**REPÚBLIC OF MOZAMBIQUE**

NATIONAL COUNCIL FOR SUSTAINABLE DEVELOPMENT

# National Climate Change Monitoring and Evaluation System (SNMAMC)

October 2014

**Approved during the 26th Session of the Council of Ministers, 28th October, 2014**

*Produced in Coordination with*
*National Council for Sustainable Development (CONDES)*
*October 2014*

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**List of Abbreviations and Acronyms**

| | |
|---|---|
| ANE | National Administration of Road |
| ARAs | Regional Water Administration |
| CCTAP | Climate Change Technical Assistance Project |
| CERUM | Multiple Use Resource Centres |
| CGC | Knowledge Management Centre |
| CONDES | National Council for Sustainable Development |
| CPEIR | Climate Public Expenditure and Institutional Review |
| CT-CONDES | Technical Council for the National Council for Sustainable Development |
| CTGC | Technical Council for Disaster Management |
| DNA | National Water Directorate |
| DNTF | National Directorate of Land and Forests |
| DPO | Development of Policy and Operations |
| DPO | Development of Policy and Operations |
| DRR | Disaster Risk Reduction |
| ENAMMC | National Climate Change Adaptation and Mitigation Strategy |
| FUNAB | Environmental Fund |
| FUNAE | Energy Fund |
| GDP | Gross Domestic Product |
| GHG | Greenhouse Gases |
| GIIMC | Inter-Institutional Climate Change Working Group |
| HFA | Hyogo Framework for Action |
| INAM | National Institute of Meteorology |
| INAS | National Institute for Social Welfare |
| INCAF | Continuous Household Survey |
| INE | National Institute for Statistics |
| INGC | National Institute for Disaster Management |
| IOF | National Household Budget Survey |
| IPCC | Inter-Governmental Panel for Climate Change |
| ISO | International Standards Organization |
| LAP | Local Adaptation Plans |
| M&E | Monitoring and Evaluation |
| MASA | Ministry of Agriculture and Food Security |
| MDG | Millennium Development Goals |
| MEF | Ministry of Economy and Finance |
| MEO | Budget execution Module |
| MGSAC | Ministry of Gender, Children and Social Welfare |
| MIC | Ministry of Industry and Trade |
| MICUTUR | Ministry of Culture and Tourism |
| MIMAP | Ministry of Inland Water and Fisheries |
| MITADER | Ministry of Land, Environment and Rural Development |
| MOPHRH | Ministry of Public Works, Housing and Water Resources |

| | |
|---|---|
| MPD | Ministry of Planning and Development |
| PAF | Performance Appraisal Framework |
| PAMCs | Action Plans for Climate Change |
| PARP | Action Plans for Poverty Reduction |
| PASA | Programme for Support of Environmental Sector |
| PASP | Programme for Social Action Production |
| PES | Social Economic Plan |
| PESOD | District Economic and Social Plan |
| PQG | Government Five Year Plan |
| REDD+ | Reducing Emissions from Deforestation and forest Degradation |
| S-CONDES | National Council for Sustainable Development Secretariat |
| SDGS | Sustainable Development Goals |
| SETSAN | Technical Secretariat for Food Security and Nutrition |
| SNMAMC | National Climate Change Monitoring and Evaluation System |
| SPCR | Strategic Programme for Climate Resilience |
| TPES | Total Primary Energy Supply |
| UMC | Climate Change Unit |
| UNFCCC | United Nations Framework Convention for Climate Change |
| UNICEF | United Nations Children Fund |
| WHO | World Health Organisation |

**Glossary**

**Aid Effectiveness principles** – Part of the Paris Declaration formulated around five central pillars: Ownership, Alignment, Harmonisation, Managing for Results and Mutual Accountability.

**Adaptation** - in the climate change context, adaptation implies an adjustment in natural or human systems in response to a changing/changed climate.

**Climate change** - changes of climate in general, usually with no presumption of human influence. Note, however, that there is one important exception to this: the United Nations Framework Convention on Climate Change (UNFCCC) defines "climate change" as anthropogenic.

**Conference of Parties-** The Conference of the Parties is the governing body of the Convention, and advances implementation of the Convention through the decisions it takes at its periodic meetings.

**Global warming** (GW) - usually: the warming trend over the past century or so; also: any period in which the temperature of the Earth's atmosphere increases; also the theory of such changes.

**Greenhouse gas** – this is any of the atmospheric gases that contribute to the greenhouse effect by absorbing infrared radiation produced by solar warming of the Earth's surface. They include carbon dioxide, methane, nitrous oxide, and water vapor. Although greenhouse gases occur naturally in the atmosphere, the elevated levels especially of carbon dioxide and methane that have been observed in recent decades are directly related, at least in part, to human activities such as the burning of fossil fuels and the deforestation of tropical forests..

**Green Climate Fund** - The Green Climate Fund is a fund within the framework of the UNFCCC founded as a mechanism to redistribute money from the developed to the developing world, in order to assist the developing countries in adaptation and mitigation practices to counter climate change

**Hyogo Framework for Action** - The HFA is a 10-year plan to make the world safer from natural hazards. It was endorsed by the UN General Assembly in the resolution A/RES/60/195 following the 2005 World Disaster Reduction Conference.

**Indicator -** Quantitative or qualitative factor or variable that provides a simple and reliable basis for assessing achievement, change or performance. A unit of information measured over time that can help show changes in a specific condition. A given goal or objective can have multiple indicators.

**Impact** - The changes in the lives of rural people, as perceived by them and their partners at the time of evaluation, plus sustainability-enhancing change in their environment to which the project has contributed. Changes can be positive or negative, intended or unintended. In the logframe terminology these "perceived changes in the lives of the people" may correspond either to the purpose level or to the goal level of a project intervention.

**Mitigation of global warming** - involves taking actions to reduce greenhouse gas emissions and to enhance sinks aimed at reducing the extent of global warming

**Monitoring and Evaluation (M&E)** - Monitoring and evaluation are two complementary but distinct processes. Monitoring consists of tracking inputs, activities, outputs, outcomes and other aspects of the project on an ongoing basis during the implementation period, as an integral part of the project management function. Evaluation on the other hand is a process by which project results, impacts and implementation performance are assessed. Projects are evaluated at discrete points in time (usually at the project's mid-point and completion) along some key dimensions.

**Sustainability Development** – Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

# 1 Background and context

1. The Mozambican National Strategy for Adaptation and Mitigation of Climate Change (ENAMMC) calls for the introduction of a National Climate Change Monitoring and Evaluation System (SNMAMC) that would enable systematic monitoring and evaluation of climate change response. The strategy envisages this should be integrated fully with Government planning and budget systems. The SNMAMC will provide the basis of national reporting to the Council of Ministers[1] and International Conventions. Further, SNMAMC will assist in writing reports on the impacts of climate change funding received.

