

## Monitoring climate change action and impacts: the Mozambique National Climate Change Monitoring and Evaluation Framework

Mozambique is one of the most climate vulnerable countries in the world, due to its geographical location in the inter-tropical convergence zone and downstream of shared river basins, its long coast and the presence of extensive areas with altitude below sea level. Other factors contribute to its vulnerability namely, a high level of poverty estimated at 54.7%, limited investments in advanced technology and the fragility of infrastructure and social services with an emphasis on health and sanitation.

Climate change is manifested through changes in temperature and precipitation patterns, increasing levels of seawater and increasing frequency and intensity of extreme weather events such as droughts, floods and tropical cyclones affecting different regions of the country. The consequences of climate change include loss of human lives, crops, domestic animals and wildlife, the destruction of social and economic infrastructure, increased dependence on international aid, increases in the price of agricultural products, the deterioration of human well-being, environmental degradation and loss of ecosystems. Climate change thus represents a setback in the efforts of the government and its partners in the fight against poverty and the pursuit of the Millennium Development Goals (MDGs).

The majority of Mozambicans inhabit rural areas which are prone to weather and climate shocks, they have low adaptive capacities, and they are heavily reliant on climate-sensitive sectors such as agriculture and livestock. Droughts, floods, and tropical cyclones pose a particular threat to coastal communities, transport infrastructure, and livelihoods that are dependent upon rain-fed agriculture. In 2015, floods in central and northern Mozambique killed around xxx people, displaced xxx,000, and inflicted costs of around x% of annual GDP .

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Since climate change can no longer be avoided, and projections indicate that its impacts in Mozambique will increase both in frequency and intensity, the National Strategy for Adaptation and Mitigation of Climate Change (ENAMMC) has identified key action areas and activities to reduce the severity of impacts. These include adaptation measures, reduction of climate risks, and opportunities for mitigation, as well as low carbon development and the reduction of greenhouse gas (GHG) emissions. An important policy requirement is for annual reporting to the Cabinet on implementation progress and impacts of the strategy.

For this reason, a national monitoring and evaluation (M&E) framework has been developed which is fully integrated with government planning and budget systems. . This framework was approved by the government in October 2014 as part of the

Development of Policy and Operations (DPO) of the World Bank-supported project, and it provides the basis for national reporting on climate change responses to the Council of Ministers<sup>1</sup>, to international conventions, and to international climate financing bodies.

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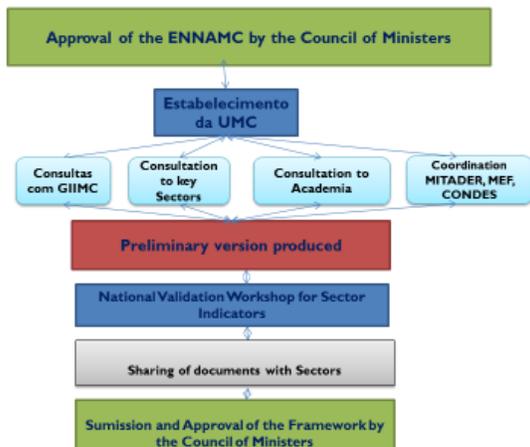
This paper addresses the following areas:

1. Why was a National Climate Change Monitoring and Evaluation framework (NCCMEF) designed?
2. How was it designed?
3. How does it work?
4. How is it implemented?
5. How is information shared and through which networks?

The paper also looks at next steps and challenges.

### Why was the framework designed?

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The framework was designed as it has strategic importance for the government for the following reasons:

- (i) To improve the efficiency in fulfilling national and international reporting requirements;
- (ii) To assess the effectiveness of climate change policy responses;
- (iii) To improve access and accountability on the use of domestic and international climate finance;
- (iv) To improve the formulation of future policies and programs by learning from past implementation.

