



**Ministry of Climate Change,  
Environment and Energy**

# **Enhanced Transparency Framework Roadmap**

**CBIT Maldives**

**Capacity Building for Improved Transparency of Climate Change  
Mitigation and Adaptation Actions in the Maldives**





**Ministry of Climate Change, Environment and Energy**  
Male', Republic of Maldives

# **Enhanced Transparency Framework Roadmap**

Consultancy Services to Review and Strengthen the Institutional Arrangements  
for Climate Change Reporting

**CBIT MALDIVES**

*Capacity Strengthening for Improved Transparency of  
Climate Change Mitigation and Adaptation Actions in  
the Maldives Project*





Ministry of Climate Change, Environment and Energy

Capacity Strengthening for Improved  
Transparency of Climate Change  
Mitigation and Adaptation Actions in  
the Maldives Project (CBIT Maldives)



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**Up Close**  
SOLUTIONS

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## Acronyms

BTR	Biennial Transparency Report
BUR1	1st Biennial Update Report
CBIT	Capacity-Building Initiative for Transparency
CCD	Climate Change Department
ETF	Enhanced Transparency Framework
GEF	Global Environment Facility
GHG	Greenhouse Gas
MCCEE	Ministry of Climate Change, Energy and Environment
MRV	Monitoring, Reporting, and Verification
NAP	National Adaptation Plan
NC2	2nd National Communication
NDC	Nationally Determined Contribution
QA	Quality Assurance
QC	Quality Control
TOR	Terms of Reference
UNEP CCCC	United Nations Environment Program – Copenhagen Climate Change Centre
UNFCCC	United Nations Framework Convention on Climate Change
URA	Utilities Regulatory Authority

## Glossary

**Adaptation actions:** Interventions, projects, programs, policies, and measures designed to help communities adjust to actual or expected changes in the climate, reducing harm, risk or vulnerability, and increasing resilience.

**Biennial Transparency Report (BTR):** A report submitted every two years by countries to describe their progress towards climate action goals, as mandated by the Paris Agreement.

**Climate impact indicators:** Measurements or metrics used to assess the specific effects of climate change in various areas such as temperature increases, sea-level rise, or frequency of extreme weather events.

**Enhanced Transparency Framework (ETF):** A set of guidelines under the Paris Agreement that requires countries to be more open about their climate actions and progress.

**GHG Inventory:** A comprehensive account of all greenhouse gas emissions and removals within a specific country over a given period of time.

**Mitigation actions:** Interventions, projects, programs, policies, and measures put in place to reduce the net emissions of greenhouse gases and combat climate change.

**Monitoring, Reporting, and Verification (MRV) System:** A system used to observe, record, and verify environmental data, particularly emissions, to ensure accurate reporting under international agreements like the Paris Agreement.

**Nationally Determined Contribution (NDC) tracking:** Monitoring and evaluating a country's progress toward the climate targets it set for itself as part of the international Paris Agreement.

**QA/QC and verification:** Quality Assurance (QA) and Quality Control (QC) involve steps to ensure data integrity and accuracy, while verification is the process of checking that reported data meets certain standards or regulations.

## Executive summary

This report is part of the Capacity Strengthening for Improved Transparency of Climate Change Mitigation and Adaptation Actions in the Maldives project, under the Global Environment Facility (GEF) funded Capacity Building Initiative for Transparency (CBIT) program. The objective of this report is to establish a roadmap for the development of the Maldives' national monitoring, reporting and verification (MRV) system, designed to respond to the requirements of the Paris Agreement Enhanced Transparency Framework (ETF).

This Roadmap provides a guide based on the gaps and barriers identified in the *Stock-take and design option report on the institutional arrangements for GHG inventory* and the *Report on gaps and needs and institutional arrangements for the monitoring of mitigation actions*, incorporates them into a consolidated National Improvement Plan, and establishes phases for implementation of capacity building activities against key milestones such as the deadline for the first BTR.

This report summarizes the key findings from the previous reports and organizes them into five components: governance, expertise, data flows, systems and tools, and stakeholder engagement. These findings are the basis for the recommendations that form the National Improvement Plan – a tabular list of over 40 key MRV development and capacity building improvement items. The Improvement Plan includes key actions that are fundamental to the success of MRV arrangements in the Maldives such as 'Develop Terms of Reference for MRV Steering Committee, MRV Coordination Team and Sectoral Working Groups include specifics of working arrangements, frequency of meetings, chain of command, and data supply mandates', and 'Assess and build technical capacity within CCD and line ministries to regularly collect, compile and report data for the GHG inventory'. Completing and prioritizing the list, identifying routes for the implementation of the improvements and helping to manage the implementation of improvements is the subject of any follow-on work under CBIT and beyond.

The ETF Roadmap presents a two year process cycle for gathering the data for the BTR, QA/QC, compilation and review of the report, in addition to the incorporation of any feedback and improvements from previous cycles. Along a longer timeframe, the items in the Improvement Plan and structures activities have been mapped out into a multi-year Roadmap for long term capacity building, organized into four distinct phases:

- **Phase 1: Planning and preparation:** Focuses on legal and institutional framework development, and resource allocation.
- **Phase 2: Capacity building and systems development:** Focuses on building the capacity and the necessary systems to respond to the requirements of the ETF.
- **Phase 3: Implementation and data collection:** Significant for the development of data collection plans for the GHG inventory and mitigation action tracking, finalizing data sharing agreements based on those plans, and rolling out the systems and tools to gather, manage and track key datasets.
- **Phase 4: Verification, monitoring and evaluation:** Focuses on the development of internal and external QA/QC and verification processes, as well as mechanisms to ensure sustainability of the MRV system such as staff retention policies, centralized learning hubs and garnering high level engagement with outputs of the MRV system to ensure continued support.

