

MauNDC Registry Gap Analysis Report



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Initiative for Climate Action Transparency - ICAT

MauNDC Registry Gap Analysis Report

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Executive Summary

The Gap Assessment of the MauNDC Registry was undertaken to evaluate the current state of the platform's structure, usability, and institutional readiness for tracking Mauritius's climate actions under its Nationally Determined Contributions (NDCs). The assessment identified several challenges hindering effective use, including limited awareness and hands-on experience among users, misaligned indicator frameworks, and inconsistencies in data entry templates. Many departments lacked clarity on their roles, and technical gaps, particularly around GHG data and adaptation tracking, were observed. Outdated or generic indicators and undefined data entry fields further constrained the registry's functionality. Additionally, institutional coordination mechanisms, such as Technical Working Groups (TWGs) and Thematic Contributors, were found to be informal and in need of clearer mandates.

To address these issues, the revisions in the MauNDC registry are proposed to align outcomes, interventions, and indicators. This would improve traceability and support robust Measurement, Reporting, and Verification (MRV). The report recommends a set of short- to medium-term actions, including interface upgrades, registry clean-up, error fixes, and user-specific access controls. Institutional strengthening measures such as clarifying mandates, formalizing roles, and improving inter-agency coordination are also proposed.

Furthermore, detailed capacity-building and technical support recommendations include targeted hands-on training, the development of sector-specific toolkits, and establishing helpdesk support. Data management improvements are aimed at standardizing templates, introducing unit recognition systems, and aligning the MauNDC registry with other national and international reporting frameworks.

Chapter 1: Introduction

The Government of Mauritius, through the Ministry of Environment, Solid Waste Management and Climate Change, has established the **MauNDC Registry** as a central platform to track, report, and evaluate the progress of policies and measures contributing to the country's Nationally Determined Contributions (NDCs). Developed with support from the United Nations Environment Programme (UNEP) and funded by the Global Environment Facility, the Registry is designed to assist Mauritius in fulfilling its obligations under the Enhanced Transparency Framework (ETF) of the Paris Agreement. The platform plays a key role in aggregating data from multiple sectors, ensuring transparency, and enabling evidence-based climate decision-making.

This gap assessment was conducted to evaluate the current effectiveness of the MauNDC Registry in fulfilling its intended purpose, particularly in terms of usability, data quality, indicator suitability, and institutional coordination. It draws upon consultations with government stakeholders, technical contributors, and registry users to identify bottlenecks and practical challenges in data entry, indicator tracking, verification processes, and alignment with national and international reporting frameworks. The assessment also highlights opportunities to enhance the functionality of the Registry and strengthen its integration with national climate governance systems.

Ultimately, the findings and recommendations presented in this report aim to inform ongoing improvements to the MauNDC Registry and ensure that it serves as a robust and user-friendly tool for tracking Mauritius's progress toward its climate targets, while aligning with the principles of transparency, accuracy, and consistency in climate reporting.

1.1 Purpose and Objectives

The purpose of this report is to assess the functional and structural gaps identified in the MauNDC Registry and document the system revisions that were proposed, implemented, or deemed technically infeasible. The Registry plays a central role in tracking the implementation of Mauritius's climate-related policies and NDCs, and its continuous improvement is essential for supporting data transparency, institutional coordination, and stakeholder engagement.

This report aims to:

- Consolidate stakeholder feedback on system limitations, data management challenges, and operational bottlenecks.
- Record the decisions made concerning system modifications, including field removals, access controls, and data clean-up mechanisms.
- Highlight actions successfully implemented and explain the rationale for actions that could not be carried out due to technical or contractual limitations.
- Serve as a communication tool among development partners, system administrators, and national stakeholders to facilitate coordinated registry improvements.
- Provide direction for future enhancements and capacity-building efforts to ensure the Registry's long-term usability and alignment with national and international climate reporting requirements.

1.2 Overview of the Existing National Framework

Mauritius has established a structured national framework to monitor, report, and verify progress towards its NDCs, ensuring alignment with both national climate priorities and international

obligations under the Paris Agreement. This framework, anchored by the MauNDC Registry, provides a centralized platform for tracking mitigation policies, sectoral actions, and GHG emissions. It is supported by institutional arrangements that bring together government ministries, technical agencies, and development partners to ensure data quality, transparency, and accountability. This chapter outlines the existing framework and tools for NDC tracking, highlights ongoing transparency initiatives in Mauritius and Rodrigues, and examines key reports and documentation that guide transparency enhancement efforts.

The national framework for NDC tracking in Mauritius is managed under the leadership of the Ministry of Environment, Solid Waste Management, and Climate Change (MESWMCC), which acts as the focal point for climate change reporting and coordination. The framework is designed to systematically track the progress of policies and measures (PAMs) that contribute to achieving Mauritius's NDC targets. It aligns with both national climate priorities and international obligations under the UNFCCC and the Paris Agreement, ensuring the country's readiness for the ETF.

1.2.1 Institutional Arrangements

The institutional framework for climate change governance in Mauritius is defined under the Climate Change Act (CCA) 2020, which provides for a multi-tiered governance structure to coordinate and monitor the country's climate change mitigation and adaptation efforts. These arrangements ensure alignment with the National Climate Change Mitigation Strategy and Action Plan (NCCMSAP), National Climate Change Adaptation Policy Framework (NCCAPF), and the Nationally Determined Contributions (NDCs), while promoting transparency, accountability, and multi-stakeholder engagement. The table below is a summary of the institutional arrangements in Mauritius.

Table 1: Institutional Arrangements for Climate Change Governance

| Institution/Body | Legal Basis (CCA 2020) | Role & Functions | Leadership & Composition | Reporting & Coordination |
|--|-------------------------|---|---|---|
| Inter-Ministerial Council on Climate Change (IMCCC) | Section 4 & 5 | Sets national climate objectives, goals, and targets; defines policies and priorities; monitors progress on climate actions | Chaired by Prime Minister; includes concerned Ministers; DCC Director acts as Secretary | Receives reports from the Minister and DCC on implementation progress |
| Ministry of Environment, Solid Waste Management and Climate Change (MESWMCC) | Section 7(1) | Proposes and develops climate change policies aligned with IMCCC decisions | Minister for Environment | Overseeing DCC and CCC; may establish Technical Advisory Committees |
| Department of Climate Change (DCC) | Section 8 & 9 | Implements policies, coordinates and evaluates programs, and conducts climate-related research | Headed by the Director of Climate Change | Reports annually to the Minister on compliance with Section 16 (duties of institutions); collaborates with the Rodrigues Commission |
| Climate Change Committee (CCC) | Section 11 | Coordinates GHG inventories, emissions reductions, vulnerability assessments, and SDG 13 tracking | Chaired by Supervising Officer (MESWMCC); includes 28 public institutions, 1 professional body, 1 civil society, 1 private sector | Reports to the Minister every 2 years; meets monthly; may establish sub-committees |
| Rodrigues Climate Change Committee (RCCC) | Section 11 & Annex 2(b) | Implements climate resilience strategies for | Led by Departmental Head (Rodrigues Environment Commission); supported | OIDC provides GHG and sink data; reporting mechanism not formally defined |

| | | | | |
|-------------------------------|---------------|--|--|--|
| | | Rodrigues; consolidates data for GHG inventory | by ODC and other officers | |
| MRV Systems & MauNDC Registry | Section 14-16 | Tracks, reports, and verifies mitigation actions and inventories; embeds sectoral roles and data | Integrated into all institutional layers | Embedded in MauNDC Registry; aligns with Enhanced Transparency Framework (ETF) |

1.2.2 Synthesis of Relevant Transparency Initiatives in Mauritius and Rodrigues

Over the past decade, Mauritius has launched several initiatives aimed at strengthening transparency in climate action tracking, in line with the ETF under the Paris Agreement. These initiatives have focused on building institutional capacity, developing MRV systems, improving data quality, and enhancing cross-sectoral coordination. In Rodrigues, a parallel but locally contextualized approach has also emerged to support climate action tracking, tailored to the island's unique socio-environmental context. Below are a few examples of the transparency initiatives in Mauritius and Rodrigues.

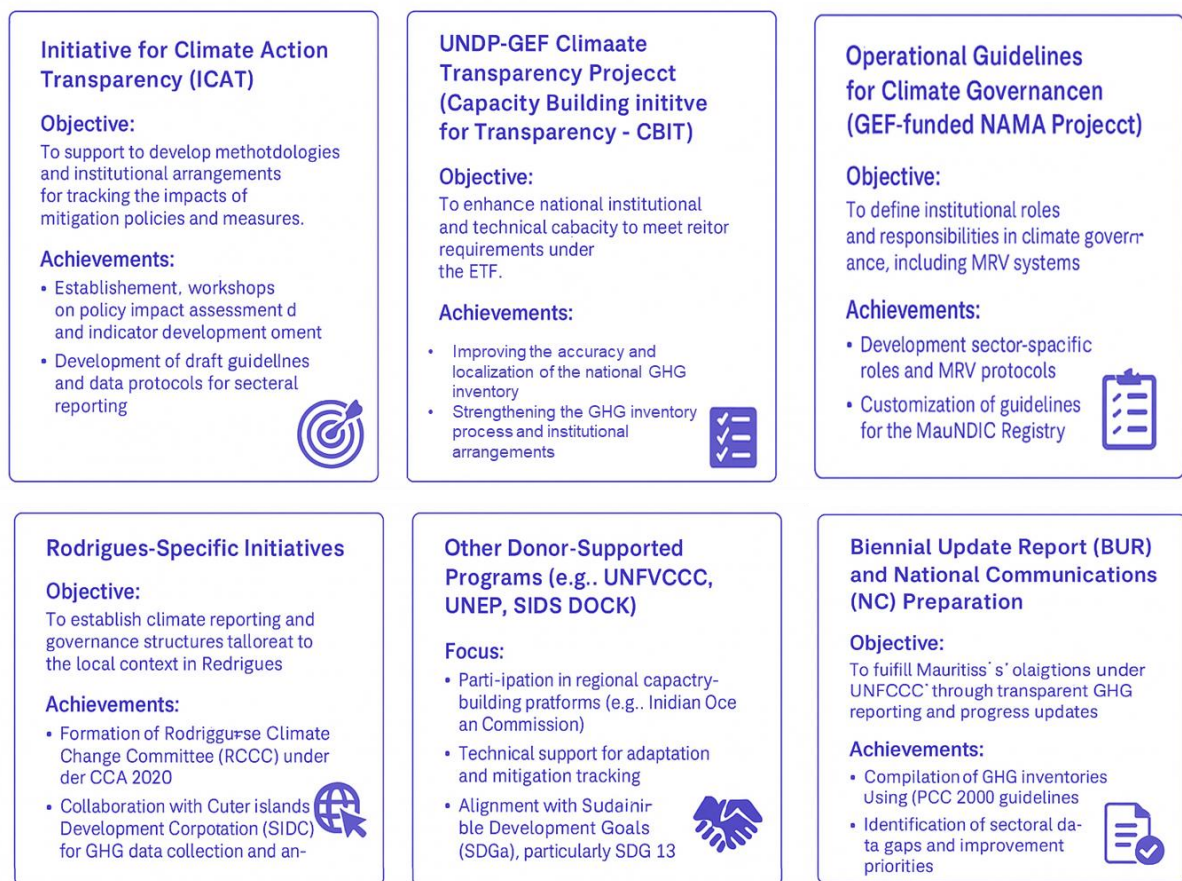


Figure 1: Transparency initiatives in Mauritius and Rodrigues

1.2.3 Analysis of Documentation and Reports Related to Transparency Enhancement

Mauritius has produced a series of key reports and technical documents that form the backbone of its climate transparency efforts. These documents have progressively strengthened the national Monitoring, Reporting, and Verification (MRV) system, supported the operationalization of the

MauNDC Registry, and enhanced the country's readiness for the ETF under the Paris Agreement. This section presents a synthesis and critical review of these materials, highlighting their contributions, strengths, and limitations in supporting NDC tracking and transparency.

Table 2: List of Transparency Documents Reviewed

| Document/Report | Purpose | Contribution to Transparency |
|--|--|--|
| Biennial Update Reports (BURs) | Report GHG emissions and mitigation updates to the UNFCCC | GHG inventory based on IPCC 2006 guidelines; documentation of mitigation actions |
| National Communications (NCs) | Comprehensive overview of national climate status and actions | Long-term policy context; institutional progress |
| GHG Inventory Reports | Quantify national emissions and removals across sectors | Use of IPCC methods; sectoral data improvement |
| MRV Frameworks and Technical Guidelines | Standardize data collection and verification processes | Sectoral MRV templates; operational protocols for registry integration |
| Sectoral Reports and Policy Assessments | Evaluate performance of NDC-contributing policies | Qualitative and semi-quantitative policy impact reviews; ICAT methods piloted |
| National Climate Change Mitigation Strategy and Action Plan (NCCMSAP) | Guide NDC implementation through prioritized mitigation actions | Provides policy roadmap; supports institutional alignment |
| National Climate Change Adaptation Policy Framework (NCCAPF) | Provides overarching policy direction for climate change adaptation across sectors | Establishes clear adaptation priorities and responsibilities, enabling transparent tracking of progress and alignment with NDC adaptation components |

Chapter 2: About MauNDC Registry

The **Mauritius Nationally Determined Contribution (MauNDC) Registry** is the country's central online platform for tracking climate actions and support related to the implementation of its NDCs under the Paris Agreement. Officially launched in December 2022, the registry was developed to enable the systematic and regular collection, preparation, and reporting of data on mitigation, adaptation, and cross-cutting actions across all key sectors, including energy, transport, agriculture, and waste management.