### How was the framework designed?

The framework was designed through a participatory process. A series of consultations were carried out at national and local levels with key stakeholders from government, civil society, academia and development partners, to define the objectives, tools and implementation arrangements. Technical notes were developed on the indicators for measurement. This engagement process has been very important in building capacities and ensuring ownership of the NCCMEF by a range of partners/stakeholders.

### How does the framework work?

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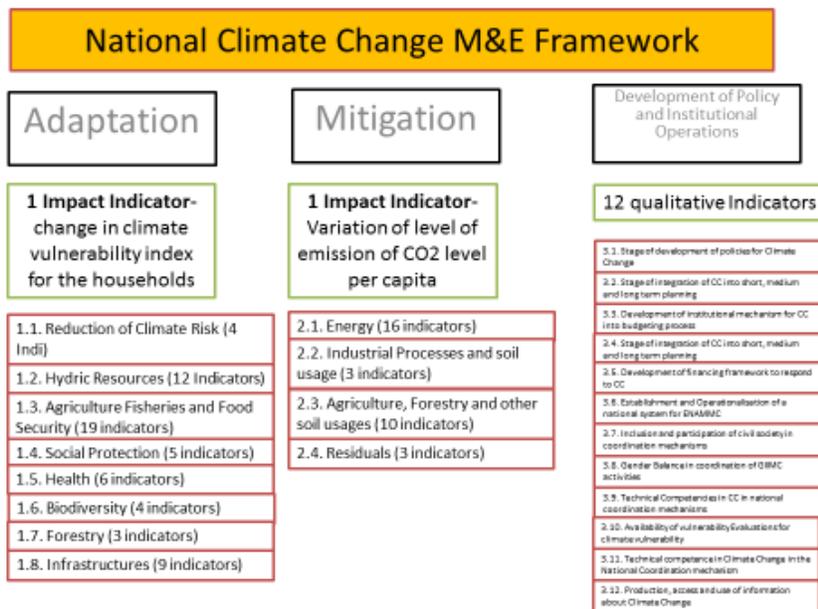
The NCCMEF has 3 pillars (*Adaptation, Mitigation and Development of Policy and Operations*), 15 strategic areas and 28 strategic actions. The framework includes **impact indicators** for specific objectives, and **results and process indicators** for strategic actions:

- **Impact indicators:** are used to track progress towards the specific objectives of the ENAMMC. They measure the effects of climate change policies on: a) reducing climate vulnerability of social, economic and natural systems; b) maintaining a low-carbon development path; and c) improving the framework for climate risk management (institutions, policies and plans, mainstreaming, capacities, data, financing, etc.). Impact indicators can be both quantitative and qualitative.
- **Results indicators:** are used to track progress in each strategic area of the ENAMMC. They measure the higher level intended achievements of the strategic actions, rather than the concrete products or outputs delivered. Only a few results indicators are foreseen for each strategic area, therefore results indicators are measuring the combined results of several strategic actions. Results indicators are mostly quantitative; however qualitative indicators can also be included.
- **Process indicators:** are used to track progress in improving the sectoral frameworks for climate risk management in each strategic area of the ENAMMC (institutions, policies and plans, mainstreaming, capacities, data, financing, etc.). These indicators are mostly qualitative and make use of “readiness ladders<sup>2</sup>” to measure progress. Figure 1 below summarizes the strategic sectors and the number of indicators per strategic area.

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<sup>2</sup> The “readiness ladders” used to measure indicators related to climate risk management are a particular type of qualitative indicator based on a sequence of progressive steps associated with milestones in the policy reform process.

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How is the framework implemented?

The indicators lie under the responsibility of the relevant government ministry. For example, the adaptation pillar, which collects information on the Index of Vulnerability comes under the responsibility of the Ministry of Land, Environment and Rural Development (MITADER). Information is collected through a household survey (IOF?), in coordination with the poverty survey carried out by the National Institute of Statistics (INE?). On the other hand, the mitigation impact indicator, which will primarily measure the level of carbon dioxide per capita, will be measured through a greenhouse gas emission measurement system by the Ministry of Land, Environment and Rural Development. Finally, information on sector preparedness to climate change issues will be assessed by the Climate Change Unit (UMC) (See Table 1 below).

