ICAT Eswatini Phase II Water Adaptation Training Workshop Report

18 NOVEMBER 2024

Venue: The Hilton Garden Inn Hotel, Mbabane, Eswatini

DISCLAIMER

PREPARED UNDER

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ICAT Eswatini Phase II
Water Adaptation Training Workshop Report

Measurement, Reporting, and Verification (MRV) for Adaptation in preparation for Biennial Transparency Report (BTR) and Expansion of Biomass-generated Renewable Electricity in Eswatini. Project No. 11875-003/ICAT/2023/97

Deliverable G (Water)

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LIST OF FIGURES

Abbreviations

BTR	Biennial Transparency Framework
CSER	Centre for Sustainable Energy Research
CCU	Climate Change Unit
DWA	Department of Water Affairs
EFT	Enhanced Transparency Framework
EWSC	Eswatini Water Services Corporation
GHGMI	Greenhouse Gas Management Institute
ICAT	Initiative for Climate Action Transparency
IWRM	Integrated Water Resources Management
JRBA-PB	Joint River Basin Authorities-Project Board
KOBWA	Komati Basin Water Authority
MEPD	Ministry of Economic Planning and Development
MNRE	Ministry of Natural Resources and Energy
MOA	Ministry of Agriculture
MOH	Ministry of Health
MRV	Measurement, Reporting and Verification
MTEA	Ministry of Tourism and Environmental Affairs
NAP	National Adaptation Plan
NDC	Nationally Determined Contributions
PPCU	Policy and Programme Coordination Unit
UNESWA	University of Eswatini
UNFCCC	United Nations Framework Convention on Climate Change
WASH	Water, Sanitation and Hygiene

INTRODUCTION

The Kingdom of Eswatini is progressing towards fulfilling its Nationally Determined Contributions (NDCs) under the Paris Agreement. Due to the country's high vulnerability to climate change impacts, particularly in the water sector, Eswatini needs well-structured approaches to enhance resilience and implement effective adaptation strategies.

The ICAT Phase II project is spearheaded by the Ministry of Tourism and Environmental Affairs in partnership with the University of Eswatini's Centre for Sustainable Energy Research (CSER) and supported by the Initiative for Climate Action Transparency (ICAT). It builds upon ICAT Phase I (2021-22). The initial project built on the foundation for assessing the adaptation measures for the water sector, assessing the gaps and drawing a roadmap to better implement the NDC adaptation measures.

One of the core components of the ICAT Phase II Project is the development of a comprehensive Measurement, Reporting and Verification (MRV) Implementation Framework and a Data Collection Template for the Water Adaptation Sector. These tools are designed to standardize data capture and reporting processes, enabling stakeholders to effectively monitor and evaluate adaptation actions. The ICAT Phase II Project engaged stakeholders intensively. During the course of Phase II, roles, inputs and jurisdictions of key role players on the water sector in Eswatini were verified with stakeholders. Data was collected and indicators for the relevant NDCs were agreed upon. Stakeholders also were extensively engaged in the outcomes of the project. Training of technicians on the templates developed under this project was undertaken as a key component of the exercise.

Workshop Objective:

The workshop sought to equip stakeholders with knowledge and skills to effectively utilize the Measurement, Reporting and Verification (MRV) Implementation Framework and Data Collection Templates.

WORKSHOP PROGRAMME

The workshop programme was as follows:

Activities	
ICAT ESWATINI PHASE II-WATER ADAPTATION , The Hilton Garden Inn Hotel	
SESSION 1: WELCOMING REMARKS	
08:30 - 08:45	**Registration of Participants**
08:45 - 09:00	**Welcome and Self-Introduction of Participants** Project Facilitator
09:00 - 09:15	**Opening remarks** MTEA
09:15 - 09:30	**Highlights of the Eswatini ICAT Project and the Implementation Strategy.** Dr. Mavimbela, UNESWA-CSER Coordinator
09:30 – 10:00	**Coffee break & Group Picture**
10:00 – 11.30	**Institutional Arrangements and Stakeholder Roles in MRV Implementation** Dr. Lihle Mafu (UNESWA-CSER)
11:30 - 13:00	**Demonstration: Step-by-Step Guide to Using the Data Collection Template and filling of the template** Dr. Gcina Vilakati (UNESWA-CSER)
13:00-14:00	**Lunch**
14:00 – 15:00	**Filling of the Template**
15:45 – 16:00	**Tea Break**
15: 00 – 16:00	**Requirements for reporting and data flow** Dr Lihle Mafu & Dr DG Vilakati
16:00 – 16:45	**Closing Remarks** MTEA