These phases are presented in line with the 5 year national planning cycle, at the end of which in 2028, the Roadmap will need to be re-evaluated.

Through following the steps and phases laid out in this Roadmap, with each successful round of the BTR, the Maldives will progress towards meeting the requirements of the ETF with increasingly less reliance on external consultants and international support.

This report also presents strategies and indicators to monitor and evaluate the success of the Roadmap.

## Introduction

This report is part of the Capacity Strengthening for Improved Transparency of Climate Change Mitigation and Adaptation Actions in the Maldives project, under the Global Environment Facility (GEF) funded Capacity Building Initiative for Transparency (CBIT) program. The objective of this report is to establish a roadmap for the development of the Maldives' national monitoring, reporting and verification (MRV) system, designed to respond to the requirements of the Paris Agreement Enhanced Transparency Framework (ETF).

The Maldives submitted its First National Communication in 2001, followed by the Second National Communication in 2016. Most recently, the Maldives submitted its first Biennial Update Report in 2019, and updated its Nationally Determined Contribution (NDC) in 2020. These comprehensive reports outlined the country's greenhouse gas inventories, climate change vulnerabilities, adaptation measures, and mitigation actions, needs and support received and required the development of institutional arrangements, expertise, and data sets climate change reporting.

Under the ETF, Parties will be required to report a Biennial Transparency Report (BTR) to the UNFCCC every two years, however least developed country Parties and small island developing States such as the Maldives may submit a BTR at their discretion. In an effort to increase transparency of climate efforts, build national capacity and reduce reliance on external consultants, this Roadmap provides a guide based on the gaps and barriers identified in two supporting reports.

The reports (the (i) *Stock-take and design option report on the institutional arrangements for GHG inventory* and the (ii) *Report on gaps and needs and institutional arrangements for the monitoring of mitigation actions*) provide a background review of national institutional arrangements and existing MRV framework and propose a series of key recommendations to improve ETF readiness.

This Roadmap incorporates the recommendations from these reports into a consolidated National Improvement Plan, and establishes phases for implementation of capacity building activities against key milestones such as the deadline for the first BTR. This report is structured as follows:

- An overview of the key findings from the stocktaking reports on the GHG Inventory and mitigation action tracking.
- Presentation of the consolidated Improvement Plan.
- Phased ETF Roadmap mapping improvement plan items to key stages of capacity building and development.
- Conclusion and summary of the Roadmap's key points.

## Key findings summary

The reports on the gaps, needs and institutional arrangements for the GHG Inventory and monitoring of mitigation actions present a comprehensive overview of the challenges and opportunities for capacity building and technical development Maldives. The findings from these reports have been consolidated into a single National Improvement Plan and ETF Roadmap within this report.

The findings from these assessments are organized into five components: governance, expertise, data flows, systems and tools, and stakeholder engagement. The key findings are summarized as follows:

### **Governance:**

- Current arrangements, and the roles and responsibilities related to previous climate change reporting (such as National Communications and the Biennial Update Report), are performed on a project-by-project, ad-hoc basis.



- The Climate Emergency Act mandates the Climate Change Department (CCD) of the Ministry of Climate Change, Environment and Energy (MCCEE) as the coordinator of climate change MRV activities for the GHG inventory and climate action tracking. However, supporting regulations to better define the institutional arrangements and compliance system associated with data collection, reporting and verification on climate action progress still need to be developed, with the overarching mandate only identified for the CCD.
- There is limited engagement from academia and local government organizations in MRV activities.
- Both GHG inventory and climate action tracking processes would benefit from formalized technical working groups representing a range of stakeholder organizations.
- Women's participation in decision-making, particularly in economic and political spheres, remains limited due to social and cultural barriers.

### **Expertise**

- Expertise is largely concentrated within the CCD, with significant technical capacity gaps in other ministries and among stakeholders (such as in).
- Insufficient information and technical knowhow of climate change mainstreaming into planning.
- There's a lack of adequate training in climate change-related areas and data handling, alongside challenges in retaining trained staff due to non-competitive conditions and lack of a junior expert development program.

### **Data flows**

- The cost of acquiring the necessary data for compiling the GHG inventory is prohibitive and the submission of data is non-compulsory with little to no voluntary supply of data.
- Data collection and management strategies are not fully developed, with policies for handling confidentiality and privacy only partially addressed.
- Lack of local emission factors in energy, waste and transport sector as highlighted by the CBIT baseline assessment (2021), use of default emission factors in the latest Biennial Update Report (2019) and anticipated development of emission factors for the BTR project (2023).
- A lack of data collection plans for NDC indicators and policies and measures which results in irregular collection schedules, insufficient quality control, and a lack of standardized data verification protocols.
- Lack of uniform data formats across sectors, compounded by private sector reluctance to share data.

### **Systems and tools**

- GHG Inventory database management systems, national GHG registry, and informational systems are not in place, but with initial level of development.
- Limited tools and guidelines for GHG inventory data collection, primarily limited to the CCD team.
- Current lack of comprehensive database management, templates and standardized IT tools hampers effective data collection, analysis, and reporting for consistent climate action and NDC tracking.

### **Stakeholder engagement**

- Outward stakeholder engagement and use of the data is currently limited to the publication of data in official reports only, without feeding in directly to the decision making processes, affecting the usefulness of the transparency system for evidence-based decision-making. However, the MRV system and associated projects such as the development of the BTR, National Communications and sectoral action plans do involve a consultation process.

