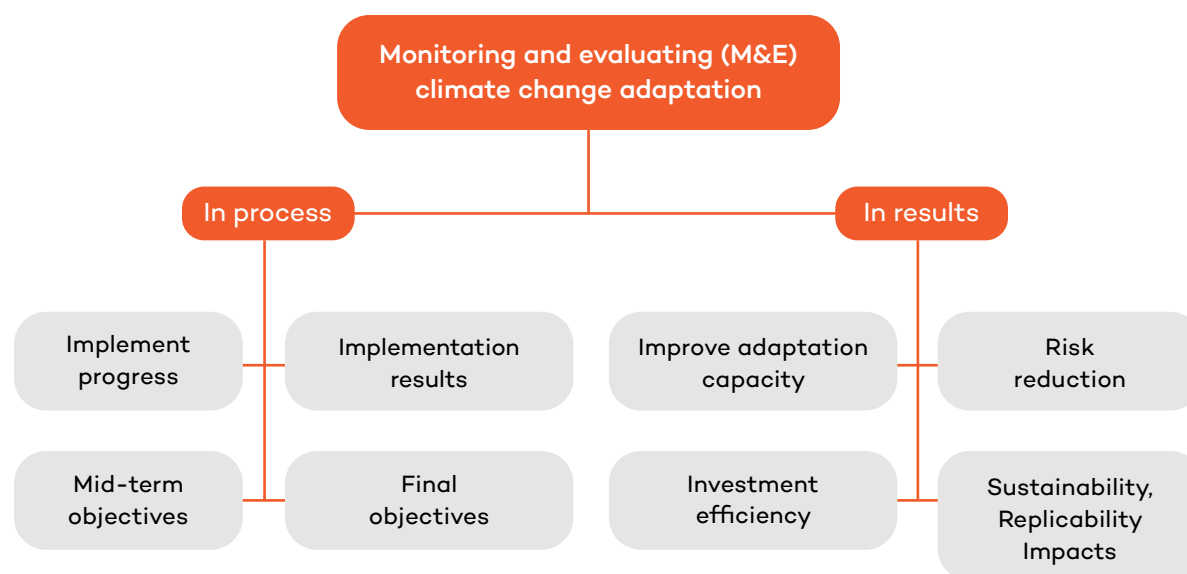


Figure A15. Diagram of M&E organization, direction, and coordination



Source: Socialist Republic of Vietnam, 2022, p. 79 (reprinted with permission).

Figure A16. Contents of the M&E of adaptation activities



Source: Tue et al., 2023a, p. 7 (reprinted with permission).