2. The ENAMMC is a long-term strategic planning document (2013-2025) and it will be implemented through Climate Change Action Plans (PAMCs) covering the following periods: 2013-2014; 2015-2019; 2020-2025. The strategy consists of three pillars: (i) adaptation and disaster risk management, (ii) mitigation and low carbon development, and (iii) cross-cutting aspects. It is foreseen that the SNMAMC will cover all the pillars; however, considering that adaptation and cross-cutting aspects are key priorities for Mozambique, cross-cutting aspects will be addressed first.

3. A phased approach is foreseen in ENAMMC for implementation of the SNMAMC: Phase 1 (2013-2014) for development of priority components and piloting, Phase 2 (2015-2019) for improvement and scaling up and Phase 3 for full operation.

4. Mozambique is part of the United Nations Framework Convention on Climate Change (UNFCCC) and participates in a number of international initiatives and processes related to climate change. This implies on one side opportunities in terms of accessing support and resources, and on another side obligations in terms of reporting and information sharing.

5. With the operationalization of the Green Climate Fund and other multilateral and bilateral initiatives, the volume of international climate finance potentially available to Mozambique is likely to increase in the next years. A sound and credible national system for Monitoring and Evaluation (M&E) of Climate Change responses will be a very important element to facilitate access to international Climate Change funding.

6. With the increase and diversification of resources available, there is a risk of proliferation of reporting requirements. The SNMAMC will be an essential instrument to mitigate this risk by establishing a national system to be used as a reference by donors and other initiatives according to the *Aid Effectiveness principles*.

7. In the perspective of additional finance, both on budget and from other resources, for climate change responses, the SNMAMC will also be indispensable to assess the long term benefits of the investments for Climate Change adaptation and disaster risk management, mitigation and low carbon development.

8. SNMAMC is therefore of strategic importance for the Government of Mozambique response to Climate Change, as it will: (I) improve the efficiency in fulfilling national and international reporting requirements, (ii) provide a way to assess the effectiveness of Climate Change policy response, (iii) improve access and accountability in use of domestic and international climate finance, (iv) improve the formulation of future policies and programmes by learning from past implementation.

[1] Preceded by the joint meeting of Conselho Técnico do Conselho Nacional de Desenvolvimento Sustentável (CT-CONDES) and the CTGC.

9. Monitoring and Evaluation (M&E) of Climate Change responses and of adaptation in particular, is a very new field of practice that presents important technical challenges. There are increasing numbers of guidelines for M&E of Climate Change at project level, but only a few concrete experiences in developing National Level systems are available[2]. The approaches and tools used to develop the SNMAMC have been selected taking into account current international best practices. Considering that methods for M&E of Climate Change are rapidly evolving, it is foreseen that the design of the system will have to be revised and updated through an interactive process.

10. SNMAMC has been designed through a participatory process. Several consultations have been conducted at national and local levels with key stakeholders from government, civil society, academic institutions and development partners to define the objectives, tools and implementation arrangements. This engagement process has been very important to build capacities and ensure ownership of the SNMAMC.

11. The Government of Mozambique recognizes that there is a strong connection between progress in development and climate resilience. A 2010 study on the economics of adaptation to Climate Change estimated the costs of non-action (which means without investment in measures of adaptation to build resilience) will be in the order of about US$450 million per year[3]. Ultimately, the ENAMMC aims to reduce the negative impacts of Climate Change so that long-term national development goals can be achieved in a changing climate. For this reason the ENAMMC is linked to the broader development planning framework constituted by Agenda 2025, the Sustainable Development Goals (SDGs) (long-term), the Government Five Year Plan (PQG), the Poverty Reduction Action Plan (PARP) (medium term), and the Social and Economic Plan (PES) and District Economic and Social Plan (PESODs) at the central and district level (short term). At the same time, ENAMMC aims at integrating Climate Change response into national and local development planning processes. The diagram in Figure 1 illustrates the broader planning context in which the ENAMMC, the sectoral PAMCs and the Local Adaptation Plans (LAPs) are placed.

12. Given the close relationship between development and Climate Change response, the SNMAMC will have to be aligned, complementing and integrated with existing M&E frameworks and reporting mechanisms for development planning. The design of the SNMAMC and the selection of the indicators have been informed by the M&E framework of national development managed by the Ministry of Planning and Development (MPD) and M&E frameworks at sectoral level. This approach will foster integration and alignment, promote efficiency in data collection, analysis and reporting, and reduce cost of implementation.

[2] Monitoring & evaluation for climate change adaptation: A synthesis of tools, frameworks and approaches, Bours et al., 2013
[3] World Bank (2010) Economics of Adaptation to Climate Change – Mozambique. Washington D.C. , World Bank

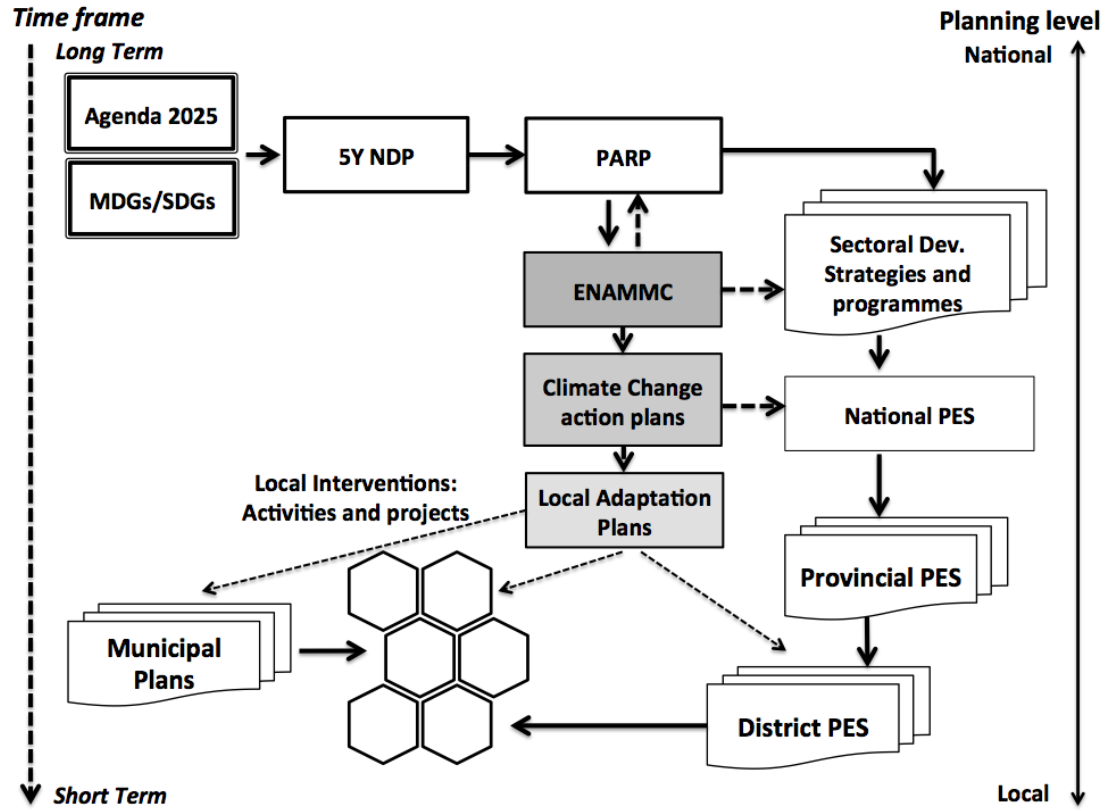


**Figure 1: The Climate Change response policy framework and the development planning context. Solid arrows describe the pathway through which impacts are delivered, while dotted arrows indicate mainstreaming of Climate Change**