## Improvement Plan

A central aspect to developing and coordinating national MRV development is an MRV Improvement Plan. This plan provides a central focus for understanding the existing activities and prioritizing the future development of the MRV systems so it is equipped to serve stakeholders and inform decision making. The improvement plan includes all aspects of the MRV system including data gathering, analysis, reporting and engagement activities.

The improvements have not yet been prioritized or fully reconciled with ongoing activities and support provided by a range of organizations, although they have been considered (such as the GEFs CBIT, the development of the GHG inventory, development of the NDC and NAPs). Completing and prioritizing the list, identifying routes for the implementation of the improvements and helping to manage the implementation of improvements is the subject of any follow-on work under CBIT and beyond.

Improvements addressing the key findings outlined in the section above are included in the table below. They are organized by the MRV system component (governance, expertise, data flows, systems and tools, and stakeholder engagement) and tagged with whether they apply to the GHG inventory, or mitigation action and NDC tracking thematic areas.

Table 1. MRV Improvement Plan for GHG Inventory and NDC and Mitigation Action Tracking

ID	Title	Description	Gap to be addressed	Thematic area	MRV component	Status
1	Improve governance	Improve the relationships and legislation that governs and mandates transparency activities within the MRV system	Lack of formal arrangements for transparency activities such as data collection, data supply, progress tracking, reporting, QA/QC and verification	GHG Inventory; NDC and mitigation action tracking	Governance	Idea
1.1	Formalize roles and responsibilities with the necessary agreements, arrangements and resources	Establish clear roles, responsibilities, and resource allocation through formal agreements for all MRV system stakeholders.	Ambiguity and overlap in roles, leading to inefficiencies in MRV processes.	GHG Inventory; NDC and mitigation action tracking	Governance	In progress
1.1.1	Revive and formally establish MRV Steering Committees and working groups previously developed for the BUR and TNC processes; include specifics of working	Re-establish and build on committee and working groups developed for TNC and BUR projects as a long term solution for managing MRV and	Lack of defined roles and specific guidance for operational procedures and data management within the MRV system.	GHG Inventory; NDC and mitigation action tracking	Governance	Idea

	arrangements, frequency of meetings, chain of command, and data supply mandates.	the requirements of the Paris Agreement ETF. Details to work out include meeting frequencies and data collection mandates.				
1.1.2	Develop Memorandums of Understanding to define working arrangements and responsibilities between stakeholders e.g. with Transport Authority, City Councils and Island Councils for Transport Sector Working Group.	Formalize data sharing arrangements and responsibilities between key stakeholders, including transport authorities and local councils.	Absence of formal agreements on cooperation and data sharing among MRV stakeholders. Lack of voluntary reporting.	GHG Inventory; NDC and mitigation action tracking	Governance	In progress
1.1.3	Develop supporting regulations on data collection protocols to operationalise key legislations such as Waste Management Act (24/2022), Climate Emergency Act (09/2021) and Energy Act 18/2021.	Introduce regulations to make key legislations like the Waste Management Act and Climate Emergency Act actionable within the MRV framework including specifics on the scope and format of the data collected, a data reporting	Regulatory bottle necks hindering the effective implementation of climate legislation and MRV requirements.	GHG Inventory; NDC and mitigation action tracking	Governance	Idea

		schedule, and the obligations of the stakeholders to report to MCCEE.				
1.1.3.1	Develop regulations to support the enforcement of the roles and responsibilities of the Utilities Regulatory Authority, MCCEE and data providing stakeholder organizations in relation to data collection and provision, along an agreed schedule, with defined content and formats.	Develop supporting regulations with clear rules for the enforcement of the established responsibilities for data collection and provision between the Utilities Regulatory Authority, MCCEE and data providing stakeholder organizations.	Challenges with enforcement of data collection and reporting responsibilities leading to potential data collection and reporting inefficiencies.	GHG Inventory; NDC and mitigation action tracking	Governance	Idea
1.1.4	Define a sustainable flow of resources to support ongoing development and management of the MRV system	Ensure continuous resource allocation for the development and management of the MRV system.	Insufficient resources associated with additional data collection and reporting requirements due to the ETF, leading to constraints in MRV system operations and improvements.	GHG Inventory; NDC and mitigation action tracking	Governance	Idea

1.1.4.1	Assess resource requirements for each working group and key stakeholder organisations and draft needs assessment.	Conduct a comprehensive needs assessment to determine the human, financial, technological and capacity building resources required by working groups and key stakeholders for implementing the proposed institutional arrangements.	Inadequate understanding of resource needs for each stakeholder organization to participate in the MRV framework.	GHG Inventory; NDC and mitigation action tracking	Governance	Idea
1.1.4.2	Develop implementation plan to secure resources.	Create a detailed plan, similar to an NDC Implementation Plan, to secure and allocate the necessary resources for the MRV system's sustainability, including lobbying for high level support. This involves identifying specific budget lines or innovative financing	Unclear route to securing resources for the MRV system beyond the scope of current capacity building projects such as the CBIT program.	GHG Inventory; NDC and mitigation action tracking	Governance	Idea

		mechanism to pay for additional activities required by ETF activities, or identifying future sources of external support (e.g. ICAT, NDC Partnership, PATPA, bilateral support etc.) and assigning them to capacity building activities in this Improvement Plan.				
1.1.5	Establish mechanisms to ensure equitable representation of women in all decision-making processes.	Establish mechanisms to ensure equitable representation of women in all decision-making processes related to climate adaptation and mitigation projects. This can include representation of a gender focused institution in decision making bodies, ensuring equal	Limited participation for women in decision-making, particularly in economic and political spheres, due to social and cultural barriers.	NDC and mitigation action tracking	Governance	Idea