PARTICIPANTS

The workshop successfully brought together a diverse group of stakeholders within the water sector. Key participants included representatives from the Ministry of Tourism and Environmental Affairs (MTEA), the Ministry of Agriculture (MOA), the Ministry of Natural Resources and Energy (MNRE) and the Ministry of Health (MoH). Other important stakeholders present included the Eswatini Water Services Corporation (EWSC), the Komati Basin Water Authority (KOBWA), the Joint River Basin Authorities-Project Board (JRBA-PB), the Siphofaneni Irrigation District (SID), World Vision and the personnel from the media.

In total, 27 representatives participated in the workshop, drawn from government ministries, departments, agencies; academia, NGOs, civil society, the private sector, and project partners (see Annex 1). Among the attendees, 12 were female, and 15 were male, reflecting a balanced mix of perspectives across sectors.

WORKSHOP ACTIVITIES

OPENING SESSION

The workshop began with opening remarks by Bafana N. Simelane (Figure 1), the Acting Director of Meteorology.

Key Points from the Workshop:

- Participants were welcomed and thanked for attending the workshop;
- The aim of the workshop was outlined as enhancing transparency and capacity building for climate action in the country;
- The agenda included a focus on the Monitoring, Reporting, and Verification (MRV) Implementation Framework and the data capture templates for the water sector;
- Collaboration between the Ministry of Tourism and Environmental Affairs and the University of Eswatini-CSER, supported financially by UNOPS, was highlighted;
- It was expressed that the knowledge gained from the workshop would support the country in meeting its reporting obligations to the UNFCCC; and,
- Appreciation was extended to CSER for their excellent work.

Figure 1: Mr Bafana N. Simelane, making his opening remarks

Following the Acting Director of Meteorology's remarks, the UNESWA-CSER (Water Adaptation Team), presented the highlights of the Eswatini ICAT Project and its implementation strategy on behalf of the Project Coordinator. He addressed the workshop, and the following key points were emphasized:

- Appreciation to all participants for attending the workshop, which is one of the final deliverable of the project;
- ICAT plays a vital role in supporting countries in developing robust MRV systems to enhance transparency in climate action;
- Eswatini is fortunate to have benefitted from two phases of this project. The first phase, also implemented by UNESWA-CSER, focused on conducting a gap analysis and the development of a roadmap for climate adaptation in both the water and health sectors;
- During Phase I, the gap analysis identified emerging gaps that need to be addressed, as well as low-hanging opportunities that should be prioritized in order to work towards building a water sector that is more adaptive to climate change; and,
- ICAT II Project, therefore, aimed to enhance the capacity of Eswatini's institutions in implementing adaptation MRV system in the water and health sectors.

Figure 2: Dr Lihle Mafu from the Water Adaptation Team (UNESWA-CSER)

MORNING SESSION PRESENTATIONS

Institutional Arrangements and Stakeholder Roles in MRV Implementation

Presentation on Institutional Arrangements and Stakeholder Roles in MRV Implementation emphasized their importance in advancing Eswatini's climate adaptation efforts in the water sector. Effective MRV systems require clear institutional arrangements (within a legal framework

and with resources allocation) to define roles, avoid duplication, and foster sectoral coordination, addressing challenges like waterborne diseases linked to climate variability. These arrangements also enhance accountability, transparency, and operational efficiency by aligning roles with resources such as hydrological tools and remote sensing technologies.

Key elements include a strong legal framework, a clear organizational structure for stakeholder interaction, and adequate resources through training, funding, and technology. Stakeholders, including government ministries, committees (e.g., NCCC, Water Sector Adaptation Committee, etc.), NGOs, academia, the private sector, and international partners. These stakeholders all play crucial roles in governance, data collection, capacity building, and funding in Eswatini's water sector adaptation.

The data flow among stakeholders was also highlighted. Technical teams collect data in the water sector, which is then transmitted to sectoral committees for alignment with national goals. These committees forward the data to bodies such as the NCCC, ensuring the data support decision-making and meets international reporting requirements, ensuring accuracy, consistency, and accessibility.