## 2 Objectives and Scope

13. Considering the background and context discussed above, the objectives of the National Climate Change Monitoring and Evaluation System (SNMAMC) in Mozambique have been defined as follows:

i. Improve accountability in use of resources and verifying effective allocation for the sectors at all levels and for the most vulnerable groups.
ii. Support inter-sectoral coordination and the implementation of ENAMMC and Climate Change Action Plans (PAMCs) through monitoring and learning from the implementation process.
iii. Evaluate to what extent the ENAMMC has contributed to reduce vulnerability to Climate Change and attain Mozambique's national development goals despite the change of the country's climate regime.
1. Inform policymaking and planning by developing new evidence on effectiveness of adaptation, mitigation and Disaster Risk Reduction (DRR) approaches.
2. Fulfill reporting requirements at national (Government) and international levels.

14. The scope of the SNMAMC will include monitoring and evaluation of policies and actions for climate change responses. It will not address monitoring of climate change itself, such as trends in climate variables or climate scenarios, since this aspect already falls under the mandate of existing programs and institutions.

15. The SNMAMC will focus on the monitoring, evaluation and learning of the ENAMMC and related LAPs. During the second phase of ENAMMC implementation (2015-2019), the System will

include guidelines for M&E of Local Adaptation Plans, and of Climate Change projects. It is important to mention that the ENAMMC implementation phases are affected by the delays in creating UMC to design and manage the SNMAMC. However, considering that these are highly context specific it will be neither possible nor necessary to establish a standard set of indicators for Local Adaptation Plans and Projects.

16. The SNMAMC will be the basis for the formulation of indicators for the M&E Framework for projects implemented by Environmental Fund (FUNAB).

17. The ENAMMC foresees that PAMCs will be developed to operationalize the implementation of the strategy and mobilize the resources required from national and international climate funding. Once the structure and approach for the PAMCs will be defined, the SNMAMC will be updated to provide guidance for M&E at the Action Plan level.

## 3 The National Climate Change Monitoring and Evaluation System (SNMAMC)

18. Monitoring and evaluation are substantially different processes, which require distinctive capacities and resources. Monitoring is performed on a regular basis and is mostly geared towards reporting; the tools and methods need to capture changes and progress over a relatively short time, typically of one year or less. The technical capacities and the costs of the monitoring process need to be compatible with the relatively high frequency of the exercise.

19. Evaluation is performed at discrete points in time, requires dedicated technical competences and substantial resources. Evaluation of Climate Change responses, and of adaptation in particular, poses great technical challenges due to the complexity of responses (multiple sectors and stakeholders are often involved), uncertainties associated with Climate Change and the time lag between interventions and the impacts. For example, the definitive assessment of the adaptation effectiveness of an early warning system for floods will be possible only after the next major flood event has happened.

20. Evaluations can serve different purposes, but they are most often oriented towards verification and accountability. Climate Change responses are a very new endeavor, both in Mozambique and internationally. Therefore, there is still very limited evidence of what policies, approaches, tools and technologies are actually effective, and on what enabling conditions and limiting factors affect their success. Therefore, evaluation of Climate Change responses cannot be limited to accountability and verification, and has to aim at learning and generation of knowledge on the effectiveness of adaptation and mitigation efforts.

21. Given the considerations above, the design of the SNMAMC aims at balancing the accountability and learning functions of monitoring and evaluation, and maximizing the integration within the national development policy and planning process.

22. The main components of the SNMAMC are as follow: (1) an Indicators Framework at national and sectoral level to track progress towards ENAMMC Objectives and Results, (2) Greenhouse Gas (GHG) inventories to measure emissions and progress towards low carbon development, (3) Climate Change Expenditure Assessments and regular tracking of climate change finance, (4) Assessment of Vulnerability to Climate Change at sectoral and local levels to assess changes in vulnerability and local results of adaptation policies and interventions, (5) a Long Term Program Evaluation to assess the impacts and effectiveness of Climate Change response over a period of 10-15 years, (6) a Learning mechanism to understand what approaches and technologies are successful and (7) communication and sharing of M&E results to inform stakeholders and influence policy development and implementation.

The diagram Figure 2 illustrates the relationship among the components of the system and the policy cycle.

