

# Key achievements and lessons learned in the second phase ICAT support in Mozambique



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## Initiative for Climate Action Transparency - ICAT

### Key achievements and lessons learned in the second phase ICAT support in Mozambique.

Deliverable #9

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July 2023

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#### PREPARED UNDER

The Initiative for Climate Action Transparency (ICAT), supported by Austria, Canada, Germany, Italy, the Children's Investment Fund Foundation and the ClimateWorks Foundation.

Supported by:



on the basis of a decision  
by the German Bundestag



Environment and  
Climate Change Canada

Environnement et  
Changement climatique Canada

The ICAT project is managed by the United Nations Office for Project Services (UNOPS).



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## 1. Context

In 2017, Mozambique began working with ICAT through a partnership with the National Directorate of Climate Change (DMC, in Portuguese) of the Ministry of Land and Environment (MTA). The work of this first phase finished in December 2019 and focused on strengthening Mozambique's institutional framework for measurement, reporting, and verification (MRV) of GHG emissions, mitigation actions, and support, and on the application of ICAT's Renewable Energy Guidance and ICAT's Sustainable Development Guidance. The guidance was used to assess the impact of national policies and actions that are part of the country's NDC, namely the Renewable Energy Feed-in-Tariff (REFIT) policy and the nationally appropriate mitigation action (NAMA) on promoting a sustainable vegetable charcoal value chain in Mozambique. The work on the institutional framework for MRV aimed at establishing a permanent institutional set-up and procedures for national-level MRV.

The following outcomes were achieved in the 1<sup>st</sup> ICAT Mozambique Phase:

- I. A mapping of gaps and barriers in institutional arrangements, procedures and legal arrangements of the national MRV system was completed.
- II. An ex-ante assessment of the mitigation potential of the REFIT policy, using the ICAT Guidance on Renewable Energy, coupled with recommendations for a robust MRV of the policy was carried out.
- III. An ex-ante assessment of mitigation potential and sustainable development impacts of the NAMA Charcoal, coupled with recommendations for a robust MRV of the policy was carried out.
- IV. A set of recommendations for the establishment of a robust national MRV system of climate change policies and actions was developed, and
- V. A road map with concrete actions for strengthening the national MRV system, in the following areas: institutional setup, legal setup, procedural setup, and data availability was produced.

Apart from the project activities, the ICAT project also delivered training on the modelling of GHG emissions of policies using the GACMO Excel-based tool, and training on the topic of the enhanced transparency framework (ETF) and the modalities, procedures, and guidelines to implement it. The road map for the national MRV system developed under ICAT contributed to setting clarity on institutional arrangements for the BUR project, and the mapping of gaps and barriers in the national MRV system was used for developing a proposal for a project to be funded by CBIT.

The outcomes resulting from the project were validated through stakeholder workshops, which had the participation of representatives of the different ministries, civil society organizations, representatives of industry associations in the private sector, the National Statistics Institute, and other development partners. The work in the country was done by national consultants (two of them are affiliated with the University Eduardo Mondlane), which have previous experience working with MTA, namely in the SNMAMC project, in the development of NAMAs, and also in the current BUR project. This setup with national consultants contributes to retaining capacity in the country, especially the link with the university. The future ICAT project in Mozambique plans to leverage this created capacity and expand it to the ministerial staff.

With the first ICAT project (henceforth ICAT Mozambique Phase I) successfully completed, Phase II

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was initiated with the goal of continuing to build on the efforts of Phase I. More specifically, the objectives of the ICAT Phase II project were to:

- a) Establish a formal institutional arrangement for climate transparency activities, based on the road map and recommendations produced in the first ICAT project.
- b) Secure sustainable capacity-building efforts in the country through the development of a training programme, involving the Climate Change Network and focusing on tracking policies and actions in the NDC, GHG inventories, and reporting of support needed and received.

## 2. Key achievements and lessons learned.

With Phase II, Mozambique has further institutionalized the arrangements for collecting data for the national MRV system in a consultative process with all national stakeholders, involving both technicians and higher-level ministerial staff, aiming at the formal attribution of mandates and responsibilities.

The work on institutional arrangements included an analysis of existing institutional frameworks and mandates for environmental management, including climate change, and presented two options for institutional arrangements, one centralized and one decentralized, which could further strengthen institutionalized collaboration between institutions in the country, to ensure an appropriate and robust flow of data and information, needed to respond to the reporting requirements of the enhanced transparency framework of the Paris Agreement.