The transition from fragmented and manual reporting to a unified digital system strengthens Mauritius's Measurement, Reporting, and Verification (MRV) framework, ensuring that information is more efficient, reliable, traceable, and transparent.

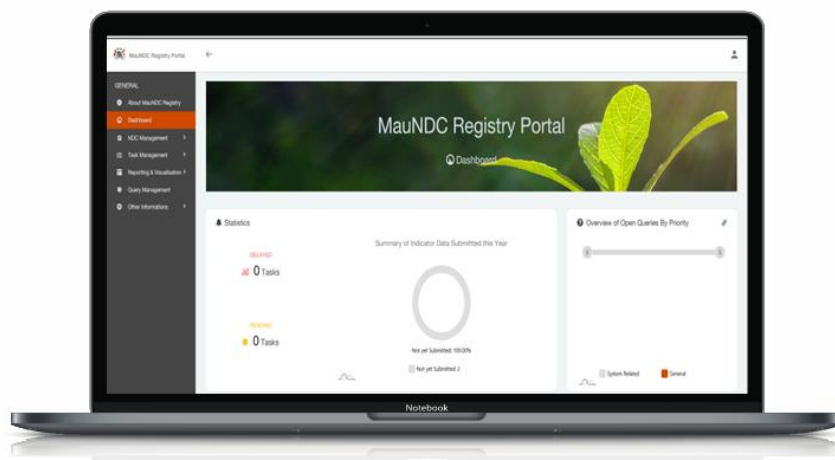


Figure 2: Dashboard of MauNDC Registry

2.1 Key objectives of the MauNDC Registry

The MauNDC Registry has been designed with clear objectives that guide its role in enhancing transparency, consistency, and accountability in tracking Mauritius's climate actions.

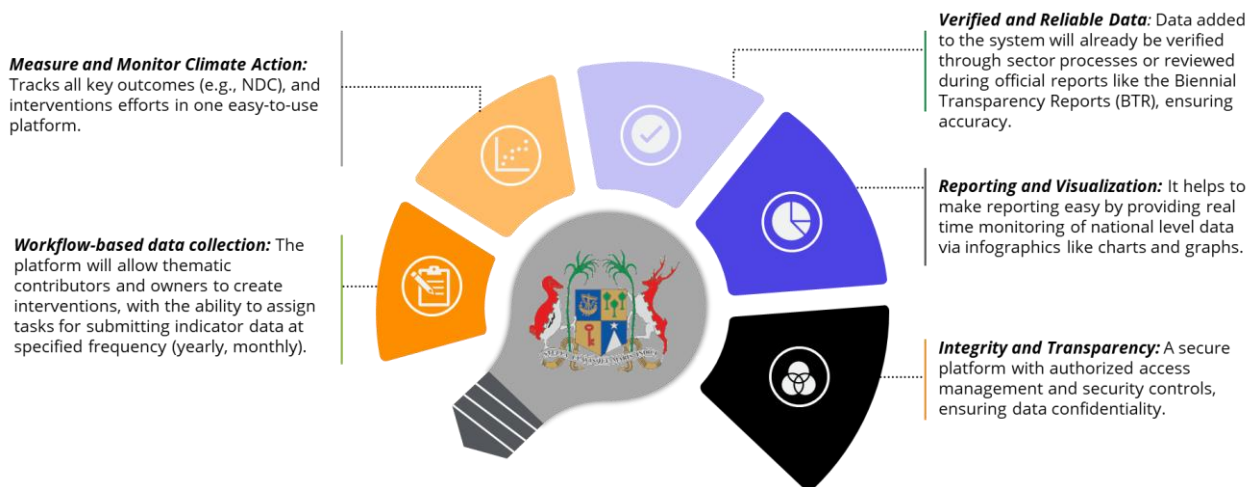


Figure 3: Key Objectives of the MauNDC Portal

2.2 Key Features of the Registry

The registry is equipped with a range of features that make it a practical and user-friendly tool for data collection, monitoring, and reporting across multiple sectors.

Tracks policy and action level implementation and impacts in terms of GHG reductions, adaptation and resilience, co-benefits through progress indicators.

Allows stakeholders to input, update, and validate data in a structured manner.

Incorporates a dashboard and visualization to summarize and visualize progress against NDC targets and indicators

Provides historical data and metadata for policy and measure tracking, enabling better policy planning and evaluation.

Figure 4: Key features of the MauNDC Registry

2.3 Components of the Registry

The MauNDC Registry is structured into distinct components that capture information on outcomes, interventions, indicators, and support, ensuring a comprehensive and systematic approach to NDC tracking.

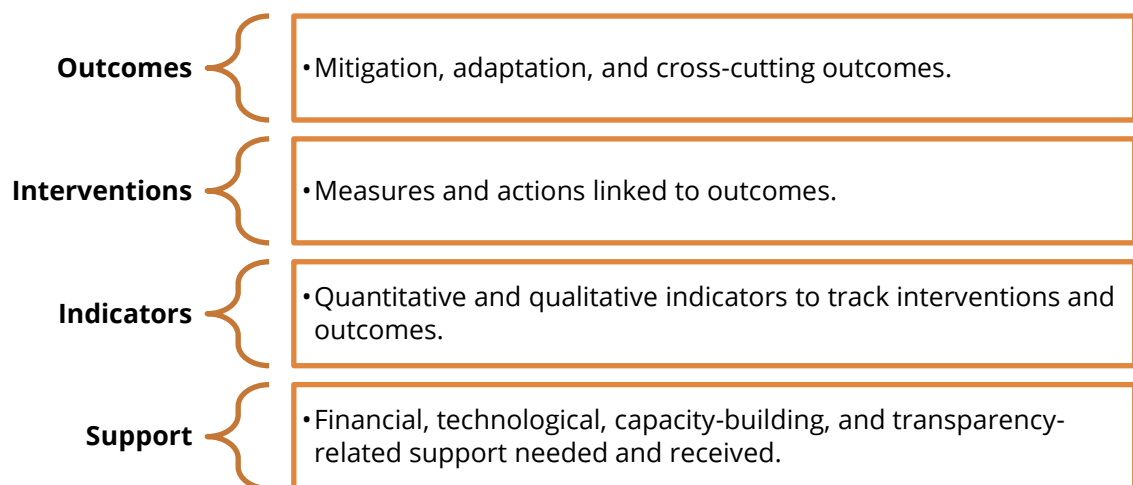


Figure 5: Components of MauNDC Registry

Overall, the MauNDC Registry represents a critical milestone for Mauritius in **strengthening climate transparency**, enabling more accurate reporting to the UNFCCC through Biennial Transparency Reports (BTRs), and enhancing the country's ability to mobilize international climate finance.

2.4 Key Stakeholder Roles and Responsibilities

The effective functioning of the MauNDC Registry relies on the active participation and coordination of multiple stakeholders across government, institutions, and other relevant actors. Each group has defined roles and responsibilities to ensure accurate, timely, and consistent reporting of NDC-related information.

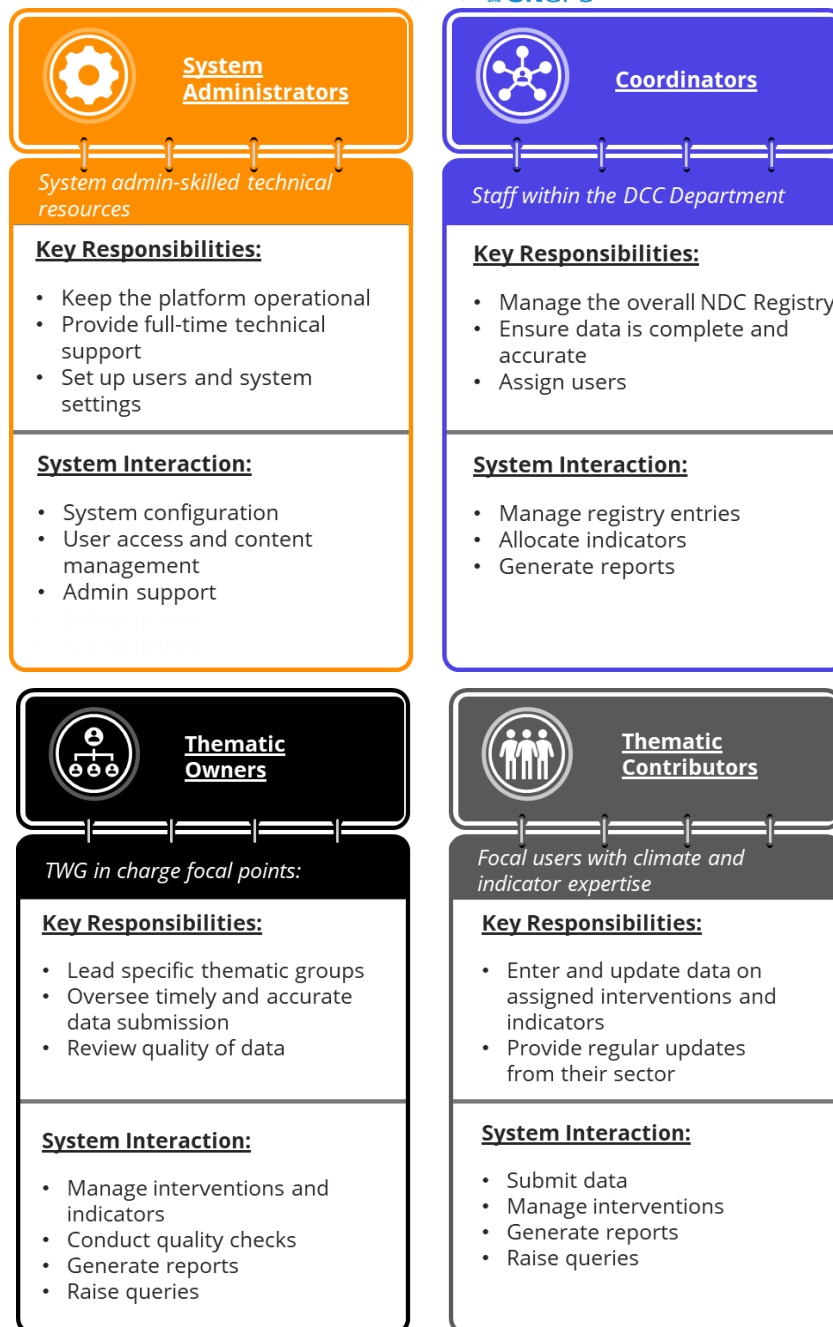


Figure 6: Key Stakeholder Roles and Responsibilities for MauNDC Registry

Chapter 3: Data Gaps Analysis

This chapter outlines key data and system gaps affecting NDC tracking in Mauritius. It highlights issues such as limited user awareness, inconsistent data formats, lack of standardized indicators, and insufficient hands-on experience with the MauNDC Registry.

3.1 Identified Gaps in Data and Information for NDC Tracking

The assessment of the MauNDC Registry has highlighted data and information-related gaps that hinder effective monitoring and evaluation of Mauritius's climate actions and progress toward its NDC targets. These issues compromise the Registry's ability to provide accurate, timely, and policy-relevant information.

Limited User Awareness and Hands-On Experience

- Many designated users across sectoral ministries and agencies were not fully aware of the purpose, scope, or functions of the MauNDC Registry.
- Several had not interacted with the platform directly, leading to underutilization and data entry delays.

Availability and Accessibility of Data

- Sectoral data especially in various sectors, remains incomplete or difficult to access.
- In some cases, data exists but is not centralized, while in others, it is not systematically collected.
- Major challenges were observed for adaptation outcomes and interventions.

Lack of GHG Accounting Knowledge

- There is a knowledge gap among users and data providers in understanding GHG accounting principles, emission sources, and how sectoral activities translate into emission data.
- This limits their ability to generate and verify accurate inputs for the Registry.

Unclear Outcomes, Interventions, and Indicators

- Users often lacked clarity on what qualifies as an NDC intervention, what specific outcomes should be tracked, and how to identify or apply appropriate indicators.
- This resulted in inconsistencies in how policies and measures were recorded or reported.

Figure 7: Issues Identified for Data Gap in Registry

These gaps highlight the need for targeted capacity building, clearer operational guidance, and enhanced coordination mechanisms to strengthen the usability and effectiveness of the MauNDC Registry.

A comprehensive analysis carried out under the GEF-funded NAMA project revealed significant data gaps and institutional weaknesses across key sectors in Mauritius with respect to Measurement, Reporting, and Verification (MRV) of mitigation actions. In many sectors such as agriculture, forestry, solid waste, and transport, data collection is conducted voluntarily, with no formal institutional requirements or standardized templates.

The use of IPCC Tier 1 emission factors is prevalent due to the absence of locally derived factors and the technical capacity required to adopt Tier 2 or 3 methodologies. Although sectors like energy

industries and IPPU have relatively robust data management structures, others, such as solid waste and FOLU, lack mechanisms for systematic data measurement, storage, and QA/QC protocols. Notably, only the National Ozone Unit has reported a complete QA/QC system.