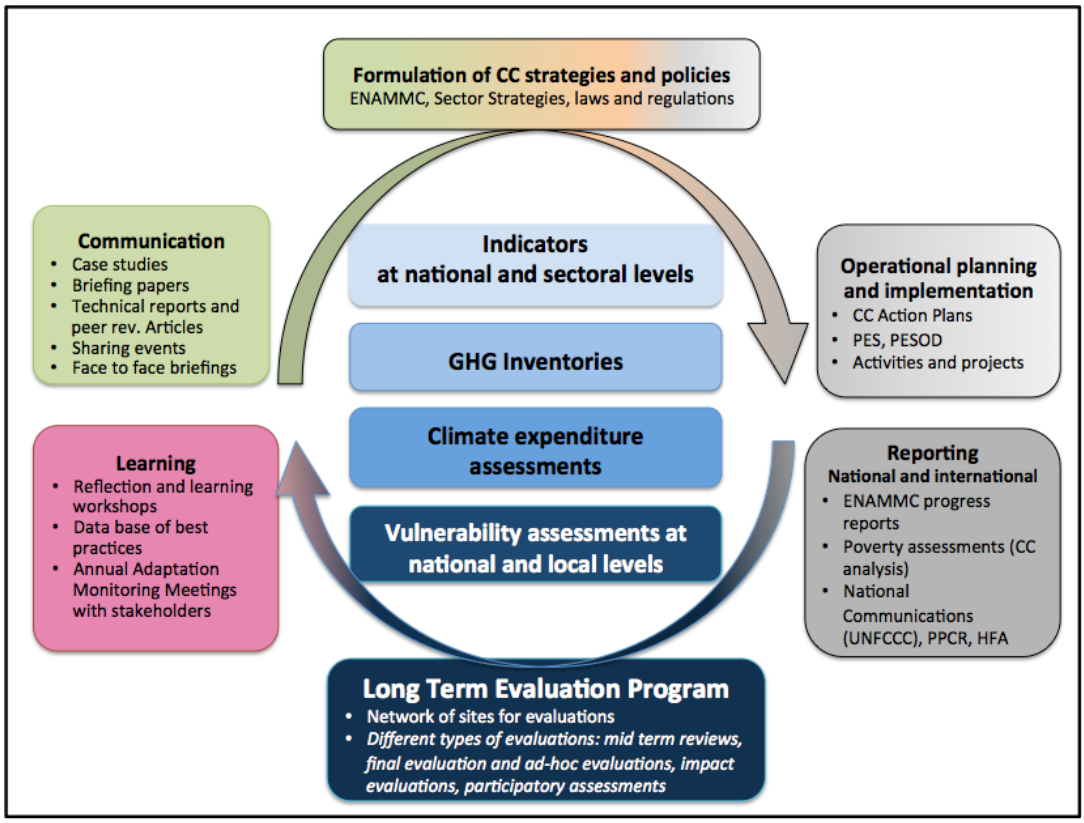


**Figure 2: Key components of the SNMAMC and their integration with the policy cycle**

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23. A Framework of Indicators will be used as a reference for monitoring and evaluation of impacts and results of the ENAMMC and Climate Change Action Plans (PAMCs). The indicators will be relying as much as possible on indicators and data collection systems already in use in the Government of Mozambique Ministries and departments. Regular inventories of Greenhouse Gas (GHG) emissions will be produced by Ministry for Coordination of Environmental Affairs (MICOA) and will provide data related to the mitigation and low-carbon development aspects. A set of procedures to track climate expenditure will be established by FUNAB, which will produce annual assessments of climate expenditure across all sectors. Assessment of Vulnerability to Climate Change will be prepared by the Climate Change Unit (UMC) based on the data collected through regular surveying (such as the National Continuous Household Survey (INCAF) or the National Budget Survey (IOF) conducted by the National Institute of Statistics (INE). In addition, Assessment of Vulnerability to Climate Change at sectoral and local level will be carried out based on needs and resources availability.

24. The progress reports, the results of evaluations developed from the Long Term Program Evaluation and the documentation of lessons learnt will provide feedback into the policy cycle. The knowledge generated through evaluations and learning events will provide the evidence needed to inform the formulation of Climate Change and development policies, and also the planning and implementation processes. Effective communication to end users through well-targeted information products will be essential for transparency and for maximizing the usefulness of the new knowledge for the formulation of Climate Change policies and consequent allocation of resources.

25. A strong connection between monitoring and evaluation, learning and knowledge management will be indispensable for the successful implementation of the SNMAMC. This integration will be reflected in the institutional mechanisms for operating the system, whereby the Climate Change Unit

(UMC) of National Council for Sustainable Development (CONDES), the National Environmental Fund (FUNAB) and the Knowledge Management Centre (CGC) will collaborate closely in operating the system.

## 3.1 Main components of the SNMAMC

### 3.1.1 Indicator Framework

26. Climate Change (CC) responses are planned and implemented at various geographical levels, from national to local. The Logic Model of the Indicator framework is presented in Table 1; for each planning level it describes the relationship among the Results and the respective type of indicator. The Results chain, linking the various layers ranging from inputs at local level up to macro Impacts at national level, is defined by the elements in the column "Results Type". The triangle indicates the Impact Pathway, which is the flow of expected positive impacts or benefits resulting from Climate Change response across the various levels.

27. As discussed in chapter 2, the SNMAMC will include a specific set of indicators only for the national level (items with gray background in Table 1). The rationale for this is that planning and monitoring of local level actions will require indicators that are highly context specific and cannot be standardized. For similar reasons, indicators for projects are also not included in the Indicator framework[4].

**Table 1: The Logic Model**

| Geo. Level | Planning Level | Time Frame | Results level | Results type | Indicator type |
|---|---|---|---|---|---|
| National | ENAMMC | 10+ Years | Strategic Objectives | Impacts | Impact |
| | | | Strategic Actions | Long-term results | Result (long term) |
| | | | | | Process |
| | Sectoral Climate Change Action Plans | 5 Years | Actions | Short-term results | Result (short term) |
| | | | | | Process |
| | | | | Outputs | Outputs |
| | | | | Inputs | Inputs |
| Local | Local Adaptation Plans | 1-3 Years | Activities | Local results | Result (local and context specific) |
| | | | | | Process |
| | | | | Outputs | Outputs |
| | | | | Inputs | Inputs |
| National/Local | Projects | 1-3 Years (mostly) | Project | Project Impacts | (Project) Impact |
| | | | | Project Results | (Project) Result |
| | | | | Outputs | Outputs |
| | | | | Inputs | Inputs |

[4] Most projects have a Logical Framework or a similar planning tool that normally includes a Results hierarchy (Impacts, Results/Outcomes, Outputs, Activities, Inputs). The overlap in terminology, whereby for example the terms Impact and Result are used at different levels with different meanings, is often source of confusion. It is hence important to use a common Logic Model to standardize the terminology and facilitate the communication among various stakeholders.

28. Local Adaptation Plans (LAP) and Projects have been designed in consistence with the national Climate Change policy framework. These LAPs are currently being developed with the support of MITADER. In the future, it is intended to ensure alignment with the Impact Pathway and the national indicators for climate change response which will be instrumental to ensure this consistency.

29. Indicators will be complemented by Theories of Change[5] that will provide the narratives describing the step-by-step process through which Results should be achieved. The Theory of Change, to be designed by the key sectors in 2016 will also explain the underlying assumptions underpinning the change process envisaged.

30. The Indicator Framework includes impact indicators for Specific Objectives, and Result and Process indicators for Strategic Actions. The SNMAMC has 3 Impact indicators, 13 Core Result indicators and 107 secondary Result indicators. The definition of each type of indicator is described as follows:

a) **Impact indicators** are used to track progress towards the Specific Objectives of the SNMAMC. They measure the ultimate effects of the Climate Change policies on: a) reducing Vulnerability to Climate Change of the society, economy 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 process indicators. **Quantitative indicators** are the ones that are measuring quantity like numbers, index, a ratio or a percentage. Quantitative Indicator indicates a quantity. The quantity can be a pure number, an index, ratio or percentage. Quantitative indicators are very widely used in development programs/projects as they give a very clear measure of things and are numerically comparable. This enables program/project officials to compare the performances or achievements of two or more programs/projects. Moreover it also allows them to compare the statuses of the same program/project at different times. Most often, quantitative indicators are preferred as they do not need feelings or judgment to quantify them. They just need mechanical methods that are theoretically expected to give the same results, no matter who measures them. **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[6]" to measure progress.

b) **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. These can have two categories: **Core Result Indicators**, for those that will be prioritized in the monitoring of SNMAMC and **Secondary Result indicators,** for those that will be measured after improvement of processes for monitoring the indicators in the Indicator Framework.

31. Figure 3 describes how impact, results and process indicators are associated with the structure of the SNMAMC. This document includes Impacts and Results indicators for the SNMAMC in Annex 1. The other indicators foreseen by the Indicator Framework will be developed during the following phases of implementation of the SNMAMC.