		participation of men and women in consultation processes and training opportunities				
2	Expand expertise, assess and build capacity	Increase the technical expertise within the Maldives' institutions	Gaps in capacity and expertise to meet the needs of the ETF without external support	GHG Inventory; NDC and mitigation action tracking	Expertise	Idea
2.1	Perform detailed training needs assessment, deliver training and build technical capacity around the identified gaps within CCD and line ministries on the GHG inventory, mitigation action tracking, indicator development, climate action impact analysis, and ETF reporting.	Identify training needs, train and build technical capacity within CCD and line ministries on data collection, templates and tools, calculation methodologies and reporting formats for the GHG inventory, climate action tracking, indicator development and impact assessments.	Lack of understanding of emission calculation methodologies, ETF requirements for NDC tracking, development of indicators and impact analyses.	GHG Inventory, NDC and mitigation action tracking	Expertise	Idea
2.2	Develop staff retention policies to reduce loss of	Establish policies to retain skilled personnel within CCD	High turnover rates and loss of experienced staff.	GHG Inventory; NDC and	Expertise	Idea



	expertise within CCD as an example for line ministries.	and line ministries, ensuring the continuity of MRV expertise. Examples include opportunities for career progression and junior expert professional development programs.		mitigation action tracking		
2.3	Develop centralised learning hubs to build institutional memory	Create centralized data management hubs for learning and knowledge sharing to maintain and enhance institutional memory on MRV practices.	Fragmented knowledge and lack of centralized information resources.	GHG Inventory; NDC and mitigation action tracking	Expertise	Idea
3	Define data flows	Identify and define the key data sets, data providers and data collection processes required to regularly meet the requirements of the ETF and for domestic decision making.	Undefined data requirements for transparency activities and domestic decision making.	GHG Inventory; NDC and mitigation action tracking	Data flows	Idea

3.1	Improve the availability and standardization of data for the GHG inventory	Enhance data accessibility and consistency across all sectors involved in the GHG inventory to ensure accurate reporting.	Variability in data quality and availability across sectors.	GHG Inventory	Data flows	Idea
3.1.1	Develop data collection plan for each GHG inventory sector	Create sector-specific plans for systematic data collection to support the GHG inventory compilation. Includes details on primary data collection, frequency, format, data quality, and resource requirements.	Lack of structured data collection strategies	GHG Inventory	Data flows	Idea
3.1.2	Develop QA/QC Plan for GHG inventory compilation process	Identify quality objectives, activities, roles and responsibilities, and a workplan to ensure reliability of GHG inventory data.	Absence of standardized QA/QC procedures for the GHG inventory.	GHG Inventory	Data flows	Idea

3.2	Improve the availability and standardization of data for NDC tracking and mitigation actions	Enhance data accessibility and consistency across all sectors involved in tracking mitigation action and the NDC to ensure accurate reporting.	Variability in data quality and availability across sectors.	NDC and mitigation action tracking	Data flows	Idea
3.2.1	Develop list of NDC tracking indicators	Compile a database of SMART progress, GHG impact and wider impact indicators to enable climate action tracking.	Comprehensive set of indicators for tracking climate action progress against NDC targets.	NDC and mitigation action tracking	Data flows	Idea
3.2.1.1	Develop data collection plans for each indicator	Create indicator-specific plans for systematic data collection to support tracking the progress of the NDC and mitigation action. Includes details on key stakeholders, primary data collection, frequency, format, data quality, and	Lack of structured data collection strategies	NDC and mitigation action tracking	Data flows	Idea

		resource requirements.				
3.2.2	Build database of planned, ongoing and implemented climate actions	Compile a database of all planned, ongoing and implemented climate actions contributing towards achieving the NDC.	Fragmented sources of information on climate change mitigation actions.	NDC and mitigation action tracking	Data flows	Idea
3.2.2.1	Develop data collection plan for climate actions in each sector	Create sector-specific plans for systematic data collection on climate change mitigation actions. Includes details on primary data collection, frequency, format, data quality, and resource requirements.	Lack of structured data collection strategies	NDC and mitigation action tracking	Data flows	Idea
3.2.2.2	Perform ex-ante impact analyses to estimate GHG emission reduction potential for all actions	Develop baseline and project impact scenarios for all climate mitigation actions to estimate GHG emissions impact	Complete datasets on estimated GHG emissions reductions from climate actions.	NDC and mitigation action tracking	Data flows	Idea

		and provide input into projection scenarios.				
3.2.2.3	Perform wider impact analyses of climate actions	Evaluate and identify wider impacts of climate action to feed into decision making processes (e.g. on Just Transition and cost-benefit analyses of climate actions)	Holistic view of benefits and drawbacks of implementing climate actions to national economy, health, well-being, biodiversity etc.	NDC and mitigation action tracking	Data flows	Idea
3.3	Where relevant, develop a list of data sharing agreements that define the format, quantity, frequency and supply conditions of the data being shared relevant for annual reporting mandated by the Climate Emergency Act and UNFCCC reporting	Establish agreements between MRV coordination team, working groups, and data providers for regular, reliable data flow.	Lack of formal data sharing agreements in place.	GHG Inventory; NDC and mitigation action tracking	Data flows	Idea
4	Build systems and tools	Build systems and tools to facilitate transparency activities and improve institutional memory	Insufficient systems and tools for data collection, management, tracking and reporting on climate change MRV themes.	GHG Inventory; NDC and mitigation action tracking	Systems and tools	Idea