Across sectors, there is limited monitoring of both GHG and non-GHG effects of implemented climate actions, and no formal methodologies or procedures exist for identifying or reporting climate support needed and received, except in the ozone sector. Key barriers include the lack of long-term mitigation strategies, insufficient financial and human resources, low technical capacity, and inadequate institutional mechanisms. Adaptation-related MRV is particularly underdeveloped, hindered by limited technical expertise, a lack of systems to track finance flows, and the absence of defined indicators and monitoring frameworks. The table below is a representation of the current state of various sectors in terms of data availability for NDC Tracking.

Table 3: Current State of the Data

| Sector | Emission Factors | Data Collection Requirement | Data Management Structure | Standardized Templates | Key Gaps |
|--|------------------|--|--|------------------------|---|
| Agriculture | Tier 1 | Voluntary | None | No | No institutional framework for data collection, no templates |
| Energy (Energy Industries) | Tier 2 | MOU-based with IPPs & Statistics Mauritius | Comprehensive (Includes confidentiality & privacy) | Yes | None, data are complete for mitigation analyses |
| Energy (Land Transport) | Tier 1 | Voluntary | Strategy exists (regular updates, backups) | No | No templates, voluntary data collection |
| Forestry & Other Land Use (FOLU) | Tier 1 | Voluntary | None | Yes | No institutional requirement, no data management for mitigation tracking |
| Solid Waste Management | Tier 1 & 2 | None | None | No | Lack of data for total GHG emissions from landfill, waste transport & transfer stations |
| Industrial Processes & Product Use (IPPU) | Tier 1 | None | Web-based system for GHG inventories | No | No formal mechanisms, lack of data on refrigerant consumption, 40% of the required data missing |

3.2 Gaps in Understanding and Defining Outcomes

Consultations revealed that users often lacked a clear understanding of how to define or report outcomes within the MauNDC Registry. Most stakeholders were only tracking activities (e.g., number of buses procured, or workshops held), without connecting these to measurable outcomes like emission reductions or enhanced adaptive capacity. Key issues included:

Unclear definitions of outcomes, particularly in differentiating between outputs, outcomes, and impacts, and how these relate to climate goals.

Confusion between 'outcomes' and 'parent outcomes', especially where interventions contribute to multiple layers of results; users were unsure whether to report immediate or overarching outcomes.

Inadequate linkage between current outcomes and national strategies, the outcomes currently available in the Registry are not well aligned with the expected results of national mitigation and adaptation strategies.

Stakeholder concerns about the relevance and currency of listed outcomes, with several users noting that the basis for existing outcomes was unclear, outdated, or not applicable to their sectors.

Absence of standard outcome indicators, especially for adaptation-related actions, where concepts like resilience and vulnerability reduction lack clear metrics.

Limited training or guidance, which left users unsure how to translate policy objectives into quantifiable and reportable results.

Inability of users to define interventions based on current outcomes, due to a lack of clarity and relevance in the Registry's outcome library.

Misalignment between policy design and registry reporting fields, complicating the accurate reflection of intended impacts.

This lack of clarity has led to inconsistent, incomplete, or inaccurate reporting of outcomes, ultimately reducing the ability of the Registry to assess whether policies and measures are effectively contributing to NDC targets.

3.3 Gaps in Interventions Mapping and Categorization

Another recurring issue was the difficulty faced by users in categorizing interventions within the Registry, especially in sectors with cross-cutting or enabling actions. Many users lacked clarity on the scope and typology of interventions and how these link to NDC implementation. Specific challenges included:

Lack of a standardized typology or classification system for mitigation and adaptation interventions, leading to varied interpretations across ministries and sectors.

Overlap and confusion between project-level activities and policy-level interventions, making it difficult for users to determine what qualifies as a reportable intervention.

Limited user awareness of how interventions are mapped to national climate goals, sectoral targets, or specific NDC commitments.

Inability to track the progress or implementation status of interventions due to the absence of supporting fields for implementation milestones, timelines, or documentation uploads.

Poor understanding of the Registry structure and its interlinkages, many users reported confusion about how outcomes, interventions, and indicators are interconnected within the system.

Unclear roles and responsibilities, several users noted they did not know their specific contributions in identifying or reporting indicators and interventions.

Lack of technical capacity to calculate GHG emission reductions, which affected the quality and completeness of intervention entries.

Duplication of interventions and cross-sectoral overlaps, especially for projects implemented collaboratively across multiple ministries (e.g., urban mobility, waste-to-energy), due to a lack of coordination or shared visibility.

Difficulty in defining interventions where existing ones in the Registry did not match users' actual policies or measures, leading to under-reporting or misclassification.

These gaps highlight the need for a revised Registry structure with better logic for mapping interventions, clearer classification guidance, tailored capacity-building support, and improved usability features to enhance accuracy and coherence in reporting.

3.4 Gaps in Indicators for Baseline Setting and GHG Impact Estimation

An effective NDC tracking system requires indicators that are not only aligned with global methodologies but also adapted to local policy contexts and data availability. While the MauNDC Registry currently includes a range of indicators, some of which are informed by international standards such as ICAT guidance and IPCC methodologies, their suitability for establishing baselines and calculating GHG reductions remains limited due to the following issues:



Figure 8: Gaps in Indicators

These challenges suggest that while the structure of the MauNDC Registry is conceptually sound, its current application is constrained by data availability, capacity limitations, and a lack of institutional clarity. Strengthening the Registry's functionality will require revisiting the indicator framework, enhancing user guidance, and establishing technical support mechanisms for GHG quantification.

Users face significant challenges in providing GHG-related data, as many sectors currently monitor and track other types of information (e.g., amount of fuel used, number of EV vehicles, etc.) rather than direct emissions or adaptation metrics. This creates a disconnect between the data that is readily available and the data required for robust tracking of GHG impacts and adaptation outcomes. Without clear guidance, stakeholders struggle to identify the appropriate methods and approaches to translate their existing datasets into measurable GHG emissions or adaptation indicators.

There is therefore a strong need for targeted guidance materials and capacity-building activities to support both the Department of Climate Change (DCC) and sectoral stakeholders in bridging this gap and ensuring consistency, comparability, and accuracy in data reporting.

To overcome this challenge at the current stage, non-GHG indicators were recommended as an entry point to feed data into the MauNDC Registry and facilitate the tracking of NDC implementation. These indicators, while not directly quantifying GHG impacts, provide a practical way to capture sectoral progress, build familiarity with the reporting system, and gradually strengthen the capacity of stakeholders to transition towards more robust GHG-related metrics over time. Recommended non-GHG indicators for mitigation and adaptation are given in Annex D and Annex E.

3.5 User Constraints

The current system design allows for the creation of multiple hierarchical layers through parent and child outcomes and parent-child interventions. While this approach provides a useful functionality to represent the complexity of national policies, strategies, and adaptation measures, it also creates confusion for users. Specifically:

- Users face challenges in differentiating between **parent interventions** (broad measures or overarching policy frameworks) and **child interventions** (specific measures or activities derived from them).
- Similarly, outcomes linked at different levels (parent-level outcomes vs. child-level outcomes) are not clearly distinguishable, leading to overlapping or duplicate reporting and difficulties in tracking results.
- Interventions sourced from **national strategies and adaptation documents** are often presented alongside these parent-child linkages, making it difficult to understand whether they are standalone measures or subsets of broader interventions.

This complexity risks undermining the transparency and usability of the system, as stakeholders may misinterpret the hierarchy or fail to capture accurate relationships between policies, measures, and their outcomes.

Chapter 4: Outcomes of Validation Workshop

4.1 Validation Workshop

The validation workshop for the Mauritius NDC Registry brought together sectoral representatives, stakeholders, and technical experts to review the existing structure, identify gaps, and propose actionable reforms. The session focused on strengthening the Registry's capacity to track climate actions in a transparent, consistent, and sector-responsive manner. The workshop was held on Thursday, **13th February 2025, at the Gold Crest Hotel, Quatre Bornes, Mauritius**. The validation workshop brought together approximately 43 participants, including representatives from the DCC and Deloitte teams from India and Mauritius.

The workshop emphasized improving MauNDC Registry usability, classification systems, financial tracking, and inter-ministerial coordination. Implementing these recommendations will enhance Mauritius' ability to track its climate commitments effectively, strengthen governance, and align with international transparency frameworks.

4.2 Gaps and Recommendations from the Validation Workshop

During the validation workshop, participants from various sectoral ministries and agencies engaged in an open and constructive dialogue on the practical challenges they face while using the MauNDC Registry. The discussions highlighted several recurring issues related to data availability, indicator relevance, outcome and intervention mapping, system usability, and alignment with national and international reporting frameworks. These insights reflect both technical and institutional gaps that need to be addressed to enhance the effectiveness, accuracy, and user-friendliness of the Registry. The key issues and suggestions that emerged are summarized below.

Table 4: Gaps and Recommendations from Validation Workshop

| Gaps | Recommendations |
|---|--|
| <ul style="list-style-type: none"> • Users addressed that they were facing challenges in understanding the registry and its linkage to outcomes and interventions. | <ul style="list-style-type: none"> • A handholding workshop will be arranged to understand the registry in detail with the live data inputs of the relevant sectors. |
| <ul style="list-style-type: none"> • They were unclear on the fact that what was their role in the indicators and interventions. Also, they highlighted that they were and will not be able to perform the GHG emission or reduction calculations. | <ul style="list-style-type: none"> • A section on conversion of values to GHG emission or reduction can be created, which may require detailed changes in the registry. |
| <ul style="list-style-type: none"> • Names of ministries are outdated in the vocabulary of the MauNDC Registry, same with sectors and KPIs. | <ul style="list-style-type: none"> • Modify names as per the latest government records and related sectors, also to be updated. • Data cleansing should be performed to ensure that when selecting certain categories, sectors that are not applicable do not appear in the drop-down options. |
| <ul style="list-style-type: none"> • Currently, users have to view the related outcomes for their department and later | <ul style="list-style-type: none"> • Align intervention details, implementation details, and support mechanisms in a single |

| | |
|---|--|
| <p>create an intervention >> add implementation details >> add cost details >> Geographical Details >> Data Source >> Attachments, after which they have to again add data in indicators under the task management section. Again, they have to add support-related details in a different section.</p> | <p>integrated window.</p> <ul style="list-style-type: none"> • Users only update all the details for each intervention at once. • They have confusion with separate details to be filled for intervention, support, and indicators. • Also, the users wanted to understand the annual updates to be added to the same intervention when the implementation stage changes. |
| <ul style="list-style-type: none"> • Cross-sectoral Projects and duplication of projects/ interventions | <ul style="list-style-type: none"> • Users recommended having a unique intervention/project ID for use of use. It will be the same throughout their operations, from planning to execution and completion. |
| <ul style="list-style-type: none"> • Users also had a query for Long-Term Project Management, as it becomes difficult when the project is on hold or waiting for approvals for a long time. In such cases, what shall be done, as it will not have any progress over time. | <ul style="list-style-type: none"> • Guidelines can be developed for projects with pending or discontinued funding, with a section for adding the reasons and supporting documents. |
| <ul style="list-style-type: none"> • The current registry only allows users to feed in the data, but they are not able to pull out all the filled data in the form of a report. | <ul style="list-style-type: none"> • Feasibility can be checked for incorporating the feature to assess printing all input fields (from outcomes to indicators). |
| <ul style="list-style-type: none"> • MRV role in the organization - then it should be limited in the final options-wise • Ex: If we create an individual account for the energy sector, they shall see only the interventions related to Energy while filling up the forms. | <ul style="list-style-type: none"> • Once the MRV role is fixed, for the selected sector, the user should only be able to see the sector related to the field selected. |
| <ul style="list-style-type: none"> • The definition of TWG - Technical or Thematic Working Group. • It can create confusion for the users and readers. | <ul style="list-style-type: none"> • Proper differentiation in the documents between Thematic Working Groups and Technical Working Groups in the MauNDC registry should be aligned with the documents |
| <ul style="list-style-type: none"> • The current user manual has only a section on thematic users. • It also has references to a few activities in the contributory section. | <ul style="list-style-type: none"> • A separate User Manual for Thematic users with clear responsibilities of Thematic Contributors and Thematic Owners. • Also, an information box can be added at each input cell with notes on what data is to be filled. |
| <ul style="list-style-type: none"> • While viewing the outcomes from the thematic user's end, the outcome's details are not visible and show error 404. | <ul style="list-style-type: none"> • To resolve the error and make the relevant outcomes accessible to users. |
| <ul style="list-style-type: none"> • The current mapping of outcomes is not properly linked with the expected outcomes of the mitigation and adaptation strategies. | <ul style="list-style-type: none"> • Defining outcomes and parent outcomes aligned with targets and sectors. • Also to define the cross-sectoral outcomes. |
| <ul style="list-style-type: none"> • Stakeholders enquired about the basis for the current outcomes of the registry, as they feel they were less relevant and a few of them were unknown or outdated. | <ul style="list-style-type: none"> • To create outcomes in consultation with the relevant stakeholders and policymakers, sector-wise. • The outcomes shall be agreed and verified by |