[5] Describe what Theory of Change is and why to use it. Indicators provide factual information on how much things have changed, while Theory of Change explains why and how change has happened.

[6] 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.

32. The Impact and Results indicators of the SNMAMC have been identified through the following steps:

i) Review of the indicators included in the most important policy and planning documents at national and sectoral level (National five Year Development Plan-PQG, Action Plans for Poverty Reduction-PARP, Social Economic Plan-PES, etc.), as well as in major Climate Change projects under the Strategic Programme for Climate Resilience –SPCR.

ii) Identification of a draft set of indicators. Whenever possible existing indicators have been selected to maximize the integration with existing national and sectoral data collection systems. The draft set of Core Result indicators included 2-3 indicators for each strategic area, which in general corresponds to a sector. The criteria used for the identification of indicators are a) effectiveness and relevance in measuring the combined results of several strategic actions b) feasibility in terms of technical capacities and c) data requirements, and integration and availability within sectoral M&E frameworks.

iii) For Impact indicators, there was a national level workshop and a series of Inter-Institutional Climate Change working Group (GIIMC) meetings to revise and validate the draft indicators.

iv) For Result indicators, there were bilateral consultations with the Ministries responsible for the strategic areas of the SNMAMC and agreement on a final set of indicators and related responsibilities for data collection and monitoring. For each indicator, the Ministry or Department responsible had prepared an Indicator Sheet using the standard Ministry of Economy and Finance (MEF) templates.

v) There was a series of consultations at provincial level to validate the SNMAMC Indicators.

vi) The draft set of indicators was presented and validated by the Technical and Advisory council of MITADER, and by the Technical Council of CONDES.

vii) The final set of Indicators was presented and approved by the Council of Ministers

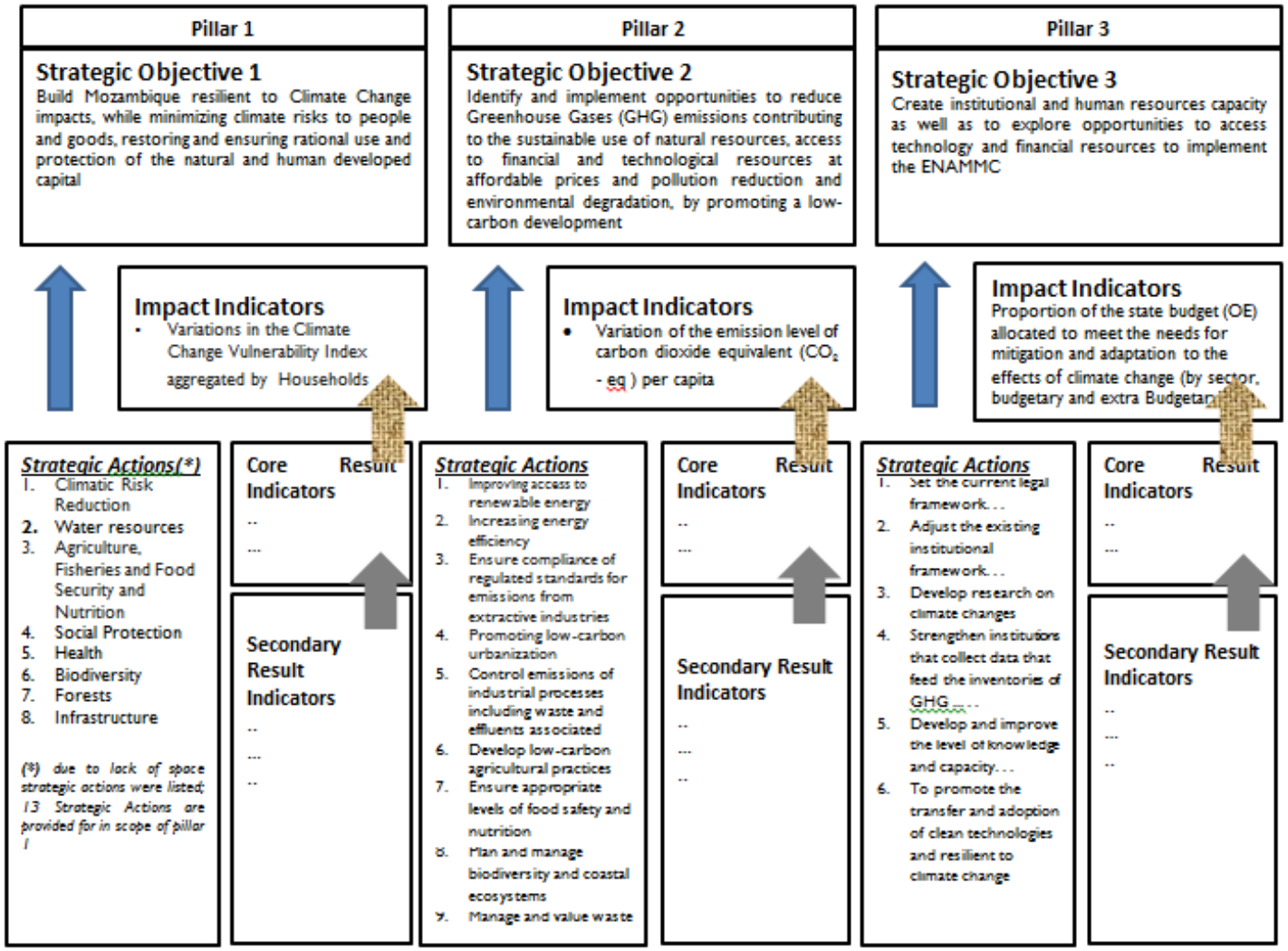


**Figure 3: Diagram of the Indicators of the ENAMMC**

33. Following the approval of the official version of SNMAMC, there will be the reporting stage. The Report will establish targets and baselines and a description of progress towards the establishment of policies under the Development of Policy and Operations (DPO) and will provide information about the Climate Public Expenditure and Institutional Review (CPEIR) will be conducted.

### 3.1.2 Greenhouse Gases (GHGs) Inventory

34. The country ratified the UNFCCC, protocol of Conference of Parties on its national communications and its National Emissions Inventory for Anthropogenic sources, and removal by sinks of all Greenhouse gases (GHGs) not controlled by the Montreal Protocol , using comparable methodologies agreed internationally. To this date, Mozambique has produced two national communications and three Greenhouse Gas Inventories reports using the 1996 Inter-Governmental Panel for Climate Change (IPCC) Guidelines Journals.

35. Mozambique currently does not have the Greenhouse Gas Inventory that can be considered sufficiently detailed, transparent, complete, comparable and accurate to set your reference year, useful for sectoral planning and the definition of mitigation policies. The country proposes that the Greenhouse gas Inventory is reviewed in depth in the context of the development of National Greenhouse Gas Inventory, which should be implemented as soon as possible. The future National Greenhouse Gas Inventory should be defined and built on the work that is already being done in the different entities.