During this process, a wide range of gaps and challenges were identified, including the following:

- Lack of consistent data (i.e., time series, gaps, baseline, methodology for data collection, etc.).
- Lack of formal data-sharing agreements.
- Lack of understanding of efforts and data needed to adequately track the country's NDC implementation.
- Lack of available national guidance to quantify and track NDC actions and related indicators.
- Insufficient priority given to climate transparency efforts at the highest levels of decision-making.
- Insufficient human and institutional capacities to capture and track the needed data and information in the respective institutions.

The two developed options for institutional arrangements were presented to all relevant stakeholders, and the stakeholders agreed that the centralized option was most suitable for Mozambique, given the existing mandates and institutional set-up. In addition, terms of reference were developed, describing the roles and responsibilities of the various institutions and the Inter-institutional Group on Climate Change (GIIMC), and MRV Coordination Team. A set of reporting templates aligned with the reporting requirements outlined in the modalities, procedures, and guidance (MPG) for Article 13 were also developed. This was done to assist the technical staff

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involved in MRV activities in Mozambique in identifying relevant information to be reported on related to NDC actions listed in the NDC Operational Plan.

Mozambique is aware of the limited in-country capacity to implement the MPG, and that this capacity gap cannot be overcome solely based on an ad-hoc external provision of capacity-building. For that reason, Phase II also developed and implemented training programs on the focus areas of the ETF, including the following:

- A training program about reporting on national GHG inventory.
- A training program about reporting on the implementation of the policies and actions in the NDC, both mitigation and adaptation, based on Mozambique's most recent NDC and the NDC Operational Plan.
- A training program about modelling the costs and impacts of mitigation actions through GACMO.
- A training program about tracking support received and identifying support needs.

These programs developed the capacity of the current and future members of the Inter-institutional Group on Climate Change (GIIMC) and contributed to the establishment of a strong and cohesive group of climate change-aware technicians who can contribute to the sustainability of reporting on climate change action and support. In addition, the training programs developed training manuals intended to be used for future reference and capacity building, to ensure that capacities could be maintained in the institutions regardless of staff turnover.

Phase II also envisioned the development of a law or national decree on the provision of data for the national MRV system. However, as a separate World Bank project is starting in Mozambique, with the scope to revise the current environment law, (including establishing the overall climate change legal arrangements in the country), it was decided to discontinue the envisioned ICAT activity on legal arrangements, and focus efforts on other climate transparency aspects to avoid duplication of work. As per the country's request, and after careful consideration and discussions with UNEP CCC and the ICAT Secretariat, two new main objectives were identified:

- **Objective #1:** Data gathering and operationalization of the NDC tracking framework.
- **Objective #2:** Capacity building on transparency aspects of Article 6 and needs and options for participating in market mechanisms.

In this context, the developed NDC tracking framework was further enhanced and tested based on NDC actions identified from the NDC Operational Plan, which was done in consultations with stakeholders. Based on this, the Operational Plan was also reviewed and areas of improvement were identified. The NDC tracking framework includes an excel based system for tracking each NDC action with related relevant indicators identified and developed in consultation with relevant stakeholders who received training on NDC tracking. It also contains an identification of relevant data and information during the process of testing the NDC tracking framework.

During the operationalization of this system, it became even more evident that Mozambique has extensive data gaps to define initial baselines, and that data and approaches to track most of the selected indicators are absent. Moreover, many of the actions outlined in the NDC Operation Plan are not under implementation, and the expectations for these actions, (i.e., implementation timeframes, quantified objectives, etc.), are not fully grasped by the incumbent authorities, which also means that data on these actions are not being tracked. To enable Mozambique to start

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tracking its NDC actions, it was deemed necessary to prioritize indicators and identify data that could be used to establish baseline values for selected indicators and provide guidance on how to track the most relevant ones. To this extent, the national consultant held a series of working sessions with MRV-appointed staff in selected ministries and started gathering available data on NDC actions that were prioritized and under implementation.