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| | <p>the sectors/TWGs.</p> <ul style="list-style-type: none"> It will also help in understanding the shared responsibilities of the users amongst sectors and verifiers. |
| <ul style="list-style-type: none"> Users are not able to define the interventions on their own based on the outcomes. Also, the intervention inputs have high chances of duplication due to changes in names or sentences. | <ul style="list-style-type: none"> To predefine/prefeed details of most of the interventions for the users to only feed the data. Allow users only to add child interventions if required. Make the parent indicator as mandatory as per the mitigation or adaptation plan to easily trace the progress and details. |
| <ul style="list-style-type: none"> Current classifications are very detailed and can create confusion and reduce the risk of misclassification of categories. | <ul style="list-style-type: none"> Recommended Classification – fewer classifications for mitigation and adaptation |
| <ul style="list-style-type: none"> The sectors have a long list that creates confusion for users to understand and define sectors. | <ul style="list-style-type: none"> It is recommended to have sectors and subsectors for ease of use. Also, the list of sectors is to be reduced. |
| <ul style="list-style-type: none"> The current list of gases is too detailed for users to define a particular category. | <ul style="list-style-type: none"> To reduce the number of gases as referred to below. |
| <ul style="list-style-type: none"> The field of the implementation stage is not well defined. They do not have a definition or explanation of the stage of a project. Users find it difficult to decide what shall be filled. | <ul style="list-style-type: none"> A proper definition of each stage with an example shall be provided in the user manual. Provision for the addition of something related to “Not Started” can be given. Dropped also can be an option that was suggested. |
| <ul style="list-style-type: none"> The objective status for implementation is not defined. What shall be the criteria for the selection of the status? | <ul style="list-style-type: none"> Provide users with clear definitions or criteria for the same. Percentage ranges can also be provided for the achieved status. Like 20%, 50% or 70% achieved. |
| <ul style="list-style-type: none"> The users are confused about the type of instrument and its significance. How is it separate from the classification? If a project has more than 1 instrument used, what is to be done in such cases? | <ul style="list-style-type: none"> Signification and clear explanation for each type of instrument should be provided. If not needed, it should not be kept in the scope of users. To avoid incorrect answers. |
| <ul style="list-style-type: none"> What shall be considered without measures, existing measures, and additional measures. | <ul style="list-style-type: none"> Users shall be guided in the same detail during the capacity building workshop, and an explanation of the same shall be given in the user manual. |
| <ul style="list-style-type: none"> Users feel that they have many barriers to implementation and thus have a lot of input. They wanted another option and a text box to input the data. | <ul style="list-style-type: none"> If the registry is revised, an option of Others with a text box can be provided. |
| <ul style="list-style-type: none"> Users were not confident about their ability to answer the same currently, as the outcomes defined presently are not | <ul style="list-style-type: none"> Once all the outcomes are aligned, they shall be able to link the same for each intervention. |

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| aligned. | |
| <ul style="list-style-type: none"> • There is no definition of the priority level for users • Users feel they may put all the projects under High priority as they know their particular projects in their department. | <ul style="list-style-type: none"> • It can be decided based on the linked outcomes and their alignment with the latest NDCs. |
| <ul style="list-style-type: none"> • Users feel that the details of the cost and the details in support are repetitive. • Users and the finance department want a detailed | <ul style="list-style-type: none"> • To include it under the intervention section, if possible, to integrate |
| <ul style="list-style-type: none"> • What kind of data is to be fed in this section? • What will be the format of the data source? | <ul style="list-style-type: none"> • To define and train users for the same. |
| <ul style="list-style-type: none"> • Most of the current indicators are related to GHG emissions for mitigation. • The separate section of task management for indicator submission is confusing. • The indicator ID is generated on its own. | <ul style="list-style-type: none"> • To include non-GHG indicators, focusing on adaptation also. • To look at the issue, any changes are possible. • It should have some linked pattern or be linked to an intervention ID. |
| <ul style="list-style-type: none"> • Total GHG emissions, net GHG emissions, and GHG emission reduction are confusing for users to input the data. | <ul style="list-style-type: none"> • Specific indicator details can be defined for each user and explain to them all the information that is related to them. |
| <ul style="list-style-type: none"> • The Quantitative Value box allows alphabets along with numbers | <ul style="list-style-type: none"> • The Quantitative Value box shall only allow numbers, and a separate section shall be generated to enter units |
| <ul style="list-style-type: none"> • Indicative or commonly used units are not given in the section. | <ul style="list-style-type: none"> • Few general and most frequently used units shall be defined in the vocabulary. |
| <ul style="list-style-type: none"> • Frequency for different departments can be different. | <ul style="list-style-type: none"> • Frequency for different departments can be different. |
| <ul style="list-style-type: none"> • Every intervention must be reviewed before submission. The system doesn't allow the submission of a single intervention independently. | <ul style="list-style-type: none"> • If the verifier is allowed, they can review and submit a single intervention in one go. |
| <ul style="list-style-type: none"> • A verifier may face challenges in verifying data from another institution. Approval already happens at the institution or parent ministry level, ensuring quality control. | <ul style="list-style-type: none"> • The need for a Verifier to be looked into |
| <ul style="list-style-type: none"> • A third party is already engaged during NC/BTR preparation for quality assurance. Adding another quality assurance step for the platform may make the process more complex. | <ul style="list-style-type: none"> • Evaluate whether additional QA is necessary or if existing QA processes for NC/BTR can be leveraged for the platform. Avoid redundancy to streamline workflow. |
| <ul style="list-style-type: none"> • Lack of visibility on the specific source of funding for each action/intervention, making it difficult to track financial contributions and mobilization efforts. • The system does not differentiate between allocated funds and actual spending, leading to potential misinterpretation of mobilized | <ul style="list-style-type: none"> • It was highlighted during the workshop that the main aim of the MauNDC registry is to track NDC. • However, the request for changes in Support will be discussed with DCC and UNOPS. • Further to discuss the same. |

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| resources. Fluctuations in funding across financial years (e.g., unspent funds, budget reductions, or increases) are not adequately reflected in reporting. | |
| <ul style="list-style-type: none"> • There is no mechanism to demonstrate when funds were mobilized but remained unspent due to constraints faced by Implementing Agencies, limiting transparency in financial reporting. | |
| <ul style="list-style-type: none"> • The system does not currently link the timeline of implementation with funds mobilized and spent, affecting the accuracy of financial reporting and monitoring of progress over time. | |
| <ul style="list-style-type: none"> • Users also want to capture project costs and funding sources. | <ul style="list-style-type: none"> • Implement multi-classification for funding and specify sources. • (If revisions are made) |
| <ul style="list-style-type: none"> • VAT implications are currently not included. | <ul style="list-style-type: none"> • Include VAT considerations are factored into financial reporting. |
| <ul style="list-style-type: none"> • Link co-financing sources, such as Corporate Social Responsibility (CSR) contributions and in-kind funding, to the main financial reporting section. | <ul style="list-style-type: none"> • To discuss the relevance and feasibility of the NDC tracing registry. |

4.3 Outcomes of the Validation Workshop

The validation workshop revealed systemic and operational challenges that hinder the effectiveness of the MauNDC Registry in supporting national climate commitments. The discussions revealed a strong consensus around the following key issues:

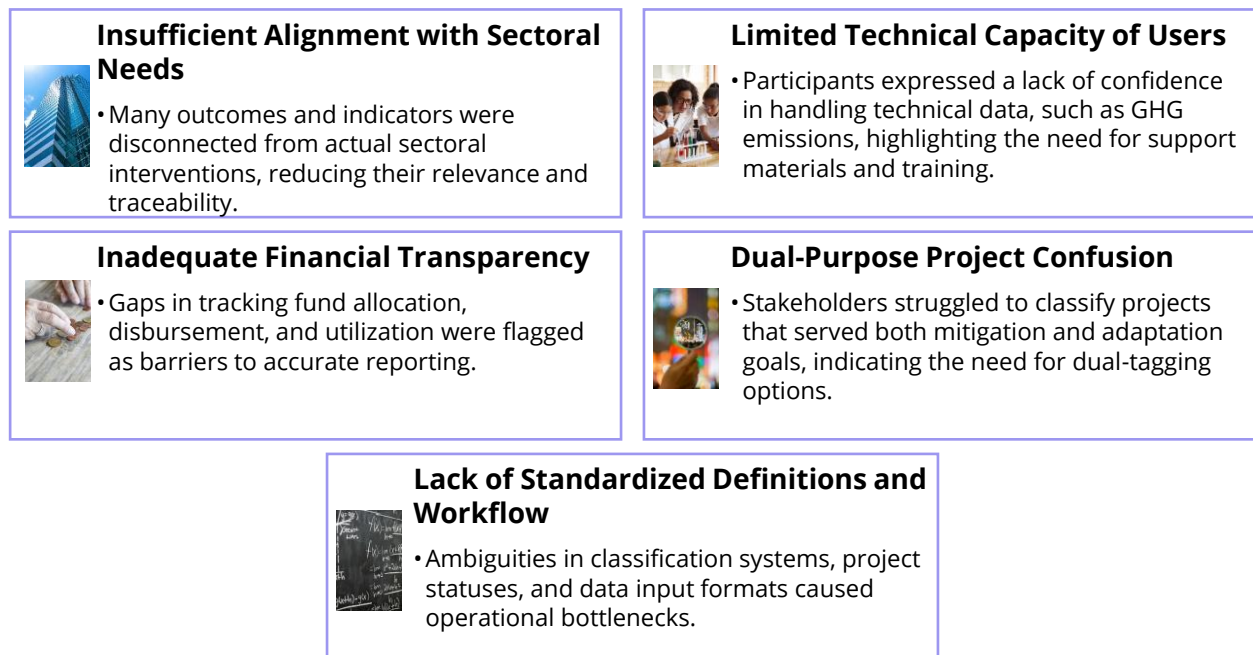


Figure 9: Outcomes of Validation Workshop

The workshop concluded with a set of consensus-based recommendations to restructure the

Registry for clarity, efficiency, traceability, and strategic alignment with national and international climate reporting mechanisms. A phased implementation plan, starting with vocabulary updates, user training, and intervention structure realignment, was recommended as the next step in enhancing the Registry's performance.

Chapter 5: Revised Structure of the MauNDC Registry

This chapter outlines the proposed revisions to the structure of the MauNDC Registry, focusing on key improvements needed for outcomes, interventions, and indicators from both user and coordinator perspectives. It also presents specific suggestions aimed at enhancing the usability, clarity, and effectiveness of the Registry for streamlined data entry and improved NDC tracking.

5.1 Overview of the Proposed Structure

Based on the gap assessment, stakeholder consultations, and a review of relevant transparency initiatives, the MauNDC Registry has been restructured to enhance its usability, alignment with the ETF, and its ability to support effective tracking of NDC-contributing policies and measures. The revised structure introduces a clear and logical classification of data, improved linkages between interventions and outcomes, and better integration of indicators and metadata to ensure consistency, transparency, and institutional relevance. It also aims to facilitate user navigation, improve data entry processes, and support automated reporting functions.

The updated structure addresses previously identified limitations, such as weak connections between policy interventions and measurable outcomes, the absence of standardized indicator definitions, and challenges with historical data tracking. The new structure also incorporates user-friendly layouts and contextual guidance to aid sectoral focal points and data entry technicians.

5.2 Key Components of the Revised Structure

The revised MauNDC Registry structure is organized around three core elements that enable seamless tracking of NDC implementation:

5.2.1 Recommended Revisions for Outcomes

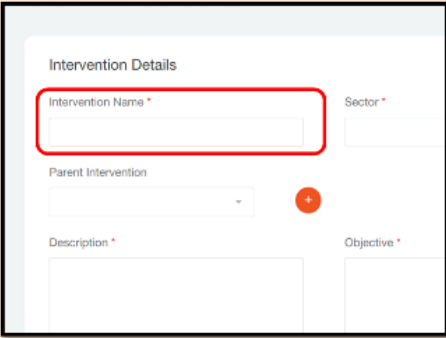
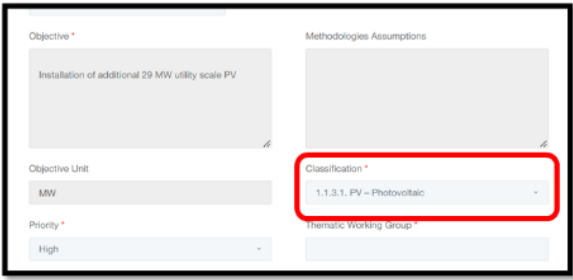
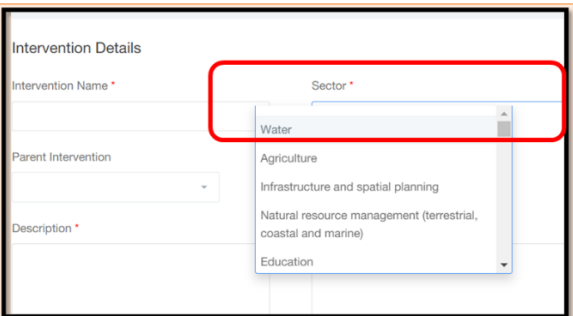
Outcomes are the intended or achieved results that stem from the implementation of NDC-contributing policies and measures. The major revisions suggested for the user end are highlighted below:

- i. **Mapping of Outcomes:** Outcomes should be systematically mapped from relevant national strategies, including the *National Mitigation Strategy and Action Plan (NCCMSAP)* and the *National Climate Change Adaptation Policy Framework (NCCAPF)*. All outdated or irrelevant data from previous versions should be removed to ensure consistency and alignment with current national priorities.
- ii. **Defining and Structuring Outcomes:** Outcomes must be clearly defined to avoid ambiguity. It is recommended to either:
 - **Remove the 'Parent Outcome' field** if it leads to confusion for users, or
 - **Make the use of 'Parent Outcome' mandatory**, with standardized guidance, to ensure consistency in how hierarchical linkages are created between broader and specific outcomes.