36. The process to develop the National Greenhouse Gas Inventory has been initiated by the Ministry of Land, Environment and Rural Development (MITADER) in 2013. The National Greenhouse Gas Inventory will be part of the broader National Climate Change Monitoring and Evaluation System (SNMAMC); given the complexity of establishing the National Greenhouse Gas Inventory, a separate and dedicated document will be prepared detailing the technical and institutional aspects for its development.

37. The National Greenhouse Gas Inventory will be managed and developed according to the guidelines in the Inter-Governmental Panel of Climate Change (IPCC), and will provide the data related to specific indicators included in the SNMAMC.

### 3.1.3 Climate Public Expenditure and Institutional Review

38. There have been some efforts to quantify the expenditure on Climate Change in the country. In 2011, Ministry of Land, Environment and Rural Development (MITADER) conducted a Climate Public Expenditure and Institutional Review (CPEIR) for the period 2005-2010. Reviews similar to CPEIR were also conducted on expenditure of Disaster Risk Reduction interventions in 2011 and 2013 as part of the Hyogo Framework for Action (HFA) by the National Institute for Disaster Management (INGC). These reviews consider Climate Change aspects to a limited extent therefore, no comprehensive baseline of the on and off budget Climate Change expenditure is available at the moment.

39. Mozambique Charter of Accounts already includes a specific code for Climate Change. However due to the lack of comprehensive guidelines and specific training the code is not consistently applied across the budget.

40. Improved and reliable information on climate-relevant expenditure is indispensable for evaluation of Climate Change policy response. It is also important for facilitating access to future flows of international climate finance – for example from the Green Climate Fund – and to inform the Government on sectors and geographical allocation needs across the country.

41. Establishing a sustainable system for producing annual Climate Change expenditure reports will require a well-coordinated effort during the next two years. The first step, to be completed by 2014, will be the development of a methodology for defining climate relevant expenditure and the preparation of a work plan detailing key activities and inputs required for establishing this component of the SNMAMC. By 2015 a review of past expenditure and the establishment of a 2014 baseline will be completed. This process will be also an opportunity for building the capacities of all concerned Ministries and agencies, in view of the full implementation of Climate Change code across the budget system by 2016.

42. FUNAB will be responsible for the coordination and implementation of the Climate Public Expenditure and Institutional Review (CPEIR) component of the SNMAMC who will receive technical support. Further, FUNAB will receive technical Support from Climate Change Technical Assistance Programme (CCTAP). The first CPEIR evaluation is being conducted during this year 2015.

### 3.1.4 Assessment of Vulnerability to Climate Change

43. As indicated in the Indicator Framework (Annex 1), Vulnerability to Climate is one of the key impact indicators that will be used to assess the overall results of policies and interventions for Climate Change adaptation. There are a number of vulnerability assessments that have been conducted in Mozambique. However a comprehensive nationwide assessment of vulnerability to Climate Change is not yet available.

44. The national Assessment of Vulnerability to Climate Change of the SNMAMC will carried out every five years and will be based on the data collected by INE in the framework of the Household Budget Survey (IOF). A set of questions related to vulnerability to Climate Change and natural disasters has been included in the questionnaire that will be used for the IOF 2014.

45. Besides the national Assessment of Vulnerability to Climate Change that will be conducted every five years, local level assessment and case studies will be carried out in the framework of the Long Term Program Evaluation with the aim to provide more in-depth understanding on the processes and causes linked to vulnerability to Climate Changes of communities and natural ecosystems.

46. Community based Assessments of Vulnerability to Climate Change using participatory techniques will be conducted as part of the process of developing and monitoring Local Adaptation Plans. The results of those assessments will be integrated in the national level assessment and will inform the case studies.

47. Given the complexity and technical challenges involved in assessing trends in vulnerability to Climate Change, it is essential to develop a well-documented methodology for the National Assessment of Vulnerability to Climate Change. Such a methodology will be developed in 2016 based on a review of existing Assessment of vulnerability to Climate Change in Mozambique, and of international best practices. The process of developing the methodology will involve consultation with key stakeholders, including civil society and academia. The methodology identified will be applied to process the data of the IOF 2017 and establish a Vulnerability to Climate Change Baseline and analytical report in 2018.

48. The UMC will be responsible for coordinating the process of developing the national Assessment of vulnerability to Climate Change, which will require special technical support that will be provided by the Climate Change Technical Assistance Project (CCTAP) Project and the Support Program for the Environment Sector (PASA 2). Currently, the two projects

helped in the developing of the current SNAMMC indicators and are expected to be more involved in the technical support in the reporting of Vulnerability to Climate Change.

### 3.1.5 The Long Term Program Evaluation and Learning

49. The Long Term Program Evaluation will be established to carry out evaluation studies on vulnerability to Climate change in hotspots across the Country. The Program will be aimed at assessing effectiveness of policies and interventions for adaptation and low-carbon development through a series of case studies carried out in a network of sites that are representative of the main agro-ecological zones and vulnerabilities to Climate Change in Mozambique.

50. Long-term Program Evaluations will be carried out up to 2025 to identify best practices, understanding barriers and enabling factors for replication. The Program will be focusing on selected policies and strategies identified in the ENAMMC, and will not be aimed at evaluating specific projects. The program will be designed in 2014, and established in 2016 depending on availability of funding.

51. A mid-term external evaluation of the ENAMMC will be organized in 2019 and a final evaluation in 2025. The evaluation will be drawing on the results of studies and evaluations conducted in the framework of the Long Term Program Evaluation. The mid-term and final evaluation report will contain an in-depth analysis of the effectiveness and impacts of the policies and strategies included in the ENAMMC, an assessment of the barriers and enabling factors, and a set of concrete recommendations for the way forward.

52. In addition to the Long Term Program Evaluation, a mechanism for learning and experience sharing will be established. This mechanism is aimed at facilitating the exchange of experiences and knowledge among practitioners, and at establishing a bidirectional flow of information between the national to the local level and vice versa. The mechanism will consist of:

a) Formal thematic workshop at national and local level on specific topics related to climate change adaptation, mitigation and low carbon development. These workshop will provide a platform where practitioners will share their experience and findings on a specific issue, such as Cities and Climate Change, technologies for adaptation in agriculture, policies for low carbon development and urban transport among others.
b) Informal events and exchange visits to bring local level practitioners and community leaders to other areas in the countries to share their experience and learning from peers.
c) Annual ENAMMC review meetings
d) Thematic exchange networks to facilitate peer-to-peer communication and collaboration.

53. The Knowledge Management Centre (CGC) will summarize and publish the results of the evaluation studies and outcomes of the learning mechanism on the web portal of the Centre, and will establish a data base of technologies and best practices that will be freely available on-line.