The training sessions were also a means to familiarize ministry staff with the methodological guidance developed for each indicator and provide the technical staff with reference material to guide future data collection and NDC tracking efforts. Moreover, it was noted that some of the sectoral experts appointed by the sectors did not, in some cases, have the appropriate technical profile for the intended NDC tracking, and as National MRV System Experts, the suggestion is to allocate these experts as GIIMC experts, and indicate junior experts as MRV experts, as they have more time availability to learn new processes. Nevertheless, ministries now have a series of documents outlining NDC indicator tracking methodologies and Excel files they can use to input baseline and NDC tracking data and report the data to the Ministry of Land and Environment.

The work on cooperative approaches included a review of Mozambique's existing experience with market mechanisms. Mozambique participated in the Clean Development Mechanism (CDM) under the Kyoto Protocol and thus established capacities and institutional arrangements to participate in the Kyoto Protocol's market mechanism, including the establishment of a Designated National Authority (DNA) for the CDM. Mozambique also intends to participate in voluntary collaborative approaches through market and non-market approaches established through Article 6 of the Paris Agreement but needs capacity building to understand the new challenges and opportunities arising from Article 6. ICAT has recently released a guide on Article 6, which was used as input to Mozambique on Article 6 related gaps and challenges in the country.

The initial gap identified was the current lack of strategic direction for Mozambique's participation in market and non-market approaches, partially also given by the lack of understanding of the scope and implications of Article 6 and its various mechanisms defined by Article 6 of the Paris Agreement. Mozambique should therefore as a first step focus on developing capacities to understand the implications of participating in Article 6 activities (in addition to the information provided by the ICAT support under this Phase 2) and develop a strategy for Article 6 participation. This strategy should include a sectoral analysis of the NDC actions outlined in the NDC Operational Plan, and also include a financial analysis, including Marginal Abatement Costs Curves (MAC curves), to guide Mozambique in identifying eligible activities in the context of Article 6, and not transfer mitigation outcomes which it could more easily attain, and rather focus on attracting finance and support for those actions which have associated incremental costs.

It is also important for Mozambique to start establishing institutional arrangements, guided by the ones provided through ICAT support during this phase, and to start defining processes and procedures for identifying, prioritizing, designing, approving, and implementing Article 6 activities. Also, given the extensive gaps identified for tracking NDC actions, participating in Article 6 activities will require an enormous effort in enhancing MRV capacities at the national, institutional, and individual levels. To accelerate this process, Mozambique should engage with "early movers", and initiate pilot activities related to Article 6, building on existing technical support and capacity-building initiatives like ICAT. These initiatives can support the implementation of the strategy and the development of processes, procedures, and mandates, as well as help to identify potential partners for implementing cooperative approaches.

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## 2.1 Overview of deliverables developed during Phase II, including revision of work plan and activities.

Table 1: ICAT Phase II Deliverables

Deliverable number	Description	Overall responsibility
D1	A report highlighting key achievements and lessons learned, from a technical point of view, in the previous ICAT project	UNEP CCC
D2	A report compiling the debates of the kick-off workshop.	National Consultant
D3	A report on the 2 options for institutional arrangements, with a description of mandates and responsibilities of the different stakeholders, and the advantages and disadvantages	National Consultant
D4	A report compiling the debates of the seminar with all stakeholders.	National Consultant
D5	A report documenting the final decision on the institutional arrangements, including the mandates and responsibilities of different stakeholders, and a proposal of a law or decree to formalize the institutional arrangements for reporting on climate action and support	National Consultant
D6	A report based on the final decision on the institutional arrangements and the mandates and responsibilities of different stakeholders, justifying the need for a legal instrument; and including a proposal of a law or decree to formalize the institutional arrangements for reporting on climate action and support	Deliverable adjusted, removing the proposal of law or decree
D7	A report about the NDC tracking framework, covering the institutional arrangement for implementation and tracking of the NDC, the data collection procedures, and the procedures for monitoring the progress made in implementing the NDC.	National Consultant
D8	A report about the various training programs, including the curriculum of the programs, the training materials used, and a summary characterization of the trained technicians and the assessment of the training results through a questionnaire.	National Consultant
D1	A report summarizing the analysis and classification of NDC actions, and indicators, including data needs and appropriateness, and providing baseline and current level of implementation values for NDC actions, and in cases, data is missing, the established plan to enhance data accessibility.	National Consultant New deliverable after revision
D2	A roadmap for participating in market mechanisms and collaborative approaches for Mozambique.	National Consultant New deliverable after revision
D3	A report providing a description of approaches/methods to track NDC indicators including a summary of meetings held with national and local stakeholders, and established approaches for data gathering and reporting	National Consultant