A9.2 Approaches to MEL for Adaptation

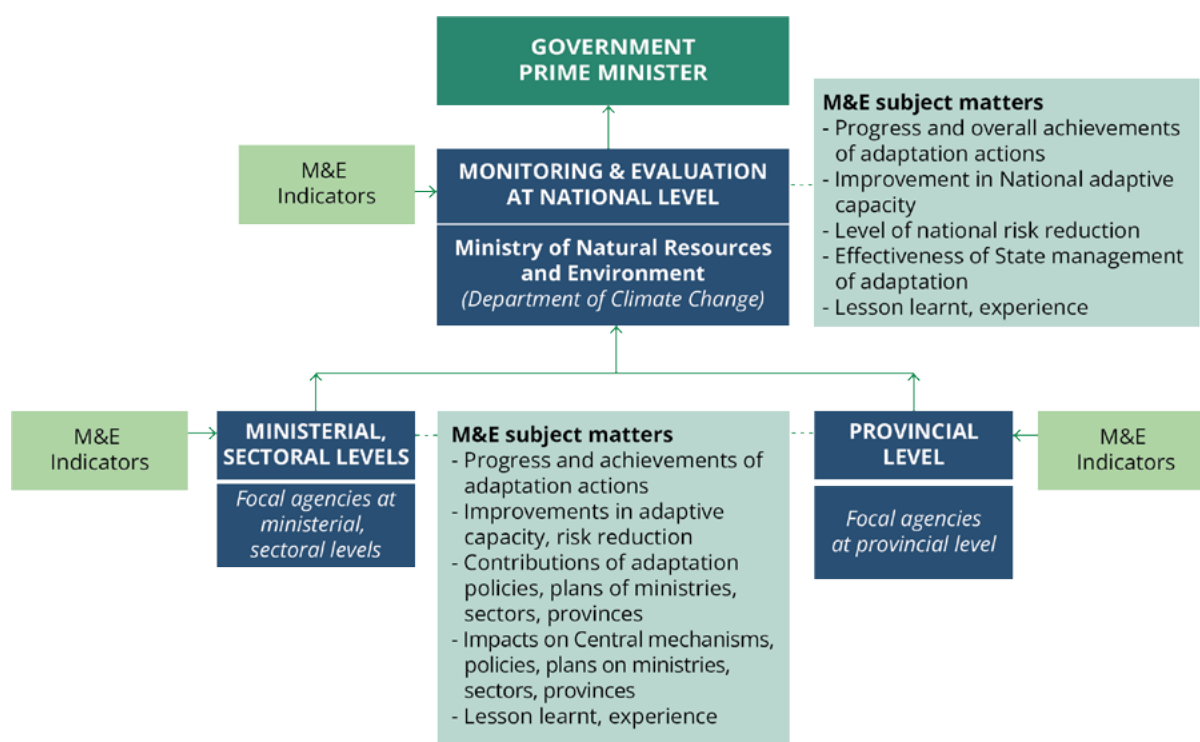
A9.2.1 Links With Adaptation Plans and IVRAs

Vietnam has an adaptation plan that articulates the country's adaptation priorities and vision. The development of the NAP was based on assessing climate trends and their impacts and



adaptation needs. This analysis formed the basis for the prioritization of tasks and solutions outlined in the NAP. This approach is further reflected in the development of the MEL framework, where the aspects to be assessed, including the indicators, are grouped by tasks and solutions for enhancing resilience and adaptive capacity, reducing natural disaster risks, and institutional interventions (Figure A17).

Figure A17. Logical framework of the national M&E system



Source: Socialist Republic of Vietnam, 2022, p. 75 (reprinted with permission).

A9.2.2 Indicators, Targets, and Methodologies

Vietnam’s NAP provides a list of indicators for assessing progress, with each indicator being mapped to a specific institute that will be in charge. In total, there are 72 indicators in six groups: government management of climate change; strengthening resilience and capacity to adapt to climate change in all fields; reducing disaster risks and minimizing damage caused by climate change; investing resources for climate change adaptation; science, technology, and international cooperation; and training and awareness raising (Tue et al., 2023a). In the *M&E Manual*, indicators are described in depth, with detail provided on the data that needs to be collected for each indicator, the methods of calculation, the reporting period, sources of data, and responsible authorities (Tue et al., 2023a). The example section from Table I1 shows how indicators and associated information are presented in that document. The *M&E Manual* also details the differences between outcome, output, process, and impact indicators. Indicators are also connected with broader targets, though this information is less detailed in the *M&E Manual*. Table A7 illustrates the role of indicators with the various authorities tasked with carrying out data collection for monitoring within Vietnam’s MEL system. The system



relies on an online platform for ministries and sub-national government bodies to report information. The *M&E Manual* outlines how to use that system.