Then discussions were then opened to the floor.

Discussion Question:

What structures in the water sector exist without completed institutional arrangements (i.e., organizations in place but lacking legal documents and financial allocations)?

Responses:

• The WASH Committee has been effective, but lacks a formal legal framework, despite support from agencies like UNICEF.

• Eswatini's water sector is developing a sector-wide approach, but struggles with the absence of a legal framework, leading to unprepared representatives attending meetings.

• The lack of financial resources is another barrier, making it essential to establish a legal framework for resource allocation to ensure the success of water sector structures and entities.

Figure 3: Thembeka Nkambule (SID)-Left, Bonginkhosi Mabuza (World Vision)-Right

Demonstration: Step-by-Step Guide to Using the Data Collection Template and filling of the template

A comprehensive Step-by-Step Guide to Using the Data Collection Template was presented at the workshop. It focused on demonstrating how to accurately populate and utilize the tool for tracking NDC water adaptation actions. The presentation began with an overview of the template's development process, which included feedback from workshops, consultations with stakeholders, and contributions from GHGMI consultants. The template has undergone multiple revisions to ensure that adaptation actions fit local circumstances and needs, and to ensure relevance to Eswatini's overall water sector needs.

Figure 4: Dr. Vilakati from the Water Adaptation Team (UNESWA-CSER)

Key features of the template were explained, including sections for NDC actions, a contact list, and data entry fields. Notably, the template incorporates dropdown menus for predefined metrics, indicators, and data units, as well as tools such as an Index Calculator and a Water Quality Index (WQI) Calculator to standardize reporting. Dr. Vilakati highlighted essential guidelines for maintaining data integrity, such as entering information only in designated cells, ensuring baseline and indicator data are verifiable and providing comments to explain deviations or challenges in data collection.

The demonstration emphasized practical applications, walking participants through each step of the data entry process, while underscoring the importance of adhering to the structure to enhance accuracy and consistency. This tool serves as a critical resource for tracking adaptation progress and ensuring that reports are aligned with national and international climate commitments. The presentation concluded with acknowledgments of the collaborative efforts of stakeholders and partners who contributed to refining the template and supported its implementation.

Questions:

During the discussion, participants raised several questions regarding the template design and data inclusion guidelines. One participant inquired about tailoring the template to the Department of Water Affairs (DWA) parameters to avoid including unnecessary items. It was clarified that most of the listed parameters align with the DWA's capabilities, as the Department has the necessary instruments and is already collecting data for these parameters.

Figure 5: Nqobizwe Dlamini (MTEA), raising a question

Another question sought clarity on the guideline requiring a link or reference for uploading data. A participant raised a scenario where the DWA collects onsite data in response to suspicious

activities, which might not be formally published in reports. It was explained that such data can still be included in the template, provided the comment section indicates that it has not been formally vetted or published. This will ensure that the document provides a proper trail of activities. If an unpublished incident report exists, it should also be noted in the comments, with details on where the report can be accessed.

Participants also expressed concerns about including data from reports written after long intervals. Such reports could document phenomena like droughts, which may occur only once in a decade. They asked how to ensure such reports remain relevant to specific reporting years or quarters. In response, it was emphasized that only reports aligned with the current reporting period and following relevant criteria should be flagged. Regular updates and cross-checking the timeline of the data with reporting needs were recommended to maintain accuracy.

Figure 6: Daniel Dladla, making a comment

Lastly, a question was raised regarding whether reporting should be limited to the parameters currently included in the template. It was asked whether additional parameters, such as heavy metals (for water quality), could be added if relevant data are available. It was agreed that the initial focus should remain on the parameters currently being collected, with plans to build upon this scope over time. Furthermore, it was emphasized that only reports officially adopted by the organization should be included in the template, and personal or non-adopted reports cannot be used.

Interactive Demonstration

Participants engaged in a live demonstration, where they entered mock data into the template. This exercise highlighted the importance of maintaining data quality and consistency. Participants were grouped based on their professions. The first group comprised NDMA and Meteorology. They looked at the Climate section while the second group looked at the Water Resources section, and the other section looked into the WASH aspect. Finally the last group looked into the Water Management sections.