4.1	Review existing systems and tools that can be integrated into any new tools developed.	Evaluate possible synergies/overlap with existing solutions to enhance the MRV framework, avoiding duplication and leveraging current assets.	Lack of awareness of existing MRV solutions to be leveraged.	GHG Inventory; NDC and mitigation action tracking	Systems and tools	Idea
4.2	Develop data collection templates, methodologies and formats for data providers and sectoral working groups	Create standardized data collection formats and guidelines to ensure consistency and accuracy across data providers and sectors.	Variability in data collection methods.	GHG Inventory; NDC and mitigation action tracking	Systems and tools	In progress
4.3	Develop GHG inventory database management system	Build an online database system for managing and sharing GHG Inventory data across all sectors	An efficient system for GHG inventory management	GHG Inventory	Systems and tools	In progress
4.3.1	Develop and distribute data collection templates and guidelines for the GHG inventory datasets	Distribute standardized data collection templates and guidelines specific to GHG inventory	Inconsistent data submission formats and guidelines	GHG Inventory	Systems and tools	In progress

		requirements (IPCC Guidelines) to all relevant stakeholders.				
4.4	Develop climate action and NDC tracking database management system	Build an online database system for managing and sharing climate actions and NDC indicators.	A system used for tracking progress of climate actions against national targets (including NDC tracking).	NDC and mitigation action tracking	Systems and tools	In progress
4.4.1	Populate database management system with full list of policies, measures, indicators, and NDC targets to build its value	Ensure the database contains a complete registry of relevant policies, measures, indicators, and targets to support detailed analysis and decision-making.	Lack of centralized tracking system.	NDC and mitigation action tracking	Systems and tools	Idea
4.5	Use systems and tools to develop official output such as the BTR to refine its functionalities	Test the system and train staff on the newly developed tools with the production of a BTR submission to the UNFCCC.	Lack of systems, tools and capacity to regularly and efficiently produce UNFCCC reports.	GHG Inventory; NDC and mitigation action tracking	Systems and tools	Planned

4.6	Integrate climate action and NDC tracking database management system with GHG inventory, adaptation data, support and finance systems	Development of integrated systems and tools for GHG inventory, NDC tracking and climate finance tracking outcomes	A lack of developed systems and tools for ETF reporting.	GHG Inventory; NDC and mitigation action tracking	Systems and tools	Idea
5	Increase stakeholder engagement	Improving stakeholder engagement across different stakeholder groups (general public, industry, NGOs, CSOs, high level coordination and decision makers)	Stakeholders regularly engaged in climate change transparency	GHG Inventory; NDC and mitigation action tracking	Stakeholder engagement	Idea
5.1	Develop a stakeholder engagement plan (communication strategy) for climate change information.	Develop a communication strategy with a tangible plan to engage stakeholders at all levels of the national system	A discernible plan for engaging stakeholders in climate change transparency matters	GHG Inventory; NDC and mitigation action tracking	Stakeholder engagement	Idea



5.2	Develop high level engagement with outputs of the MRV system.	Initiate engagement with National ministries and agencies.	High-level decision makers lack detailed knowledge about climate challenges, the impacts of taking action and how to incorporate the latest climate evidence into policy decisions.	GHG Inventory; NDC and mitigation action tracking	Stakeholder engagement	Idea
5.3	Increase availability and ease of access to climate targets and data for stakeholders through shared access to database management system outputs	Increase climate awareness of key stakeholders	Lack of awareness among stakeholders regarding key climate goals and data	GHG Inventory; NDC and mitigation action tracking	Stakeholder engagement	Idea

## ETF Roadmap Framework

The Roadmap is presented in two sections. The first is the BTR cycle: processes repeated every two years to produce a BTR. This cycle is illustrated in the figure below and presents a timeline for the various activities required to produce a BTR. It also contextualizes the Improvement Plan above and provides a more granular level of detail for capacity building and improvement activities. The figure below presents six distinct phases of the BTR cycle, spread out over the course of just over two years. Good practice is for the latest data collected to refer to no earlier than the year X-2. E.g. for the 2026 BTR, the data for the latest year should be from 2024.