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		New deliverable after revision
D9	A report highlighting key achievements and lessons learned, from a technical point of view, in the second phase of project ICAT.	UNEP CCC

### 3.ICAT II Impacts in Mozambique

The expected impact of the project continues to relate to providing support to Mozambique as it takes steps to enhance its climate transparency efforts. ICAT’s support is provided to in-country partners, and relevant stakeholders with tools and mechanisms suitable for the country context as it evolves its transparency mechanism and climate change mitigation efforts.

In this context, the ICAT Mozambique Phase II contributed to the following MELU KPIs<sup>1</sup> defined under the ICAT monitoring and evaluation framework:

Table 2: ICAT Mozambique Phase II projected KPIs

ICAT MELU KPI	Description	Context
KPI 3	<i>Number of people trained by ICAT in the use of tools and methodologies for monitoring and evaluating climate action, disaggregated by a) ICAT capacity building projects, b) e-learning, and c) ReCATHs.</i>	Based on the training activities provided by ICAT to national stakeholders in Mozambique a total of 130 people benefitted from thematic training programmes:  32 people (21 male, 11 female) participated in a training program about reporting on national GHG inventory.  28 people (13 male, 15 female) participated in a training program on NDC tracking.  45 people (17 male, 28 female) participated in a training program on transparency of support.  25 people (15 male, 10 female) participated in a training on GACMO on modeling the costs and impacts of mitigation actions.  This training used existing national data on fossil fuel consumption and sectoral emissions to demonstrate the application of the GACMO approach.
KPI 5	<i>Number of ICAT country and subnational level projects / ICAT ReCATH countries that have resulted in at least one of the following: new or refined GHG inventory; new or refined MRV framework; new or refined NDC tracking framework; improved integration of subnational/NSA climate action; and/or</i>	As can be inferred in the detailed deliverable breakdown listed above in Table 1, the support provided by ICAT builds on the refinement of Mozambique’s MRV system.  Indeed, several activities under Phase II of ICAT Mozambique were designed to support Mozambique in defining a robust NDC tracking system that should fit into a feasible institutional arrangement. This

<sup>1</sup> ICAT’s MELU Guidelines for KPIs stands for “Monitoring, Evaluation, Learning and Uptake” guidelines.

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	<i>new adaptation monitoring measures, plans or processes</i>	purpose was successfully in the project’s second phase.
<b>KPI 6</b>	<i>Number of ICAT projects / ICAT ReCATH countries utilizing ICAT methodologies/ guides to assess the impact of their climate actions and policies (including adaptation).</i>	<p>ICAT methodologies and tools were also used to support deliverables under ICAT Mozambique Phase I and II, namely:</p> <ul style="list-style-type: none"> <li>• The ICAT Guide on Renewable Energy, which was used to support an ex-ante assessment of the mitigation potential of the REFIT policy.</li> <li>• The ICAT Sustainable Development Methodology, which was employed in the development of an ex-ante assessment of the mitigation potential and sustainable development impacts of the Coal NAMA in the country.</li> </ul>

## 4. Proposal for ICAT Phase III activities in Mozambique

Bearing in mind the upcoming achievement of the deliverables listed in Table 1 and the discussions held with the project partners and national stakeholders during the final validation workshop held in Maputo between the 22nd and 25th of May 2023, the following activities could be focused on and further prioritized in ICAT Mozambique Phase III.

### 4.1 Preparatory Activities for Article 6 Participation

#### Analysis of CDM experience: Continue initial efforts on Article 6 and develop a Domestic Article 6 strategy.

As previously stated, Mozambique participated in the Clean Development Mechanism (CDM) under the Kyoto Protocol and thus established capacities and institutional arrangements to participate in the Kyoto Protocol's market mechanism, including the establishment of a Designated National Authority (DNA) for the CDM. However, during the validation workshop, it became evident that the achievements of CDM activities in Mozambique were unclear.

Understanding the yields (i.e., both in terms of GHG emissions reductions as well as economic benefits) from CDM activities in Mozambique can be a valuable point of departure for the country as it prepares to engage in Article 6 activities and as it develops a national strategy for Article 6 (particularly 6.2 and 6.4).