5.2.2 Recommended Revisions for Interventions

During the assessment, several structural and functional issues were identified, ranging from overly detailed classifications and sector lists to the absence of standard definitions for stages and priorities. These inconsistencies not only create confusion for users but also hinder effective monitoring and reporting. The proposed revisions aim to streamline intervention entry, align terminologies, and improve the usability of the registry by making it more intuitive, standardized, and aligned with national MRV requirements.

Table 5: Recommended Revisions for Interventions

| No. | Gap / Issue Identified | Recommended Revision | Visuals |
|-----|---|--|--|
| 1 | Intervention names are not standardized. | Predefine Parent Interventions by the DCC and add them to the lookup vocabulary |  |
| 2 | Overly detailed classifications create confusion. | Simplify classification categories under mitigation and adaptation (e.g., avoid very specific tags like "1.1.3.1 PV - Photovoltaic") |  |
| 3 | The sector list is too long and complex. | Restructure sectors into sectors and subsectors , and reduce the overall list. |  |

4 Excessive number of gases listed Reduce gas categories to only those relevant for NDC tracking (e.g., CO₂, CH₄, N₂O, etc.)

5 Lack of clarity on intervention stages Define each **intervention stage** (e.g., start, implementation, operational, completed) and integrate a standard tracking system.

6 No definition for continuous interventions or status (achieved/partially achieved) Clearly define boundaries and conditions for intervention status.

7 No method to indicate intervention priority Add a **priority field** (e.g., high, medium, low) with clear definitions and guidance.

8 Users unsure of Thematic Working Group (TWG) affiliation Pre-assign interventions to relevant **TWGs** in the system for user reference

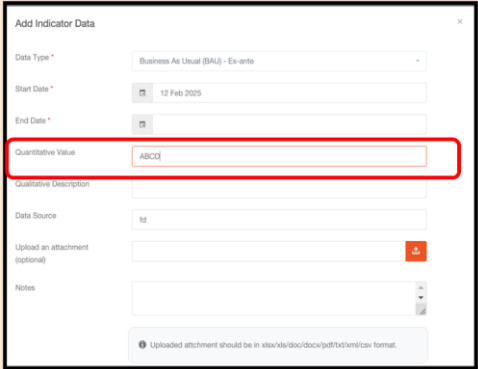
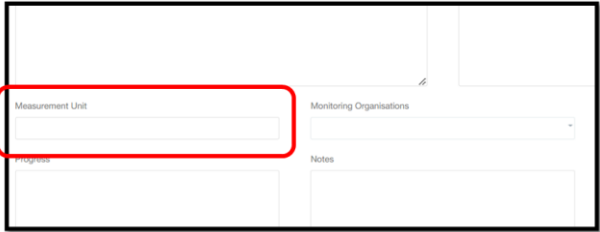
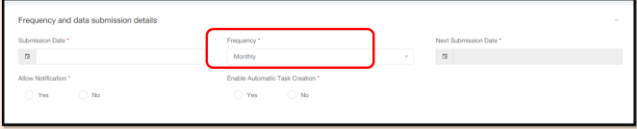
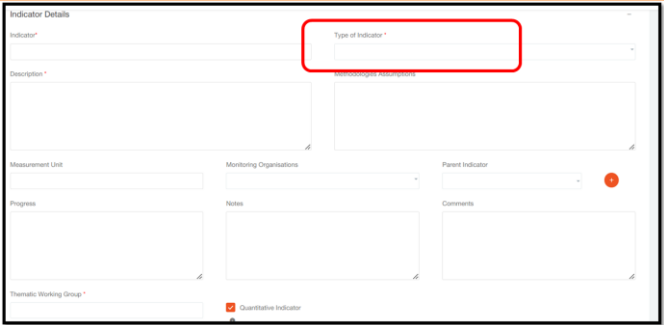
9 Parent intervention is not mandatory Make **Parent Intervention mandatory** or remove it entirely to avoid confusion.

5.2.3 Recommended Revisions for Indicators

The current setup presents several challenges that hinder accurate and consistent data entry. Issues such as the allowance of alphabets in quantitative fields, lack of predefined units, inconsistent

reporting frequencies across departments, and the absence of indicator type definitions have been identified. Additionally, many existing indicators are heavily focused on GHG-related data, which is often unavailable or difficult for users to report.



Table 6: Recommended Revisions for Indicators

| Sr no. | Current Gap | Recommended Revision | Visuals |
|--------|---|---|--|
| 1 | Lack of numeric input control | Restrict input to numeric values only and create a separate field for units . |  |
| 2 | The Units field is open-ended and inconsistent. | Predefine a list of frequently used units (e.g., tons CO ₂ e, MWh, km, %) in the vocabulary. |  |
| 3 | Different users have different reporting frequencies | Define common reporting frequencies by sector or intervention type (e.g., annual, quarterly) with default data entry deadlines |  |
| 4 | Users are unclear whether an indicator is output, outcome, or impact level. | Add a “Type of Indicator” field with categories like Output, Outcome, Impact, GHG, and Non-GHG. |  |
| 5 | Users lack access to GHG-specific data, especially in early phases | Develop new user-friendly indicators based on available intervention-level data (e.g., number of solar panels installed, area reforested) | |

5.2.4 Recommended Revisions for Support

The effective use of the support module within the MauNDC Registry is essential to capture financial, technological, and capacity-building needs for NDC implementation. While no structural issues have been identified with the module itself, stakeholder feedback highlights challenges related to the costing of actions, identification of financial support needs, and alignment of tracked expenditures with reporting requirements. To ensure the module becomes a practical tool for decision-making and resource mobilization, targeted revisions and guidance are required. These should focus on standardizing cost estimation approaches, defining categories of support, and providing clear instructions for stakeholders to report their needs and received support in a consistent and comparable manner.

Table 7: Recommended Revisions for Indicators

| Sr no. | Current Gap | Recommended Revision | Visuals |
|--------|--|--|---|
| 1 | Users feel it is repetitive to re-enter all relevant details in the Support module that are already captured elsewhere in the registry. | Streamline data entry by enabling auto-linking of information already entered in other modules, with an option for users to verify or edit only where necessary. |  |
| 2 | Users are often unaware of what information needs to be included under “Expected/Achieved Impact and Result” or “Methodology and Approach for Support Estimates.” | Provide clear guidance notes, examples, and tooltips within the system to explain what information is required under each field, complemented by stakeholder training. |  |
| 3 | Some users reported receiving only partial financial support, which makes implementation of projects/interventions difficult and results in no progress being reflected in outcome indicators. | Allow the registry to capture partial funding cases, flagging them as “partially funded,” and link them to a note explaining implementation constraints so that lack of progress is not misinterpreted as non-performance. | |
| 4 | Lack of transparency on financial support received and its source in the registry reporting line. | Ensure that the support received for each action/intervention, along with the source of funding, is clearly visible in the reporting line for transparency on mobilization of funds. | |
| 5 | No distinction between funds allocated (budgetary/grant) and the actual amount spent, leading to inaccurate reporting of mobilized | Introduce a clear demarcation between allocated funds and actual expenditures, enabling the system to reflect funds mobilized but unspent due | |

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| | resources. | to institutional or implementation constraints. |
| 6 | Inability to link financial data with implementation timelines, making it difficult to track when resources were mobilized and used | Integrate timelines of implementation for each action/intervention, with corresponding data on funds mobilized and spent during the implementation period for accurate, time-bound reporting. |
| 7 | Difficulty in identifying and reporting financial support needs beyond broad budget allocations. | |

5.2.5 Other General Recommended Revisions

As part of the efforts to enhance the functionality and user experience of the MauNDC Registry, several operational and technical gaps were identified through stakeholder feedback and practical testing. These gaps, if not addressed, may hinder the effective use and credibility of the registry for tracking NDC implementation. The table below outlines the current issues observed and presents corresponding recommendations to improve system performance, ensure user clarity, and strengthen institutional alignment.

Table 8: Other Recommended Revisions for MauNDC Registry

| Sr. No. | Current Gap | Recommended Revision |
|---------|---|---|
| 1 | MRV's role in the organization is not sector-specific, allowing access to unrelated interventions. | Once the MRV role is defined, the user should only have access to interventions related to their assigned sector (e.g., Energy users only see Energy interventions). |
| 2 | Ambiguity in the definition of TWG – Technical or Thematic Working Group. | Differentiate between Technical and Thematic Working Groups in all documents and ensure alignment in the MauNDC registry terminology and usage. |
| 3 | The current user manual only includes a section on thematic users and some references in the contributor section. | Prepare a dedicated user manual for Thematic Users, clearly defining the roles and responsibilities of both Thematic Contributors and Thematic Owners. |
| 4 | Presence of outdated or irrelevant data in the registry. | Clear the registry of all legacy data to ensure consistency, accuracy, and relevance in future reporting and monitoring. |
| 5 | Users encounter "Error 404" when accessing the Outcomes section at the User end. | Resolve access configuration issues to ensure a smooth and error-free user experience while accessing the Outcome Module. |
| 6 | Auto-mail notifications to verifiers are not triggered upon data correction or user updates. | Disable the verifier function if auto-mailers cannot be made functional, or alternatively, ensure the auto-mail system is fixed and triggers appropriately during data updates. |

Chapter 6: Support Landscape for NDC Implementation

The chapter provides an overview of the current support received and the additional support required to implement Mauritius' NDCs effectively. It highlights financial, technical, and capacity-related needs along with institutional roles and responsibilities.

6.1 Support Provided to Date (National and International)

Mauritius has benefited from a range of support mechanisms, both nationally driven and internationally funded, geared towards enhancing its climate action and strengthening its NDC implementation framework. Internationally, support has been mobilized through initiatives such as the GEF-funded "Nationally Appropriate Mitigation Actions for Low Carbon Island Development Strategy," the UNDP's Low Emission Capacity Building (LECB) Programme, and ICAT's support for improving transparency and MRV systems. These have contributed to the development of tools such as the MauNDC Registry, enhancement of GHG inventory systems, capacity building, and sectoral studies.

Nationally, support has been coordinated primarily through the Ministry of Environment, Solid Waste Management and Climate Change, with contributions from line ministries in sectors such as energy, transport, agriculture, and waste. Technical working groups and thematic contributors from various departments have been engaged in data provisioning and review processes. National Statistics Mauritius and the National Ozone Unit have also provided critical data and support functions in GHG tracking.

Despite these efforts, many initiatives have been project-based and time-bound, limiting long-term sustainability. In addition, the translation of external technical support into long-term institutional capacity remains a challenge.

6.2 Support Required (Financial, Technical, Capacity)

To fully operationalize and sustain the implementation of Mauritius' Nationally Determined Contributions (NDCs), structured and sustained support is required across three interconnected domains: financial, technical, and capacity development. While several initiatives have laid the groundwork for climate action, the transition to an integrated and self-sufficient MRV system demands both depth and continuity in support.

6.2.1 Financial Support

Mauritius requires dedicated and sustained financial resources to institutionalize and scale up NDC-related actions across sectors. Key financial needs include:

- **Sector-specific MRV System Development:** Funding is required to establish robust and interoperable MRV systems tailored to each key emitting and vulnerable sector (e.g., energy, transport, agriculture, LULUCF, waste, and water). These systems must be capable of collecting, managing, and reporting disaggregated data at the sectoral and sub-sectoral levels.
- **Infrastructure Investment:** Support is needed to upgrade or establish new physical and digital infrastructure necessary for resilient, low-carbon development. This includes

investments in renewable energy systems, electric mobility infrastructure, climate-resilient transport, water resource management, and early warning systems.

- **Long-Term Data Systems:** Financial investment is necessary to establish centralized data platforms with integrated data pipelines from various ministries, agencies, and partners to support MRV needs, analytics, and decision-making.
- **Domestic Climate Finance Mechanisms:** Establishing national-level climate funds or leveraging public-private financing frameworks can ensure predictable funding to scale up NDC implementation and align with the evolving transparency and climate finance requirements under the Paris Agreement.
- **Access to International Climate Finance:** Mauritius must continue to engage with multilateral sources such as the Green Climate Fund (GCF), Adaptation Fund, and bilateral donors to mobilize climate finance that supports its NDC priorities and addresses conditional targets.

6.2.2 Technical Support

Mauritius requires a range of technical support to strengthen data quality, enhance methodological rigour, and ensure sector-wide consistency in NDC tracking. Key areas include:

- **GHG Modelling and Scenario Development:** Technical expertise is needed to develop and calibrate GHG emissions and removal models using national and sectoral data. These models must support “with and without policy” scenarios and include projections under different socio-economic and climate pathways.
- **Development of Country-Specific Emission Factors:** Transitioning to Tier 2/3 methodologies requires the development of localized emission factors and activity data sources. Technical assistance is essential to define and validate these inputs through pilot studies, expert consultations, and regional benchmarking.
- **Adaptation Indicators and Tracking Tools:** Mauritius lacks standardized methods and metrics for monitoring adaptation outcomes. Technical assistance is needed to identify, define, and validate adaptation indicators (qualitative and quantitative), and to integrate them into MRV and decision-making processes.
- **QA/QC Protocols and Data Validation:** Technical support is required to define and implement standardized procedures for quality assurance and control (QA/QC), data verification, and handling of data uncertainties.
- **Design of Sectoral Toolkits:** Practical guidance notes, templates, calculation sheets, and data entry checklists must be developed for each contributing sector, ensuring alignment with the ETF and usability for non-technical users.
- **Interoperability with International Reporting Platforms:** Mauritius needs technical guidance to ensure alignment of its national registry and reporting formats with platforms such as the UNFCCC Biennial Transparency Reports (BTRs), Adaptation Communications, and Article 6 reporting.