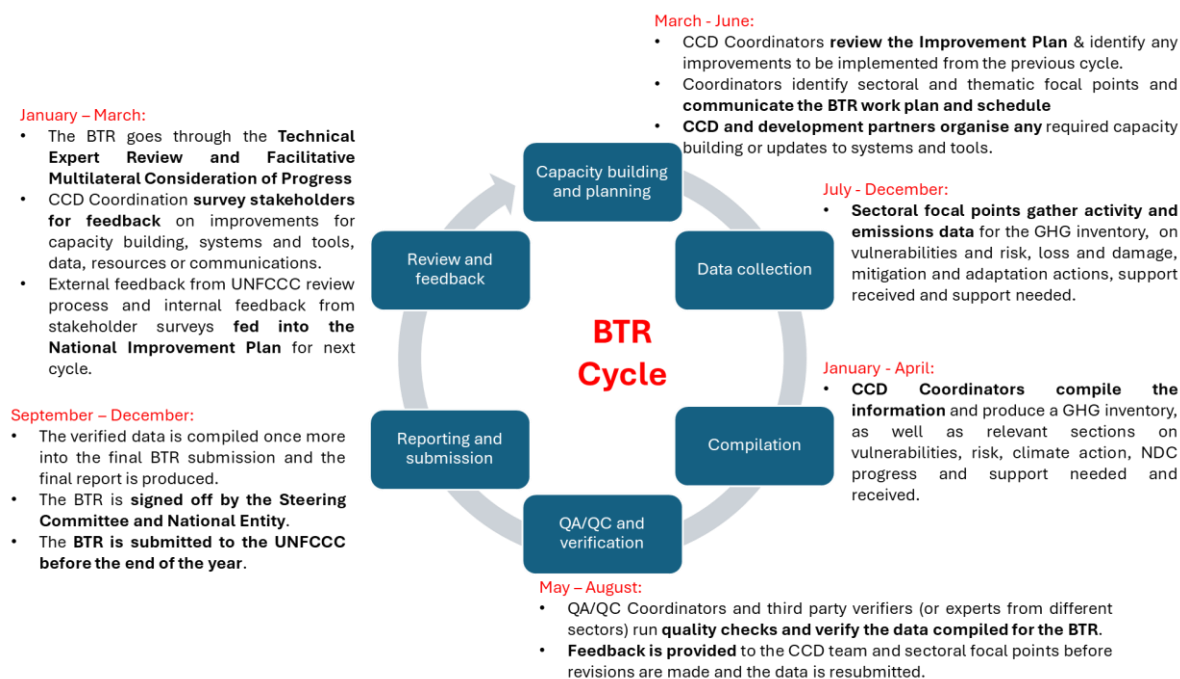


Figure 1. Roadmap for the BTR Cycle

The second element of the BTR is a summary of the recommended MRV system development approach along a timeline that works towards a number of key milestones. These milestones include annual progress reports, the publication of the first BTR in 2024, and the expected updated of the NDC in 2025. It also takes into account ongoing capacity building projects such as the planned activities under the CBIT program. Where possible, existing capacity building projects such as CBIT and the BTR development project should be leveraged to make progress on improvement plan items. Future capacity building projects, as yet unfunded, should be coordinated and designed with the Improvement Plan in mind to address identified gaps. The summary activities in the Roadmap link to more detailed draft activities outlined in the Improvement Plan. CCD should identify capacity building projects and development partners that are available to support each of these items. This longer term capacity building plan is mapped until the end of this policy planning cycle in 2028. After this, national progress on climate transparency will need to be re-evaluated and the roadmap updated and incorporated into the new national planning processes.

The Roadmap is organized into phases that structure activities in the Improvement Plan into a logical order for national MRV system development to support the CCD in approaching the broad task of improving the national climate change transparency system. It is important to note that improving the

national system focusses on existing systems rather than building new systems. The phases and recommended work plan are illustrated in the figure below, with details of each phase provided in the following sections.

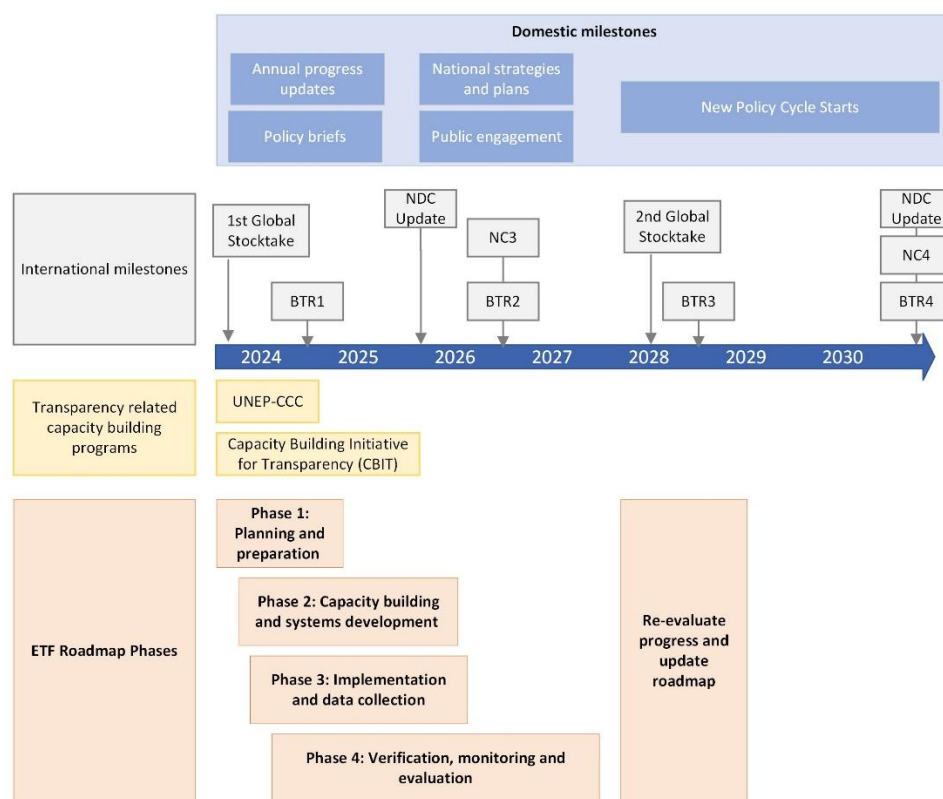


Figure 2. Maldives' ETF Roadmap Phases

### Phase 1: Planning and preparation

The initial phase of the Roadmap designed to support the Maldives in becoming ready for the Paris Agreement's Enhanced Transparency Framework (ETF) focuses on **planning and preparation**. This phase involves the development and improvement of existing robust governance structures and institutional frameworks to formalize ETF related mandates and clarify roles and responsibilities.