Specific objectives ENAMMC	Impact Indicators	Observation
1. Build Mozambique's resilience to the impacts of Climate Change (CC)	1. Level of change in Climate Vulnerability Index of the Household to Climate Change	1. INE 2. INE through National Budgeting Survey (IOF)

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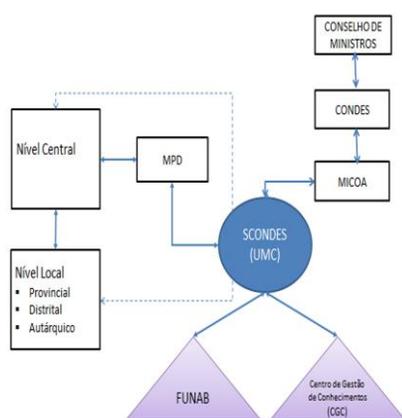
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2. Identify and implement opportunities to reduce GHG emissions	2. Variation of equivalent carbon dioxide emission level (CO <sub>2</sub> - eq ) per capita	3. MITADER Through the National Inventory System
3. Create the institutional and human capacity and explore opportunities for access to technological and financial resources to implement the ENAMMC		4. qualitative indicators to be measured alert through the ladders system

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### How will information be shared?

The NCCMEF report is to be submitted annually to the government of Mozambique, and shared among other stakeholders and decision-makers. At the national level, information is primarily for the government for decision-making processes. However, other decision-makers - such as ministers, local government and non-government institutions - are also able to use the information from this report.



Information will flow from the local level to the Council of Ministers' level for the approval of specific documents (such as progress reports, impact evaluations). From the local level, information will be sent to the provinces where data will be verified and summarized (where necessary). From the provincial level, data will be sent to the line ministries at the central level. Information at the central level will also be verified and summarized. After compilation, information will be sent to the Ministry of Planning and Development as a reporting requisite to the Economic and Social Plan (PES). Then CONDES collects the necessary data. Where necessary, CONDES will revisit the line ministries for data verification and further explanation. Information will be cross-tabulated with other relevant data from the National Environment Fund, which has the information on climate change budgeting

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(see Figure 2).

The Knowledge Management Center will play a key role in sharing the knowledge from climate change initiatives, as well as being an ongoing source of information during the course of the year. The information from the Knowledge Management Center will be public, accessible through its website [www.cgcmc.info](http://www.cgcmc.info)

### Next steps

- Each sector to allocate staff through formal proceedings to ensure that the sector indicators are followed and accounted for.
- Numeric figures to be included with physical evidence gathering. It is recommended that in the key vulnerable districts, a minimum of two sites should be selected for physical verification.

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- Technical notes for the indicators in the report to be submitted by the end of May 2015.
- The first complete baseline report to be completed in September 2015.

### Challenges

- Some of the Impact Indicators for the NCCMEF might not be readily available because of the characteristics of the data and the amount of work that it takes to collect such data. This framework builds on the existing data collection system. Given that some of the impact data needs to be collected using general surveys, such data (eg the Household Vulnerability Index Survey) might not be available until the implementation of the tool that collects such type of data.
- Annual data collection is dependent of strong coordination between the government institutions and linkages between the data frameworks. Currently, there are no regulations for data sharing from the NCCMEF, so this might influence data availability.
- Human resources at all levels (government, CONDES, UMC). Availability of qualified staff at government level, as well as at the National Council for Sustainable Development (CONDES), are needed to properly report on climate change.
- The Climate Change Coordination Unit (UMC) will act as a coordination agent for collecting and summarizing data on the climate change indicators. Responsibility for data quality lies with the sector line ministry for the specific indicators. Therefore, the quality of information reported might be dependent on the quality of information received from the sector areas.

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