6.2.3 Capacity Development

Capacity constraints, both institutional and individual, have been identified as major challenges across all phases of NDC implementation and MRV. Capacity development is therefore essential for sustained NDC progress. Key needs include:

- **Training for Data Entry Personnel and Contributors:** Sector-level staff involved in collecting and entering data into the MauNDC Registry require practical, hands-on training on the use of emission factors, indicators, frequency of data entry, registry navigation, and roles/responsibilities.
- **Training for Thematic Contributors and Owners:** These actors need deeper knowledge of climate policy frameworks, sector-specific GHG and adaptation methodologies, and monitoring approaches. Training modules should cover data source identification, proxy data usage, and the use of MRV tools.
- **Capacity for Decision-Makers and MRV Coordinators:** Senior officials need targeted capacity building to understand the implications of tracking and reporting, linkages between climate policies and development strategies, and methods to interpret MRV results to inform policy adjustments.
- **Institutional Knowledge Retention:** Frequent staff turnover has been identified as a key barrier. A structured institutional memory system (e.g., manuals, SOPs, knowledge repositories, and continuous learning frameworks) is essential to avoid recurring capacity gaps.

6.3 Institutional Roles and Responsibilities

Institutional arrangements for NDC implementation in Mauritius are based on a multi-stakeholder approach involving ministries, technical agencies, data contributors, and oversight bodies. While collaboration across institutions has enabled the initial setup of the MauNDC Registry and supported reporting to international mechanisms, the current structure lacks the clarity, formalization, and accountability required for sustained and efficient NDC tracking under the ETF. Strengthening institutional roles and responsibilities is thus a key enabler for operationalizing the MRV system and mainstreaming climate action across sectors.

Table 9: Institutional Roles and Responsibilities for NDC Implementation

| Institution | Current Role | Gaps Identified | Recommendations / Way Forward |
|---|---|---|--|
| Ministry of Environment, Solid Waste Management and Climate Change (MESWMCC) | <ul style="list-style-type: none"> - Lead coordinating agency for NDC implementation- Focal point for UNFCCC and ETF reporting - Manages MauNDC Registry and national climate policy coordination | <ul style="list-style-type: none"> - Informal enforcement mandate - Limited authority to ensure compliance from other ministries | <ul style="list-style-type: none"> - Formalize coordination role with legal backing - Establish MRV coordination framework - Define QA/QC oversight responsibilities |
| Sectoral Ministries & Departments | <ul style="list-style-type: none"> - Implement climate-relevant policies and actions - Contribute data to the registry - Align sectoral planning with NDC goals | <ul style="list-style-type: none"> - No formal MRV responsibilities - Lack of technical capacity and climate focal points | <ul style="list-style-type: none"> - Appoint MRV focal points with ToRs - Conduct sector-specific MRV training - Formalize data contribution roles |
| Statistics Mauritius | <ul style="list-style-type: none"> - Publishes national data on energy, transport, industry- Supports statistical consistency for baseline and trend analysis | <ul style="list-style-type: none"> - Plays a limited role in MRV design and verification - Not integrated into registry workflows | <ul style="list-style-type: none"> - Involve Statistics Mauritius in MRV data validation - Align registry with national statistics systems - Establish joint data protocols |
| Technical Working Groups (TWGs) | <ul style="list-style-type: none"> - Provide technical validation and guidance | <ul style="list-style-type: none"> - Overlapping roles with Thematic | <ul style="list-style-type: none"> - Define scope and membership through |

| | | | |
|---|--|---|--|
| | <ul style="list-style-type: none"> - Develop indicators and emission factors | <p>Contributors</p> <ul style="list-style-type: none"> - No formal mandates or SOPs | <p>formal notification</p> <ul style="list-style-type: none"> - Develop SOPs for TWG operations - Clarify workflow between TWGs and registry admin |
| Thematic Contributors | <ul style="list-style-type: none"> - Upload and manage sectoral data in the registry - Liaise with sectoral ministries and TWGs | <ul style="list-style-type: none"> - Lack of formal documentation of roles - Inconsistent data entry and limited accountability | <ul style="list-style-type: none"> - Develop registry manuals and SOPs - Conduct hands-on training and mentorship - Assign data access rights with accountability clauses |
| Academic & Research Institutions | <ul style="list-style-type: none"> - Potential to support emission factor development, scenario modelling, and adaptation metrics | <ul style="list-style-type: none"> - Not actively involved in registry processes - Limited funding for applied research | <ul style="list-style-type: none"> - Engage universities through formal MoUs - Provide research grants for MRV-related work |
| Private Sector Entities | <ul style="list-style-type: none"> - Source of emissions and activity data (especially in energy, waste, and transport) - Can support voluntary disclosures and scenario reporting | <ul style="list-style-type: none"> - Limited engagement in NDC tracking or MRV reporting | <ul style="list-style-type: none"> - Establish data-sharing agreements - Build incentives for climate disclosures through policies or finance linkages |

Chapter 7: Recommendations

Building on the assessment of gaps and challenges observed across institutional, technical, and operational dimensions, this chapter outlines targeted recommendations to enhance the functionality, sustainability, and impact of the MauNDC Registry. The suggested actions are structured around four key pillars as explained below. These recommendations are grounded in practical considerations and aligned with the ETF requirements under the Paris Agreement.

7.1 Summary of Identified Gaps and Proposed Solutions

To address the immediate and most critical gaps in the MauNDC Registry and its operations, a set of short- and medium-term actions are proposed. These focus on enhancing system usability, resolving user access issues, cleaning outdated data, and aligning the registry structure with sectoral needs and available data. These actions are designed for quick implementation to improve the overall functionality and credibility of the registry.











| Short Term (0-6 months) | Medium Term (6-18 months) |
|--|--|
|  <p>Finalize and integrate revised outcomes, indicators, and interventions into MauNDC Registry.</p> |  <p>Introduce registry-based tracking modules aligned with ETF reporting requirements</p> |
|  <p>Clear the registry of outdated data and user roles to streamline current implementation.</p> |  <p>Develop automated dashboards and export features for periodic national reports</p> |
|  <p>Introduce field-level validations and controlled inputs (e.g., numeric-only for quantitative value, predefined units, dropdown lists)</p> |  <p>Create differentiated user-manuals for thematic Contributors, Thematic Owners, and Verifiers</p> |
|  <p>Define common data entry timelines and standardize templates across all sectors</p> |  <p>Establish sector-specific MRV roles and responsibilities with official notifications</p> |
|  <p>Fix technical glitches (e.g., Outcome Module access errors, auto-mailer functionality)</p> |  <p>Initiate pilot implementation of new MRV processes in 2-3 priority sectors (e.g., energy, transport, solid waste)</p> |

Figure 10: Proposed Solutions for Enhancing Transparency

7.2 Institutional Strengthening Measures

Strengthening institutional arrangements is essential to ensure effective coordination, accountability, and long-term sustainability of the MRV system. This section outlines key measures for defining roles, establishing legal mandates, and improving the governance framework of climate data management across relevant ministries and institutions.

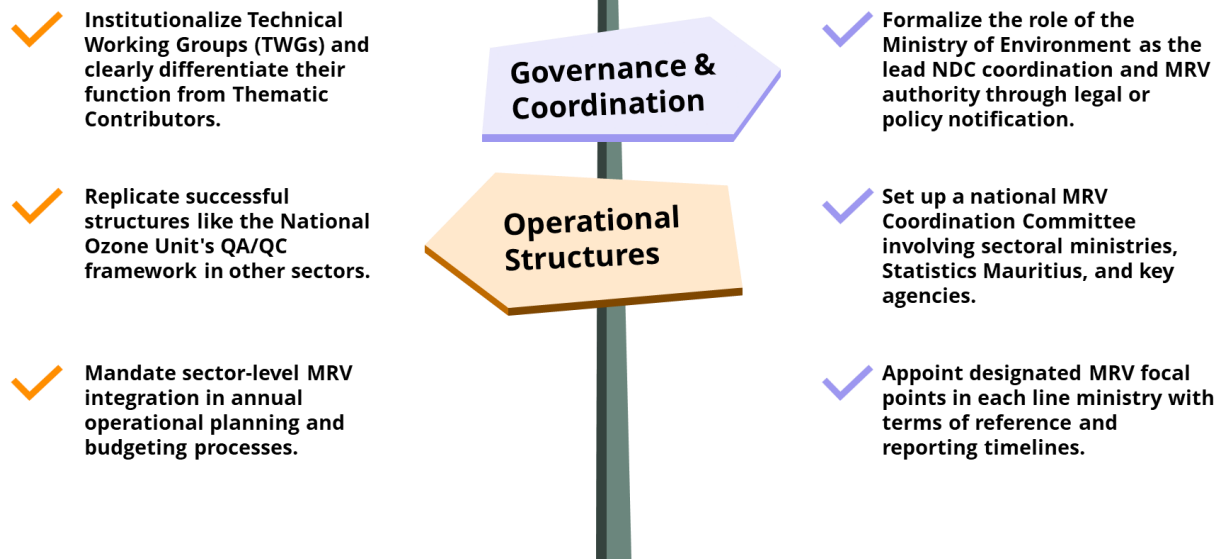


Figure 11: Recommendations for Strengthening Institutional Arrangements

7.3 Data Management and Reporting Improvements

Reliable and consistent data is the foundation of effective NDC tracking. This section focuses on improving data management protocols, reporting formats, and the logical integration of indicators. It also recommends enhancing interoperability between the MauNDC Registry and other national databases.

- Standardize data entry templates across sectors with mandatory fields, validation checks, and real-time error prompts.
- Introduce a standardized unit vocabulary and automated unit recognition to ensure consistency in reporting.
- Align data collection templates and requirements across the MauNDC Registry, Biennial Transparency Reports (BTR), National Communications (NC), and other reporting frameworks.
- Develop guidance materials and training modules to help users clearly understand the type, format, and frequency of data required by the MauNDC Registry.
- Implement metadata documentation for each dataset to enhance transparency, traceability, and usability.
- Enable automated data validation and periodic quality control checks at the point of data entry.

Figure 12: Recommendations for Data Management and Reporting Improvements

7.4 Capacity Building and Technical Support Needs

Empowering users and institutions with the right knowledge and tools is vital for the long-term success of the registry. This section outlines the capacity development and technical assistance needed for data contributors, verifiers, and decision-makers, including tailored training, knowledge resources, and sector-specific toolkits.

- Arrange hands-on training workshops for Thematic Contributors and Thematic Owners on MRV principles and registry usage.
- Develop and disseminate simplified, sector-specific toolkits for emissions tracking and adaptation monitoring.
- Facilitate advanced technical training on GHG modelling, scenario development, and Tier 2/3 emission factor estimation.
- Create a dedicated helpdesk or user support cell for ongoing registry assistance.
- Produce short video tutorials, user guides, and FAQs to support daily operations and troubleshooting.

Figure 13: Recommendation for improve capacity for NDC Tracking

Conclusion

The findings and recommendations outlined in this assessment are critical to transforming the MauNDC Registry into a robust, user-friendly, and institutionally integrated tool for tracking climate action. Strengthening institutional roles, building technical capacity, and improving data systems will not only enhance compliance with the Enhanced Transparency Framework (ETF) under the Paris Agreement but also support evidence-based policymaking for a more climate-resilient Mauritius.

Way Forward

The registry revisions and recommendations presented in this assessment lay the groundwork for a more transparent, efficient, and sector-integrated NDC tracking system in Mauritius. However, the full impact of these interventions will be realised through structured implementation, continuous user engagement, and iterative improvements to the system.

The recommended Outcomes, Interventions, and Indicators for **Mitigation** and **Adaptation**, as shown in **Annex D** and **Annex E**, are based on the *National Climate Change Mitigation Strategy and Action Plan (NCCMSAP)* and the *National Climate Change Adaptation Policy Framework (NCCAPF)* for the Republic of Mauritius. These are indicative recommendations only; the final set of Outcomes, Interventions, and Indicators will be confirmed following deliberations during **Workshop 3**.

The interface changes and institutional coordination mechanisms will be documented in Deliverable 4, which will describe **how the data gaps have been addressed and how the availability of data has improved**. This deliverable will also capture the outcomes of the **guided “learning by doing” capacity building sessions**, highlighting how practical engagement with the MauNDC Registry has enhanced user understanding, improved data quality, and fostered institutional ownership of the MRV process. These efforts aim to establish a sustainable system that supports ongoing implementation, monitoring, and international reporting of NDCs.