## 3.2 Gender

54. Most of the effect of Climate Change and the adaptation thereof affect all sexes and age groups, but women and children are particularly vulnerable because of the gender-differentiated roles of men and women in a society. In Mozambique, men are usually responsible for the financial management and security of the family, while women are

responsible for food security, health, and other tasks such as fetching water and firewood etc. The SNMAMCs has taken these aspects into consideration and will aim to ensure all gender aspects are also monitored through the following ways;

a) Gender disaggregated indicators and gender specific indicators.
b) Specific focus on gender aspects in evaluation studies in the Long term program Evaluation
*c)* Aiming for Gender balance in the members involved in the annual progress review meeting.

### 3.3 Alignment of Projects to the SNMAMC

55. The requirements for Monitoring and Evaluation at project level are vary a lot depending on the nature of each project, the funding source and the implementing entity. The definition of a standard set of indicators at project level is therefore not feasible or appropriate considering the aim of the SNMAMC that is to assess the overall results of the ENAMMC and LAPs, rather than of specific projects. A flexible approach to promote alignment of individual projects to the System will be followed and it will include the following:

a) Provide simple guidelines to Climate Change project managers in the development of Project level M&E frameworks for Climate Change responses.
b) Require projects to register in a national database, providing essential information such as the climatic hazard addressed, technologies used, sectors and geographic areas of intervention, and total budget allocated. Incentives should be put in place to encourage registration (such as providing in exchange preferential access to data and information, participation to training and sharing events, etc.).
c) Encourage projects to become part of the National Long Term Program Evaluation for the Assessment of Vulnerability to Climate Change, and share the results of project/programme evaluations and lessons learned on effectiveness of the adaptation measures implemented.
d) Organize learning events (e.g. workshops and seminars at local and national levels) where projects are invited to share their experiences and lessons learned.

### 3.4 Communications and Dissemination of Information

56. Communicating and sharing effectively the information produced through monitoring, evaluation and learning activities will be indispensable to achieve evidence based decision making for the development of better Climate Change policies and more effective allocation of resources for investments in response to Climatic threats.

57. The information contained in the SNMAMC, such as trends in key impact indicators and lessons on technologies and approaches for climatic adaptation will be communicated through different channels and means in order to reach specific target audiences. This will include short policy briefs for decision makers, presentations in national and international events on Climate Change, publication of technical reports and articles, posts on web sites, and briefings for the press and media. The Knowledge Management (CGC) will include these products and activities in its program, and will be responsible to develop them based on the information provided by the UMC.

58. Communications will also be crucial for transparency and accountability towards different stakeholders, as well as for raising awareness of achievements and challenges in dealing with the threats posed by Climate Change. To this effect, until December of each year the annual ENAMMC progress report will be published on the knowledge Management Centre website (CGC) after presentation to the Council of Ministers. In order to improve accessibility

and usability of the information, key results of the report will be summarized and published in a user-friendly dashboard on the web site.

# 4 Mechanisms for inter-institutional coordination and Operational Implementation

## 4.1 Mechanisms for Inter-institutional Coordination

59. The implementation of SNMAMC will be coordinated by National Council for Sustainable Development (CONDES) through Climate Change Unit (UMC). The Mandate of CONDES through UMC is to ensure the operationalization of SNMAMC in coordination with Ministry of Land, Environment and Rural Development (MITADER) - an institution that leads the implementation of ENAMMC, MEF - the ministry responsible for the planning and monitoring and evaluation instruments and policies of the government and FUNAB - responsible entity for Budget management. The CGC is currently providing systematic Knowledge Management and evidence on Climate Change. The figure below shows the flow of inter institutional coordination and the main link to the operation of the monitoring system.

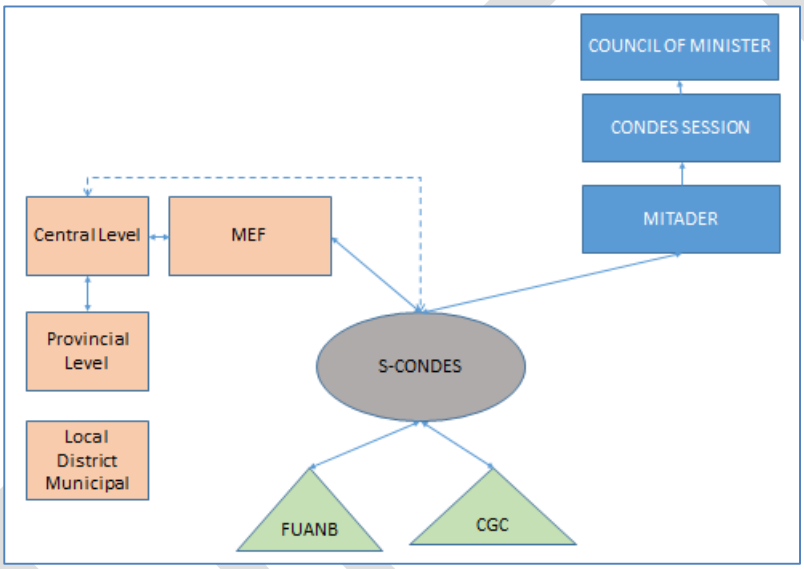


**Figure 4: Flow of information and mechanisms for Coordination for SNMAMC**

60. In terms of fitting in other systems and subsystems of the government of Mozambique, the SNMAMC will ;

a) take part in a planning and monitoring sub-system to assess the extent to which the planning sector takes into account aspects of Climate Change;
b) show clearly the progress of interventions by the government as part of the Climate Change;
c) present the link between poverty alleviation goals with sustainable development goals;
d) continually monitor the integration of aspects of Climate Change in the various sectors and the contribution of their actions to climate change vulnerability

61. Specific responsibilities of the key sectors on Climatic Change Monitoring and Evaluation include the following:

a) **Climate Change Unit (UMC)**

i) Support the sectors in incorporating aspects of climate change in the planning process
ii) Provide technical assistance to ministries on Monitoring and Evaluation of Climate Change ;
iii) Coordinate the establishment of a database on Climate Change initiatives ;

b) **The Environmental Fund (FUNAB)**
iv) Conduct climate expenditure reviews on indicators related to climate finance;
v) Monitor and evaluate the projects financed by the Fund in the context of Climate Change.

**c) Knowledge Management Center (CGC)**
i) Develop a "best practices database" using results of evaluations and learning workshops
ii) Produce publications and knowledge sharing materials based on evaluations

**d) Ministry of Economy and Finance (MEF)**
i) facilitate the integration of selected Climate Change indicators within the national development Monitoring and Evaluation frameworks ( PQG, PES and PESOD);
ii) Ensure that Climate Change aspects are included in the annual Evaluations of the Social Economic Plan (PES) and the District Economic and Social Plan (PESOD) progress reviews;
iii) Provide institutional support to the process of inclusion of Climate Change indicators within the sectoral Monitoring and Evaluation frameworks

### 4.2 Operational Implementation

62. The operationalization of SNMAMC will be coordinated by National Council for Sustainable Development (CONDES) through UMC. The Monitoring and Evaluation of the ENMAMC through SNMAMC will be conducted in the same period in which the ministries / government departments are carrying out the monitoring and evaluation of activities within the Social Economic Plan (PES) and 5 year National Development Plan (PQG). The ministries / government departments will report on Climate Change at the same time reports goes to PES or Ministry of Economy and Finance (MEF).