The groups then presented their findings and challenges as follows:

Figure 7: Group 1-Climate group making their presentation

Findings:

The discussion focused on NDC 4, specifically the duration of drought periods. The indicator was reported in terms of days, with the responsible organization identified as MTEA. It was noted that drought events occur approximately once in a decade, as cited in the NDMA report titled "Assessment of Socio-Economic Impacts of 2015-2016 El-Nino Droughts in Eswatini" and MET Bulletins. Additionally, the number of flood events per decade was reported with an indicator value of 12, referencing the State of Climate Report and the Climate Change Technical Report 2023.

Challenges:

A significant challenge identified was the lack of appropriate units for reporting. For example, the duration of drought periods could be measured in days, weeks, months, or years, but these units were not available as options in the Data Collection Template. This gap highlights the need to expand and standardize the available units to ensure accurate and meaningful data representation.

Figure 8: Group 2- Water Resources Group making their presentation

Findings:

The focus was on NDC 7, specifically the indicator "Number of feasibility studies undertaken for constructing water storage". Ongoing feasibility studies were noted, including the Mkhondvo-Ngwavuma Water Project, and the Nondvo Dam Project. Both of the projects have been documented and baseline values have been entered into the spreadsheet.

Challenges:

A key challenge is that while the Department of Water Affairs (DWA) operates at a national level, the availability and use of information depend on clarity regarding its intended purpose. There is a need to align stakeholders on the specific objectives for the information to ensure it is accessible and appropriately integrated into reporting processes.

Figure 9: Group 3-WASH Group making their presentation

Findings:

The discussion focused on NDC 8, where it was agreed to segment data under quality and domestic categories based on the five operational regions, each with water treatment plants. Monthly averages should be collected for these regions. The reporting year was confirmed as the 2022/2023 financial year, with data available. Key indicators included:

- Percentage of population with access to sanitation facilities: Currently 56% (2023 mixed report), targeting 80% by 2030 and 100% by 2050.
- Percentage of households using open defecation: Currently 4.6% (2022 mixed report), aiming for 0% by 2030 and 2050; and,
- Frequency of water quality assessments: Currently at 5% (2024 rural water report by World Vision), with projections of 50% by 2030 and 100% by 2050.

Challenges:

Significant challenges were noted, particularly in coordination and reporting. NGOs involved in sanitation projects do not consistently report directly to the Ministry, making it difficult to consolidate data accurately. The WASH sector operates with divided responsibilities. For example, sanitation falls under health authorities, while water management is handled by water authorities. This separation of duties creates gaps in joint reporting and results in fragmented data submissions. There is an urgent need for integrated reporting mechanisms to ensure that water and sanitation efforts are accurately captured and aligned with national targets.

Figure 10: Group 4-Water Management making their presentation

Findings:

The discussion focused on recent water surveys conducted across most basins, with Usuthu Basin completed in 2021 and Ngwavuma Basin expected to be concluded by the end of November, 2024. For the indicator Number of Basin Management Plans approved, it was noted that while no plans are currently approved (baseline: 0), there is a target to approve five plans by 2030 as part of an ongoing process.

Challenges:

A key challenge identified was the misalignment of some indicators, as they were intended for the Department of Water Affairs (DWA) rather than the Joint River Basin Authority (JRBA).

OUTCOME OF THE WORKSHOP

- **Enhanced understanding and Skills:** Participants will demonstrate improved knowledge of the MRV Implementation Framework and competencies in using Data Capture Templates;
- **Strengthened Collaboration:** Stakeholders will establish stronger partnerships, with clearly defined roles and responsibilities, to enhance institutional arrangements within the MRV Framework; and,
- **Developed Action Plan:** Participants will be able to create concrete action Plan for the Implementation and Monitoring of the MRV Framework and Data Capture Templates.

CLOSING REMARKS

Mr. Bafana N. Simelane, the Acting Director of Meteorology, delivered the closing remarks. He expressed gratitude to all participants for their attendance and valuable contributions throughout the workshop. He emphasized the hope that the knowledge gained during the workshop would prove beneficial for reporting to the UNFCCC. He also encouraged participants to share the information with their colleagues to ensure it benefits the entire country. The workshop concluded with a prayer led by Ms. Mahlinza.