Annexures

Annex A: Participant List Disaggregated by Gender

| Sr. No. | Surname | Name | Designation | Organization |
|---------|----------------|------------------|--|--|
| 1 | APASSAMY | SELVON | Senior Hydrological Officer | Water Resources Commission |
| 2 | APPADOO | SHIVANE | Coordinator for Community Mobilization | National Disaster Risk Reduction and Management Centre |
| 3 | ATAWOO | ALTAZ | Principal Research Scientist | FAREI |
| 4 | AUKHEZ | JAYSING | Ag Deputy Director | Ministry of Land Transport/Traffic Management Road Safety Unit |
| 5 | BUDLOO | ASHKWIN | Renewable Energy Development Officer | Mauritius Renewable Energy Agency |
| 6 | CAPERY | OOMAR DAWOOD | E/SE | CES-MNI |
| 7 | DUMUR | RAJESWAREE | Research Scientist/Senior Research Scientist | Resource Management Division, Food and Agricultural Research and Extension Institute |
| 8 | DUSORUTH | Tajkumar | Engineer/SNR Engineer | WMA |
| 9 | Foorabally | Sharmeen Bibi | Engineer(Airworthiness) | Department of Civil Aviation |
| 10 | GOPAL | VINESHWAR SHARMA | Deputy Director | NPCS |
| 11 | Jorai | Avijit | Associate Research Scientist | Mauritius Oceanography Institute |
| 12 | Keesoony | Avinash | Research Scientist | FAREI |
| 13 | Mewa Hurdowar | Dicksha | Statistician/Senior Statistician | Statistics Mauritius |
| 14 | Moorlah | Navin | Principal Project Officer | Solid Waste Management Division |
| 15 | Nundah | Rani | Coordinator | Ministry of Gender Equality and Family Welfare |
| 16 | Nundloll | Mohammad Ismaail | Technical Officer | Irrigation Authority |
| 17 | Ramdany | Rajaramsing | Acting Principal Vehicle Examiner | NLTA |
| 18 | Ramlochun | Hans | Senior Beach Works Inspector | Beach Authority |
| 19 | Ramtohul | Jaya | Research Scientist | FAREI |
| 20 | Seeburn-Sobhun | Nirkitha V. | Engineer/Senior Engineer | MEPU |
| 21 | Seewoonauth | Ajay | Project Leader | Air Mauritius |
| 22 | Singh | Manvendra | Principal Research Scientist | Mauritius Oceanography Institute |
| 23 | Sooben | Neshen | Senior Town and Country Planning | Ministry of Housing and Lands |
| 24 | Sookhraz | Sanjay | Senior Environmental Affairs Officer | Central Electricity Board |
| 25 | Thummanah | Bheemul | Environment Officer/Senior Environment Officer | Ministry of Environment, Solid Waste Management and Climate Change |
| 26 | Ujoodha | Parinita | Analyst/Senior Analyst | Ministry of Finance |
| 27 | Sohatee-Tullo | Parvatee | Maintenance Officer | Shipping Division |
| 28 | Athal | Anju | OMA | Ministry of Local Government |
| 29 | Pynee | Kersley | Ag scientific Officer | NPCS |
| 30 | Ramdonee | Neetish | SHO | Metro Express Ltd |
| 31 | Chikhuri | Krishna | CAPPDO | Minister of Agro-Industry, Food Security, Blue Economy and Fisheries |
| 32 | Sookarah | Rishidev | Senior Manager | RDA |
| 33 | Rughooputh | B.K. | Manager, Port Safety and Environment | Mauritius Ports Authority |
| 35 | Dinassing | S | | CWA |
| 36 | Jhumka | Zayd | ACF | Forestry Service |
| 37 | Sedembarum | Vanessa | Tourism Planning Executive | M/Tourism |
| 38 | Dusoruth | Tajkumar | E/SE | WMA |
| 39 | Foorabally | Sharmeen Bibi | Airport Engineer | Department of Civil Aviation |
| 40 | Mungul | Vimal | Meteorologist | MMS |
| 41 | Ramguth | Avinash | A.S.A | CISD |
| 42 | Meeheelaul | Sarita | Director | Department of Climate Change |
| 43 | Safee | Nuzhah | STM Intern | Department of Climate Change |
| 44 | Kanhye | Vimla | EO/SEO | Department of Climate Change |
| 45 | Karoo | Zubair | Senior Manager | Deloitte Mauritius |
| 46 | Vajpai | Akash | Manager | Deloitte India |
| 47 | Govani | Janki | Assistant Manager | Deloitte India |
| 48 | Jhurree | Khooshboo | Assistant Manager | Deloitte Mauritius |
| 49 | Koobloll | Yoshita | Consultant | Deloitte Mauritius |

Annex B: Workshop Agenda



Agenda for Workshop 2: MauNDC Registry Walkthrough and Data Gaps Validation

Objective: To provide a comprehensive walkthrough of the MauNDC Registry, present the proposed restructuring of data and information, and validate the findings of the data gaps analysis report.

Date: 13th February, 2025

Venue: Gold Crest Hotel, Quatre Bornes

Duration: 9:30 am to 3:00 pm

Participants: Key national stakeholders identified in Annex A and relevant additional stakeholders for NDC tracking.

| Time | Agenda Item | Description |
|---------------|---|--|
| 09:00 – 09:15 | Opening Remarks | Welcome, objectives, and expected outcomes |
| 09:15 – 09:45 | Overview of the ICAT and MauNDC Registry | Explanation of registry components, functionalities, and its role in NDC tracking |
| 09:45 – 10:15 | Walkthrough of the MauNDC Registry System | Live demonstration of MauNDC Registry tool, interface, and data structuring |
| 10:15 – 10:30 | <i>Coffee Break</i> | |
| 10:30 – 11:15 | Presentation of the Data Gaps Analysis Report and Proposed Restructuring of Data and Information | Summary of key data gaps and coverage issues Understanding challenges from the user interface Presentation of the revised data collection and tracking structure, explaining the rationale behind the proposed changes, and expected improvements in data accuracy |
| 11:15 – 12:15 | Stakeholders review of interventions in their sector and discussion on challenges in inputting required data (To be Continued post Lunch) | Stakeholders are handed out interventions relevant to their Technical Working Group (based on mitigation strategy and action plan and proposed adaptation interventions) and discuss challenges in inputting intervention data fields for selected interventions. Open floor for feedback, insights, and recommendations Briefing about the data requirement for MauNDC Registry |
| 12:15 – 13:00 | <i>Lunch Break</i> | |
| 13:00 – 14:45 | (In Continuation of the previous session) Stakeholders review of interventions in their sector and discussion on challenges in inputting required data | |
| 14:00 – 14:45 | Summary of Key Takeaways and Next Steps | Recap the key findings, agree on the next steps, and discuss the brief agenda of Workshop 3. |
| 14:45 – 15:00 | Closing Remarks | Final summary of workshop outcomes and closing words, acknowledging participant contributions. |
| 15:00 onwards | <i>Coffee Break</i> | |

Outputs:

- The workshop report includes presentations, minutes from discussions, agreed items, and a gender-disaggregated list of participants.

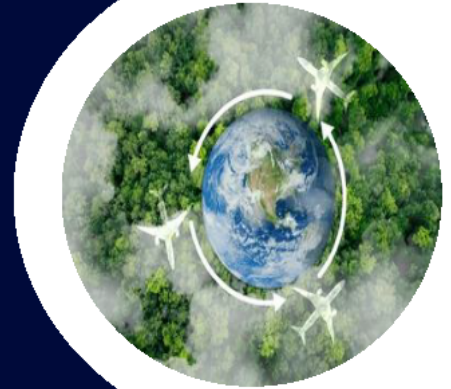
Annex C: Workshop Presentation



MauNDC Registry Walkthrough and Data Gaps Validation

Gold Crest Hotel, Quatre Bornes

Thursday, 13th February 2025



↖ *Double-click on the above image to view the Presentation*

Annex D: Recommended Outcomes, Intervention, and Indicator: Mitigation

| Sector | Outcomes | Interventions | Proposed Indicators |
|--|--|---|---|
| Energy/ Energy Industries | Decarbonisation of the electricity system using renewable energies and demand side energy efficiency | Promote end-use energy efficiency | Emission reductions from energy efficiency (tCO ₂ e/year) |
| | Decarbonisation of the electricity system using renewable energies and demand side energy efficiency | Enhancing renewable energy sources in the electricity mix, with completed phase out of coal before 2030 | Share of renewable energy in electricity mix (%) Coal-based electricity generation capacity decommissioned (MW) GHG emissions from electricity generation (tCO ₂ e/year) |
| Transport (Land Shipping and aviation) | Towards a sustainable low-carbon land transport system in Mauritius | Improved fuel economy of vehicles | Average vehicle fuel economy (L/100 km or km/L) GHG emissions per vehicle-km traveled (gCO ₂ e/km) |
| | Towards a sustainable low-carbon land transport system in Mauritius | Decreasing peak time congestion to improve traffic fluidity | Average vehicle speed during peak hours (km/h) Fuel consumption per trip (L/trip) |
| | Towards a sustainable low-carbon land transport system in Mauritius | Reducing consumption of fossil fuels through increased adoption of lower-carbon vehicles | Share of electric/hybrid vehicles in fleet (%) Fossil fuel sales for transport sector (liters/year) Avoided emissions from modal shift or vehicle electrification (tCO ₂ e/year) |
| | Towards a sustainable low-carbon land transport system in Mauritius | Electrification of mass transit mode of passenger transport | % of public transport fleet electrified Electricity vs diesel use in transit (GWh vs liters) GHG emissions avoided (tCO ₂ e/year) |
| Solid Waste Management | Avoided emissions at landfills from a circular waste economy | Composting of the putrescible fraction of solid waste | Tons of organic waste composted annually CH ₄ emissions avoided from landfill (tCO ₂ e/year) |
| | Avoided emissions at landfills from a circular waste economy | Recycling of municipal solid waste | Recycling rate (% of total MSW) Emissions avoided from recycling vs virgin production (tCO ₂ e/year) |
| | Avoided emissions at landfills from a circular waste economy | Energy recovery from municipal solid waste | Energy generated from waste-to-energy (MWh/year) GHG savings from displaced fossil fuel use (tCO ₂ e/year) |

| | | | |
|--------------------------------------|---|---|---|
| Waste Water Management | Avoided emissions in wastewater management from the adoption of low-carbon technologies | Reduced methane emissions from the adoption of low-carbon water treatment technologies | Adoption rate of low-carbon treatment systems (%) CH ₄ /N ₂ O emissions avoided in wastewater treatment (tCO ₂ e/year) |
| | | | |
| Industrial Processes and Product Use | Reducing the import of HFCs according to the Kigali Amendment to the Montreal Protocol | Phase-Down of hydrofluorocarbons (HFCs) refrigerants in Mauritius | Annual HFC consumption (tonnes CO ₂ e) |
| | Reducing the import of HFCs according to the Kigali Amendment to the Montreal Protocol | Phase out of equipment using HFCs | Number of non-HFC systems base equipment imported % of stock converted to low-GWP refrigerants |
| | Reducing the import of HFCs according to the Kigali Amendment to the Montreal Protocol | Environmentally sound disposal of HFC refrigerants | Tonnes of HFCs recovered (tCO ₂ e) Number of trained technicians for HFC recovery |
| | | | |
| Agriculture (Crops) | Reducing emissions from good agricultural practices | Reducing chemical inputs in crop production | Fertilizer/pesticide use per hectare (kg/ha) N ₂ O emissions from agricultural soils (tCO ₂ e/year) |
| | Reducing emissions from good agricultural practices | Implementation of bio-farming and other sustainable agricultural practices | % farmland under bio-farming GHG emission intensity of crop production (tCO ₂ e/ton yield) |
| | | | |
| Agriculture (Livestock) | Improved food security with application of mitigation technologies for livestock waste management | Improved food security through the adoption of environmentally sound animal excrement management technologies | % farms with anaerobic digesters or improved systems % farms with anaerobic digesters or improved systems adopted by women CH ₄ /N ₂ O emissions reduced from manure management (tCO ₂ e/year) |
| | | | |
| | | | |
| Forestry | Increasing the sink capacity of Mauritius | Planting trees in urban areas | Number of trees planted CO ₂ sequestered in urban forests (tCO ₂ e/year) |
| | Increasing the sink capacity of Mauritius | Afforestation of abandoned agricultural land | Area afforested (hectares) CO ₂ removal from biomass growth (tCO ₂ e/year) |