Phase 1 includes the estimation and allocation of the human, financial and capacity building resources required to meet the additional requirements of the ETF. The relevant improvement plan items covered under this phase are described in the table below.

The estimated timeframe for this phase is 6 – 8 months. The resources required to undertake the activities outlined for this phase are primarily the procurement of climate change transparency and legal consultants, with an estimate of financial cost of approximately \$40,000 - \$60,000 USD.

Table 2. Roadmap Phase 1: Planning and preparation activities

Improvement ID	Improvement name
----------------	------------------

1.1	Formalize roles and responsibilities with the necessary agreements, arrangements and resources
1.1.1	Revive and formally establish MRV Steering Committees and working groups previously developed for the BUR and TNC processes; include specifics of working arrangements, frequency of meetings, chain of command, and data supply mandates.
1.1.2	Develop Memorandums of Understanding to define working arrangements and responsibilities between stakeholders e.g. with Transport Authority, City Councils and Island Councils for Transport Sector Working Group.
1.1.3	Develop supporting regulations on data collection protocols to operationalize key legislations such as Waste Management Act (24/2022), Climate Emergency Act (09/2021) and Energy Act 18/2021.
1.1.3.1	Develop regulations to support the enforcement of the roles and responsibilities of the Utilities Regulatory Authority, MCCEE and data providing stakeholder organizations in relation to data collection and provision, along an agreed schedule, with defined content and formats.
1.1.4	Define a sustainable flow of resources to support ongoing development and management of the MRV system
1.1.4.1	Assess resource requirements for each working group and key stakeholder organizations and draft needs assessment.
1.1.4.2	Develop implementation plan to secure resources.

## Phase 2: Capacity building and systems development

Phase 2 of the Roadmap focuses on **building the capacity and the necessary systems** to respond to the requirements of the ETF. This phase is dedicated to enhancing the expertise of personnel through targeted training programs, addressing both immediate and long-term needs for increased technical capacity and expertise within Maldivian institutions. These training programs will focus on areas such as GHG inventory compilation, data requirements for climate action reporting, and the use of indicators for tracking progress towards Nationally Determined Contribution (NDC) targets.

Phase 2 will also emphasize the development of the systems, tools and templates needed to improve the availability, standardization, and reliability of data for GHG inventory and NDC tracking. The development of these systems will include the creation of data collection templates, methodologies, and formats tailored to the needs of data providers and sectoral working groups. This phase aims to address both the short-term need for efficient data collection and the long-term goal of maintaining robust and adaptable data systems.

The relevant improvement plan items covered under this phase are described in the table below.

The estimated timeframe for this phase is 12 - 24 months, in particular the systems and databases can take a significant amount of time to build. The resources required to undertake the activities outlined for this phase are primarily the procurement of GHG inventory and mitigation experts for training, and database developers to build the database management systems. This also includes the procurement of any specialised software and associated licencing fees. The training activities have an estimated financial cost of approximately \$30,000 - \$50,000 USD, and the estimated cost of the systems development is \$75,000 - \$175,000 USD, bringing the total estimated cost of this phase to \$105,000 - \$225,000 USD.

Table 3. Roadmap Phase 2: Capacity building and systems development activities

Improvement ID	Improvement name
2.1	Perform detailed training needs assessment, deliver training and build technical capacity around the identified gaps within CCD and line ministries on the GHG inventory, mitigation action tracking, indicator development, climate action impact analysis, and ETF reporting.
4.1	Review existing systems and tools that can be integrated into any new tools developed.
4.2	Develop data collection templates, methodologies and formats for data providers and sectoral working groups
4.3	Develop GHG inventory database management system
4.3.1	Develop and distribute data collection templates and guidelines for the GHG inventory datasets
4.4	Develop climate action and NDC tracking database management system

### Phase 3: Implementation and data collection

Phase 3 is significant for the **development of data collection plans** for the GHG inventory and mitigation action tracking, **finalizing data sharing agreements** based on those plans, and **rolling out the systems and tools** to gather, manage and track key datasets. This involves the identification and development of a set of NDC indicators and the database of climate actions (using the tools developed under Phase 2). Once these data have been identified, they can be analyzed to assess their impacts on GHG emissions and projected emissions, as well as wider impacts for adaptation, the economy and society.

This phase will also be important for the development of an extensive stakeholder engagement strategy, outlining key stakeholders, defining engagement activities, setting clear timelines, and establishing mechanisms for ongoing communication and feedback. This strategy aims to foster transparency, inclusivity, and cooperation, ensuring that all parties are informed, involved, and aligned with the ETF objectives and activities.

A key component of this phase is the pilot testing of new systems or methodologies, specifically designed to produce outputs such as the BTR and updates to the NDC. This testing phase will allow for the refinement of methodologies and the resolution of any issues before full-scale implementation, ensuring that the systems developed are robust, user-friendly, and fully capable of meeting the ETF's requirements. The relevant improvement plan items covered under this phase are described in the table below.

The estimated timeframe for this phase is 12 - 18 months, given the delay between identifying data needs and retrieving the datasets. The resources required to undertake the activities outlined for this phase are primarily the procurement of GHG inventory and mitigation experts to provide support and backstopping capacity to government focal points in CCD and line ministries who will establish the data flow, perform impact assessments and develop outputs. These activities have an estimated financial cost of approximately \$50,000 - \$75,000 USD.