#### Identification of potential Article 6 pilot activities

To participate in Article 6 activities, Mozambique needs support in identifying eligible activities that the country can either:

- a) Implement on its own (in the next round of NDCs),
- b) Include in its Long-term strategy (LTS), or
- c) Include in its domestic Article 6 strategy.

This can be identified with the results generated for the country context via the (Greenhouse Gas Abatement Cost Model /GACMO) tool and the development of Marginal Abatement Cost (MAC) curves.

In Mozambique, MAC curves have been developed through several rounds of GACMO training but have not yet been tailored in the context of detailed national data on costs and potential revenues/savings from NDC actions outlined in the operational plan. A thorough MAC analysis customized to the local context could provide valuable input to the country's Article 6 strategy, particularly in terms of identifying actions viable to be implemented through national resources, and actions that could be considered for market approaches due to incremental costs.

In this regard, UNEP CCC is well placed to provide technical stakeholders in Mozambique with enhanced GACMO training and begin the customization of the GACMO tool to the local Mozambican context. Given the recurrent data gaps, this activity could be quite resource intensive, as a lot of the data will have to be generated.

Moreover, with the emission and mitigation scenarios in place, followed by a detailed identification of mitigation actions with incremental costs, UNEP CCC can support national institutions and

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provide support on best practices for data gathering (i.e., relevant for NDC implementation), and support in the identification of a set of NDC mitigation activities that Mozambique can either incorporate into its next round of NDCs, include in its LTS, and/or include into its domestic strategic around Article 6 deployment.

## Development of a national strategy for Article 6

ICAT has developed a guideline ("Transparency for cooperative approaches under the Paris Agreement: A guide to navigating the links between Articles 6 and 13") that can support the initial efforts to operationalize the deployment of an Article 6 strategy in the country. To supplement this newly developed guide, UNEP CCC has internal experience with Article 6 via the "Supporting Preparedness for Article 6 Cooperation" project (SPAR6C), which aims to enhance the readiness of Colombia, Pakistan, Thailand, and Zambia to participate in the international carbon market under Article 6 of the Paris Agreement. To achieve this, the project will work to increase private sector engagement in NDC implementation and to support raising climate ambition in partner countries. This experience and the technical expertise that comes from the project implementation in various national contexts can be an inspiration to Mozambique and replicated to develop a national strategy for Article 6 participation.

## 4.2 Continue to Strengthen Mozambique's National Transparency System

In the consultation meetings held in Mozambique with national stakeholders from various Ministries and directories, the desire to continue deepening the country's transparency efforts and implementation of the national MRV framework developed through ICAT support was strongly referred to by participants. One way this continued support can be strengthened is to conduct an MRV training (including QA/QC of the country's inventories), building upon the latest ICAT deliverable submitted by the consultant on "*Piloting the National MRV System of Mozambique: Establishing information sharing system while updating the baseline data and approaches to track NDC indicators*", which should be provided systemically to technical staff.

Parallel to this activity, the recruitment of local technicians shall be employed to support data entry in the developed system together with sectoral staff means that Mozambique's National Transparency System would be put into practice by capacitated staff and under the support and guidance from the consultant and UNEP-CCC.

As it is evident that much of the needed data is not available at the ministerial level, Mozambique could also benefit from piloting the application of ICAT's *Non-state and Subnational Action Guide*<sup>2</sup>. The application of the guide presents the following immediate benefits:

1. It will assist technical staff in collecting data at the regional level, therefore potentially generating new needed datasets at a central level which could be used to establish baseline values and identify new reporting streams that could assist in NDC tracking, and
2. It will assist Mozambican stakeholders (state and non-state) in identifying and assessing the impacts of actions spearheaded by the private sector, thus expanding on the reach of the MRV system by establishing stronger links with private sector entities, and the national MRV system.

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<sup>2</sup> The Guide can be read in full here: [impact assessment of non-state and subnational actions \(climateactiontransparency.org\)](https://climateactiontransparency.org)

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3. It will thus ultimately allow for the country to obtain more detailed information on the contribution of private sector entities to the ongoing GHG emission reduction efforts in Mozambique, while also making it viable for the country to identify potential pilot Article 6.4 activities and obtain capacity to establish MRV capacities for Article 6 participation.