Annex E: Recommended Outcomes, Intervention, and Indicator: Adaptation

| Sector | Outcomes | Interventions | Proposed Indicators |
|-------------|---|---|--|
| Water | Enhanced governance and adaptation planning capacity in the Water Sector | Develop hydrological models and socioeconomic risk assessments (W1.1) | % of watershed areas with climate-risk models |
| | | Conduct technical studies and research on climate change and water sector related activities (W1.2) | # of water-sector policies updated # of prioritized adaptation activities identified |
| | | Support research on long-range sea-level rise and application in planning (W1.3) | |
| | Improve water use efficiency | Develop funding mechanisms for wastewater treatment and reuse (W2.1) | % of reuse projects financed through new mechanisms |
| | | Increase awareness and capacity-building on reuse of treated water (W2.2) | Number of stakeholders trained or sensitized on safe reuse of treated water |
| | | Invest in irrigation infrastructure and access to water for agriculture (W2.3) | Increase in irrigated area Water use efficiency (SDG 6.4.1) |
| | | Install rainwater harvesting systems and improve legal/regulatory frameworks (W2.4) | # of systems installed # of water policies or regulations updated |
| | | Construct desalination plants (W2.5) | Desalination capacity (m ³ /day) Volume of desalinated water produced |
| | Practice and promote Integrated water management and ecosystem-based adaptation | Develop cross-sectoral ecosystem-based adaptation strategy (W3.1) | Area of floodplains reconnected # of wetlands mapped # of institutions trained on NbS |
| | | Identify and protect land for wetland adaptation to sea-level rise (W3.2) | Area (ha) designated for tidal wetland adaptation |
| | | Mainstream adaptation into National IWRM Plan (W3.3) | |
| | | Promote multi-level and intersectoral water governance (W3.4) | |
| | Improved data, monitoring and evaluation for water adaptation | Develop oceanic and atmospheric observation systems (W4.1) | # of oceanic/atmospheric observation stations established |
| | | Develop M&E framework for water adaptation (W4.2) | |
| Agriculture | Enhanced knowledge base on climate risks and ecosystem services in Agriculture Sector | Conduct climate change risk and adaptation assessments to identify vulnerable areas (A1.1) | # of climate risk and adaptation studies completed # of vulnerable ecosystems and communities identified |
| | | Develop research programs and technical studies to integrate climate change into agriculture sector policies (A1.2) | # of agriculture policies/strategies with integrated climate actions # of prioritized activities identified with climate benefits |
| | | Conduct evaluation of ecosystem services and their economic value (A1.3) | # of ecosystem services evaluated Economic value (USD) of key ecosystem services |
| | Promotion of climate-smart land use and biodiversity | Encourage participatory land use planning for sustainable agriculture (A2.1) | # of community land use plans developed % of targeted land area under such plans |

| | | | |
|------------------|---|---|--|
| | | Ensure alignment with water, forestry, and biodiversity adaptation (e.g., water conservation, forest cover increase) (A2.2) | % of land area under micro-irrigation Area of forest cover increased (ha/year) # of floodplain easements implemented (New) |
| | | Promote ecosystem-based adaptation including bee pastures and agroforestry (A2.3) | Area under agroforestry practices (ha) # of bee pasture conservation projects supported |
| | | Promote composting and reduce synthetic fertilizer use (A2.4) | % of farms using compost as primary soil amendment |
| | | Promote climate-resilient technologies and new crop varieties (A2.5) | # of climate-resilient crop varieties introduced Annual food crop production per unit area |
| | Strengthened institutional capacity and financial support for climate adaptation in agriculture | Build institutional and community capacity (A3.1)(NBS indicator) | # of training sessions held # of participants trained (gender-disaggregated) |
| | | Develop financial planning for transition to climate-smart agriculture (A3.2) | Financial resources allocated for CSA transition (USD/year) # of CSA initiatives supported through funding |
| | | Develop M&E framework for all adaptation strategies (A3.3) | M&E framework developed (Yes/No) # of strategies with tracked indicators |
| | | Strengthen communication tools and early warning systems (EWS) (A3.4) | # of communication tools upgraded or developed # of farmers reached through advisories |
| Fisheries | Sustainable utilisation of fisheries resources | Promote collaboration with regional and international bodies for stock assessments (F1.1) | # of joint stock assessments conducted # of regional/international collaboration initiatives on fisheries |
| | | Establish integrated Blue Economy-based sector management framework (F1.2) | Existence of integrated management framework (Yes/No) # of sector policies/strategies aligned with Blue Economy principles |
| | | Strengthen linkages between fisheries, value addition, and infrastructure (F1.3) | # of new value chain linkages developed # of infrastructure projects supporting fisheries value addition |
| | | Upgrade the Vessel Monitoring System (VMS) (F1.4) | Functionality level of VMS (e.g., % of vessel coverage) # of enforcement cases supported by VMS data |
| | Resilient coastal and marine ecosystems and communities (NBS indicator) | Promote good fishing practices and integrated catchment-coast climate responses (F2.1) | # of sustainable fishing training programs conducted # of integrated management plans developed |
| | | Review water laws and integrate fisheries-climate considerations (F2.2) | |
| | | Expand and strengthen Marine Protected Areas (F2.3) | # of MPAs established or expanded Total area (km ²) under MPAs # of people impacted by MPA-related socio-economic programs |
| | | Rehabilitate marine habitats: mangroves and corals (F2.4) | Area of mangrove replanted (ha/year) # of coral nurseries/farming sites established |
| | | Upskill or re-skill under-employed fishermen (F2.5) | # of fishermen trained % of trained individuals employed in alternative or enhanced roles |

| | | | | |
|--|--|--|--|---|
| | Climate-resilient aquaculture development | Promote ocean ranching form of aquaculture (F3.1) | # of ocean ranching projects implemented Volume of aquaculture production from ranching systems | |
| | | Shift to species tolerant to warming and deoxygenation (F3.2) | # of species transitioned to climate-tolerant alternatives # tons of species produced % share of production from resilient species | |
| | | Evaluate role of currents and ecosystems in aquaculture planning (F3.3) | # of studies on currents and ecosystem effects on aquaculture Guidelines developed and adopted | |
| | Strengthened data systems and stakeholder capacity for Fisheries | Assess climate change risks to fisheries and communities (F4.1) | # of risk and vulnerability studies completed # of communities assessed | |
| | | Build stakeholder capacity for ecosystem identification and fishery plans (F4.2) | # of stakeholders trained # of fishery-specific plans developed | |
| | | Facilitate interdisciplinary knowledge exchange on fish phenology (F4.3) | # of interdisciplinary meetings/workshops # of research outputs shared with managers | |
| | | Economic valuation of marine and coastal ecosystems (F4.4) | # of ecosystem valuation studies completed Estimated value (USD) of coastal/marine ecosystem services | |
| | | Develop fisheries knowledge and data-sharing system (F4.5) | Data platform operational (Yes/No) # of users accessing platform # of data points uploaded and updated annually | |
| | Tourism(NBS indicator) | Improved protection of critical ecosystems and climate-resilient tourism infrastructure | Develop an implementation plan for Strategic Tourism Plan incl. financing (T1.1) | Implementation plan developed (Yes/No) Budget allocated for climate-resilient tourism activities (USD/year) |
| | | | Promote restoration: native vegetation, marshes, mangroves, seagrass, dunes, coral habitat (T1.2) | Area (ha) restored (by habitat type) # of restoration projects implemented # of coral nurseries established |
| Use pilot studies with developers for governance innovation (T1.3) | | | # of pilot studies completed # of governance innovations adopted by tourism operators | |
| Develop multi-stakeholder decision-making processes for land-use planning (T1.4) | | | Stakeholder consultation framework adopted (Yes/No) # of stakeholders participating in planning processes | |
| Develop integrated tourism planning aligned with agri-biodiversity-coastal strategies (T1.5) | | | Integrated tourism-ecosystem plan developed (Yes/No) # of cross-sectoral projects initiated | |
| Active engagement of the tourism sector in adaptation and sustainability | | Launch ecotourism linked to carbon sequestration (T2.1) | # of ecotourism projects launched Carbon sequestered through associated conservation projects (tons CO ₂ e/year) | |
| | | Build capacity for sustainable tourism & valorisation of local resources (T2.2) | # of stakeholders trained in sustainable tourism # of awareness campaigns conducted # of resource-efficient innovations adopted in tourism | |
| | | Implement incentives: PES, eco-taxes, biodiversity offsets (T2.3) | # of operators benefitting from PES or eco-tax schemes Total funds mobilized through tourism-based incentive schemes (USD/year) | |



| | | | |
|------------------------------------|--|--|--|
| | Strengthened monitoring and accountability of tourism development impacts | Develop ecotourism strategy, EMS, audits, and M&E framework (T3.1) | Ecotourism strategy adopted (Yes/No) # of hotels/IRS audited M&E framework developed and used (Yes/No) |
| | | Promote eco-friendly practices and eco-labelling in tourism operations (T3.2) | # of certified eco-labelled hotels/resorts % of tourism operators implementing verified eco-practices |
| Health | Climate-resilient health policy and institutional frameworks developed | Develop knowledge base on climate-related health risks and adaptation actions (H1.1) | # of climate-health studies conducted # of risk and vulnerability maps developed |
| | | Develop community-based health and climate approaches (H1.2) | # of community programs initiated # of communities covered by adaptation outreach |
| | | Develop cross-sectoral institutional framework for health adaptation (H1.3) | Institutional framework developed (Yes/No) # of public health plans integrating climate risks |
| | | Prepare Health National Adaptation Plan (HNAP) with roadmap and M&E (H1.4) | HNAP developed (Yes/No)M&E framework established # of health adaptation actions budgeted/funded |
| | Strengthened health infrastructure | Upgrade health facilities for surge capacity and climate-sensitive disease response (H2.1) | # of health facilities climate-proofed/upgraded # of isolation/response units established |
| | | Establish observatory and a unit for climate-sensitive/vector-borne diseases (H2.3) | Observatory established (Yes/No) # of new surveillance units operational |
| | | Expand Early Warning Systems (EWS) for disease/environmental hazard surveillance (H2.4) | # of diseases and hazards under EWS Frequency of updates/alerts issued Coverage (national/regional) of EWS |
| | Strengthened systems to address climate-sensitive health risks | Expand medical insurance coverage for climate-related health issues (H2.2) | # of insurance products covering climate-sensitive diseases # of people covered under climate-inclusive insurance |
| | | Introduce new mosquito/vector control techniques (H2.5) | # of new vector control technologies deployed Change in vector population or disease incidence (before/after intervention) |
| | Improved public awareness and preventive health behavior | Develop IEC plans to change public perception and behavior (H3.1) | # of IEC materials produced # of awareness campaigns conducted Reach (% of population) |
| | | Promote healthy lifestyles, nutrition, and vector control (H3.2) | % increase in population practicing healthy behaviors (survey-based) # of community-led initiatives on nutrition/vector control |
| | Skilled health workforce for climate-related disease burden | Develop curricula for life-long learning on climate-health (H4.1) | # of curricula/modules developed for academic purposes (for schools) # of institutions integrating modules |
| | | Train health professionals on climate change adaptation (H4.2) | # of health workers trained # of planning units with trained personnel |
| | Availability and preparedness for essential medicines and vaccines | Maintain stockpile of emergency medical supplies (H5.1) | Volume and type of emergency supplies stocked # of stockpile replenishment cycles annually |
| Expand vaccine availability (H5.2) | | # of vaccines added to national immunization program % coverage of at-risk populations | |

| Infrastructure and disaster risk reduction (NBS indicator) | Improved knowledge on climate risks to coastal infrastructure and communities | Conduct climate risk and vulnerability assessments (I1.1) | # of risk and vulnerability assessments conducted # of vulnerable hotspots identified |
|---|--|---|--|
| | | Develop information systems and promote climate data in infrastructure planning (I1.2) | Climate-infrastructure data platform operational (Yes/No) # of infrastructure projects using topographic, hydrologic, and climate data |
| | Climate risks mainstreamed in sectoral infrastructure policies and coastal development planning | Develop technical guidelines for adaptation using nature-based solutions (I2.1) | Guidelines published and in use (Yes/No)# of projects implementing NbS (nature-based solutions) |
| | | Build awareness and capacity among developers and engineers (I2.2) | # of professionals trained# of awareness sessions held |
| | | Establish coordination and consultation mechanisms for integrated landscape planning (I2.3) | Inter-agency coordination mechanism established (Yes/No) # of joint planning sessions conducted |
| | | Optimize land use for priority infrastructure adaptation (I2.4) | % of strategic land areas designated for priority climate-resilient infrastructure # of land-use plans updated to reflect climate risks |
| | Strengthened disaster preparedness and risk reduction systems for infrastructure | Operationalize real-time warning systems for infrastructure failure (I3.1) | Warning system operational (Yes/No)# of alerts issued annually |
| | | Develop M&E framework including use of Doppler radar data (I3.2) | M&E framework developed (Yes/No) # of infrastructure adaptation activities tracked using indicators |
| | Climate-resilient road infrastructure systems in place and operational | Identify roads at high risk for damage during climate events (I4.1) | # of roads mapped as climate-vulnerable Risk classification system developed (Yes/No) |
| | | Define mechanisms for rapid damage assessment and funding (I4.2) | Emergency response funding plan developed (Yes/No) Average response time post-disaster (hours/days) |
| | | Establish intervention mechanisms for road recovery (I4.3) | Road intervention protocol implemented (Yes/No) # of emergency intervention teams activated |
| | | Revise road design guidelines for climate resilience (I4.4) | Guidelines revised (Yes/No) # of new projects using updated guidelines |
| | | Introduce resilient materials for road construction (I4.5) | # of projects using climate-resilient materials Performance rating of materials post-disaster |
| | | Ensure timely restoration of damaged roads (I4.6) | % of damaged roads restored within set timeframe Average restoration time post-event |
| | | Amend procurement processes to be climate-responsive (I4.7) | New procurement procedures adopted (Yes/No) Procurement lead time during emergencies |
| | | Use simulation models for climate stress testing of road infrastructure (I4.8) | # of models developed# of road segments tested with simulation tools |
| | | Integrate responses to new infrastructure failure types (e.g., bridge collapses) (I4.9) | Response protocols developed for new failure types (Yes/No) # of contingency plans covering emerging risks |