Table 4. Roadmap Phase 3: Implementation and data collection activities

Improvement ID	Improvement name
3.1	Improve the availability and standardization of data for the GHG inventory
3.1.1	Develop data collection plan for each GHG inventory sector
3.1.2	Develop QA/QC Plan for GHG inventory compilation process
3.2	Improve the availability and standardization of data for NDC tracking and mitigation actions
3.2.1	Develop list of NDC tracking indicators
3.2.1.1	Develop data collection plans for each indicator
3.2.2	Build database of planned, ongoing and implemented climate actions
3.2.2.1	Develop data collection plan for climate actions in each sector
3.2.2.2	Perform ex-ante impact analyses to estimate GHG emission reduction potential for all actions
3.2.2.3	Perform wider impact analyses of climate actions
4.4.1	Populate database management system with full list of policies, measures, indicators, and NDC targets to build its value
4.5	Use systems and tools to develop official output such as the BTR to refine its functionalities
5.1	Develop a stakeholder engagement plan (communication strategy) for climate change information.

#### Phase 4: Verification, monitoring and evaluation

Phase 4 focuses on the **development of internal and external QA/QC and verification processes**, as well as mechanisms to ensure **sustainability of the MRV system** such as staff retention policies, centralized learning hubs and garnering high level engagement with outputs of the MRV system to ensure continued support.

These development activities will help to ensure there is a steady flow of high quality, reliable and accurate data, as well as a feedback process from a wide range of stakeholders that prioritizes

continuous improvement and transparency. With these, and continued high level support for a mandate that responds to the ETF, the Maldives MRV system will continue to grow and develop over time, an important factor in the success of advanced climate change transparency systems.

Increased attention and feedback should support the Maldives' to move beyond ad-hoc project based funding for transparency activities, towards institutional support and capacity that promotes the domestic use of climate transparency data for sectoral planning and policy making. This should also feature mechanisms for reviewing the systems' effectiveness and the monitoring of key performance indicators to evaluate the success of the institutional arrangements in producing reliable, high-quality data regularly. The relevant improvement plan items covered under this phase are described in the table below.

The estimated timeframe for this phase is 24 – 36 months, as this phase involves steadily building support for the MRV system, gathering feedback on its performance, and integrating various systems and processes. The resources required to undertake the activities outlined for this phase are primarily the procurement of climate change transparency experts and human resource experts to provide support and backstopping capacity to government focal points in CCD who will manage the monitoring and evaluation of the system, as well as ensuring sustainability of the institutional arrangements. This phase may also require the support of IT/database experts to integrate different database management systems across platforms. These activities have an estimated of financial cost of approximately \$30,000 - \$60,000 USD.

*Table 5. Roadmap Phase 4: Verification, monitoring and evaluation activities*

<b>Improvement ID</b>	<b>Improvement name</b>
2.2	Develop staff retention policies to reduce loss of expertise within CCD as an example for line ministries.
2.3	Develop centralized learning hubs to build institutional memory
3.1.2	Develop QA/QC Plan for GHG inventory compilation process
4.6	Integrate climate action and NDC tracking database management system with GHG inventory, adaptation data, support and finance systems
5.2	Develop high level engagement with outputs of the MRV system.
5.3	Increase availability and ease of access to climate targets and data for stakeholders through shared access to database management system outputs



## Monitoring and Evaluation of the Roadmap

This section outlines the monitoring and evaluation (M&E) plan for the roadmap. The progress of the roadmap can primarily be tracked through the monitoring of the Improvement Plan. This plan provides a list of tangible activities, their implementation status and progress can be tracked and updated using this plan. To track these activities, this Improvement Plan can be transferred to an Excel file or online database, managed by CCD, and referenced during the conception of capacity building programs with development partners. This will support the monitoring of Roadmap progress.

M&E indicators can be used to evaluate the success of the Roadmap and Improvement Plan activities. Several indicators from the CBIT Project Results Framework have been identified below that could be used to track the progress of the roadmap:

1. Number of sectoral agencies with their capacities strengthened to report information on NDC implementation, tracking of adaptation actions and support received and needed. Measured through the provision of contents to produce sectoral chapters of NCs and BTRs.
2. % of stakeholders (sex disaggregated) declaring to be in a better position to perform their role (data provider, compiler, QA/QC, reporting) for the GHG inventory process.
3. % of stakeholders (sex disaggregated) declaring to be in a better position to track mitigation actions against NDC targets from key sectors.
4. % of stakeholders (sex disaggregated) declaring to be in a better position to track adaptation actions, vulnerability and risk, and loss and damage from key sectors.

These indicators will require a baseline assessment (the CBIT project terminal evaluation process can provide this), and periodic reviews every 12 months to re-evaluate progress and align priorities.

## Conclusion

This Roadmap document provides a comprehensive set of recommendations for developing the governance, data flows, expertise, systems and tools and stakeholder engagement required for the Maldives to effectively respond to the requirements of the ETF.

These recommendations are organized into four distinct phases that align with international reporting milestones, ongoing capacity building projects and the national planning cycle. MRV coordinators within CCD can use the Improvement Plan and Roadmap to guide future capacity building and development projects, and effectively communicate with development partners around needs, constraints, and barriers that still to be addressed. This report also provides a BTR process cycle to guide coordinators in establishing a regular workplan and schedule for ETF compliance. These elements of the Roadmap are illustrated in the sections above.

This journey towards ETF readiness represents a critical investment in the Maldives' climate governance capacity, setting the foundation for a resilient and transparent climate action framework. Through the implementation of this Roadmap, the Maldives not only gears itself for compliance with international standards but also strengthens its own capabilities to tackle GHG emissions, raise ambition and continue to lead efforts to mitigate climate change effectively.