Table A7. Guidelines for information collection and calculation for M&E indicators at the ministerial/sectoral level

STT	M&E indicator	Explanation of indicators	Data/information to be collected	Method of calculation	Reporting period	Sources of data/documents	Responsible authority
I. Government management of climate change							
1. Developing the legal framework, institutions and policies							
1.1	The Law on Climate Change to be included in the National Assembly's Law and Ordinance formulation program	Evaluation of the progress of developing the proposed Law on Climate Change according to the provisions of the Law on Legislative Promulgation	<ul style="list-style-type: none"> Current status of the contents that have been and are being implemented up to the reporting period 		Annual	Department of Climate Change	Department of Climate Change, MONRE
1.2	Number of legal documents related to climate change adaptation developed and implemented	Statistics on legal documents (decree, circular, decision, etc.) with contents related to climate change adaptation	<ul style="list-style-type: none"> Title of the document Current status (under development or issued. If issued, specify the number and date of issue) Summary of the related content 	Statistics on the total number of documents and calculate the quantity according to the type of normative legal documents (decrees, circulars, etc.)	Annual	State management units directly under the ministries	Climate change agency/focal point of the ministries

Source: Tue et al., 2023a, p. 43 (reprinted with permission).

Indicators were designed using a stepwise process and evaluated based on the SMART (specific, measurable, assignable, realistic, and time-bound) criteria (Socialist Republic of Vietnam, 2022; Tue et al., 2023a). This design took place with input from ministries and other sub-national government bodies mandated to participate in the MEL system. There were difficulties in the first cycle of MEL, as some indicators have proven too complex or challenging to measure. Ideally, these concerns will be addressed in subsequent cycles using feedback from ministries and sub-national bodies.

A9.2.3 GESI Considerations

In the MEL system, there is a focus on gender and social inclusion, and topics of livelihoods and development, among others, are included. Several groups of tasks and solutions targeting vulnerable people, women and youth are included as part of the NAP. However, the MEL system specifies only a handful of GESI-specific indicators:

- percentage of people and women in areas vulnerable to climate change impacts receiving vocational training and livelihood transformation;
- percentage of people and women in climate change-vulnerable areas provided with soft skills training on climate change adaptation and natural disaster prevention and control;



- percentage of female/ethnic minority civil servants, public employees, and workers provided with professional training on climate change; and
- percentage of female/ethnic minority people communicated and having improved awareness of climate change adaptation and natural disaster prevention and control.

There are ongoing efforts within the DCC to make that focus more robust. A recent UNDP report highlights progress in considering gender in adaptation planning and action in Vietnam beyond just MEL (UNDP, 2022a). Yet there is no evidence of GESI consideration from reports or data from the indicators at this time.

A9.3 Monitoring

Given the nascent status of the MEL system for adaptation in Vietnam, the outcomes of monitoring efforts remain to be seen, at least before the first cycle finishes at the end of 2023. Vietnam has submitted three National Communications to the UNFCCC, the most recent one being in 2019. The third National Communication outlines the sectoral impacts of climate change and ongoing response programs but falls short of detailing implementation progress or results achieved so far.

A9.4 Evaluation

In the NAP and the *M&E Manual*, evaluation is broadly framed as evaluating

the effectiveness of adaptation activities in terms of reduced vulnerability, enhanced resilience, adaptive capacity and reduced loss and damage caused by climate change; provide a foundation for the management, coordination, and improvement of the effectiveness of adaptation activities and the state of management of climate change. (Socialist Republic of Vietnam, 2022, p. 33)

The DCC is undertaking an evaluation of the NAP process in 2024 to inform an update of the NAP and accelerate the implementation of adaptation priorities. The evaluation is supported by the NAP Global Network and is due to be finalized by the end of 2024.

A9.5 Learning

Progress on MEL has yet to reach the learning stage in Vietnam, and there are no reports or other communications directly resulting from MEL work within this new system. As outlined above, some learning may occur through feedback from ministries and other reporting entities, though it is unknown how MEL might impact broader adaptation policies and the NAP.

Respondents interviewed for this study noted the successes of the MEL system so far, including its fast development, strong legal mandate, and the work completed so far in this first cycle. However, there is room for improvement by strengthening capacities within reporting entities, as well as the ongoing need to adjust indicators and methods.



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