63. CONDES will consolidate the data collected on climate change by ministries / sectors. It is the responsibility of the ministries to coordinate data collection at the provincial and district level. The data will be made available to CONDES internally by the respective ministries / government departments.

### 4.3 Data Management and Operational Procedures

64. Each government ministry and department or implementing agents will submit through a formal communication to the UMC the updated values of the indicators for preparation of the annual progress report. Any changes in the calculation methods or data sources used to monitor the indicators will have to be reflected in an updated version of the Indicator Sheet, which will have to be transmitted through a formal communication to UMC.

65. The Climate Change Unit (UMC) will establish and manage a database/portol on climate change indicators including the following actions;

a) Create a Registry system to record in both paper and electronic version all official communications for government ministry and department or implementing agents.

b) Develop a database of the indicators included in the Indicators framework and of the related metadata (Indicator Sheet). The database will include procedures and tools for managing versions and generating automated reports.
c) Develop and manage a "document management system" to record in electronic version all relevant documents and technical reports related to the monitoring, evaluation, learning and reporting.

### 4.4 Mechanisms for Reporting and Accountability

66. The Climate Change (UMC) has the mandate to conduct the monitoring and evaluation of Climate Change through SNMAMC. UMC will be responsible to lead collection of information on regular basis (annual, intermediate and at end of the mandate) of implementing the ENAMMC. UMC in coordination with MITADER must ensure the evaluation is conducted in the implementation of the current pilot phase of the strategy. The intermediate evaluation between periods (2016-2019). The final evaluation of ENAMMC will be conducted between (2020- 2025). UMC shall ensure the compilation of Monitoring and Evaluation reports and submit to MITADER. This ministry will ensure submission of reports on Monitoring and Evaluation to CONDES and subsequently to the Council of Ministers.

67. The data and knowledge generated by the SNMAMC will be used to fulfill the following reporting requirements both National and International Level:

a) National;
   i) Annual progress reporting to the Council of Ministers
   ii) Annual climate change expenditure assessments
   iii) Reporting on implementation of sectoral Climate Change Action Plans

b) International
   i) CIF - Climate Investment Fund
   ii) National Communications to UN

68. It is the responsibility of Climate Change Unit (UMC) to:
a) Ensure that substantive information on Climate Change is provided feed the indicators Framework in a fiting format;
b) assess the consistency of the indicator Framework;
c) ensure the qualitative and quantitative analysis of information;
d) Analyze the results framework and evaluate its implications in terms of policies on the ENAMMC.

## 5 Institutional Arrangements

69. The institutional arrangements for the implementation of SNMAMC are based on the implementation mechanisms defined by ENAMMC. Given the inter-sectoral nature of climate change responses, ENAMMC consists of strategic action both at sectoral level and cross-cutting level. The monitoring process will therefore be organized at three levels: (i) the monitoring of the results of sectoral responses, (ii) the cross-cutting responses (iii) and overall impacts.

70. Each ministry and department of the Government of Mozambique is responsible for monitoring the results of sectoral response in the specific area of their work, as defined in the ENAMMC document. This responsibility includes data management and determining of results for the core indicators indicators included SNMAMC (Annex 1A) according to the specifications in the Technical notes of indicators.

71. Ministries have also agreed that, over time, they will collect further data sets. These Secondary Results Indicators' are listed in Annex 1B. These indicators will provide insights into specific sectoral progress on Climate Change adaptation. As this more detailed data becomes available, it may be possible, in the future, to use some of this information to expand the Core Results Indicators

72. The Secretariat of CONDES through UMC, will be responsible for monitoring the cross-cutting responses. This includes responsibility for data management and determining results for relevant performance indicators. The UMC will provide, upon request, technical support to the ministries and government agencies in relation to Monitoring and Evaluation of Climate Change.

73. The Secretariat of CONDES will also be responsible for organizing and coordinating meetings of Inter-Institutional Climate Change Working Group (GIIMC) in a joint analysis of overall progress in implementing the ENAMMC as well as to share information, lessons learned and adopt recommendations to set the future course of action of ENAMMC. During the review meeting, each ministry and government department will present the sectoral progress and evaluation data for the indicators to be submitted in the annual report. In this occasion, the progress of impact indicators related to the institutional readiness and policies will be established through a consensus-based evaluation process. The review meeting will be held on annual basis.

# 6 Annexes

## Annex 1: Indicator Framework

### 1.A. Impact Indicators

| Strategic Objectives | Impact Indicators | Institutions Responsible |
|---|---|---|
| 1. Build a Mozambique resilient to Climate Change impacts, while minimizing climate risks to people and goods , restoring and ensuring rational use and protection of the natural and human developed capital; | 1. Variations in the Climate Change Vulnerability Index aggregated by Households | National Institute of Statistics (INE) through IOF |
| 2. Identify and implement opportunities to reduce Greenhouse Gases (GHG) emissions contributing to the sustainable use of natural resources , access to financial and technological resources at affordable prices and pollution reduction and environmental degradation , by promoting a low-carbon development ; | 2. Variation of the emission level of carbon dioxide equivalent ($CO_2$ - eq ) per capita | MITADER |
| 3. Create institutional and human resources capacity as well as to explore opportunities to access technology and financial resources to implement the ENAMMC | **3.** Proportion of the state budget allocated to meet the needs for mitigation and adaptation to the effects of climate change (by sector, budgetary and extra Budgetary). | FUNAB/MEF |

## 1.B. Core Result Indicators for Pillar 1 of ENAMMC

**Strategic area 1.1**: Risk Reduction

| | **Strategic actions** | **Core Result Indicators** | **Institutions Responsible** |
|---|---|---|---|
| 1 | **Early warning system strengthening** | | |
| | 1.1 Provide adequate and dedicated timely meteorological information to each user (including the development of fire warnings), by identifying the most effective ways to reach target audiences with the most appropriate tools and equipment's including the use of local languages | Variation in the average time observed between a warning issued by the ARAs / DNA due to flooding, and the issuance by the INGC of a red warning state in the basins of Limpopo (bottom) and Incomati Rivers. | |
| | 1.2 Scaling-up the warning system, to reach out the district (through sectoral institutions in improving specific early warning system, particularly for agriculture, water and health) | | INGC |
| | 1.3 Articulate on time, for all information transmission to key users and local communities. | | |
| 2 | **(Increase) the preparedness of response to climate risks** | | INGC |
| | 2.1 Improving the preparation of impending climate disasters including withdrawal and protection of people and areas of risk and supply of goods means and equipment operations. | | |
| | 2.2 To reinforce the role INGC in coordinating evacuation, rescue operations, and reconstruction support to victims of climate disasters | | |
| | 2.3 To strengthen the coordinating role of the INGC and its partners in reducing vulnerability to drought in the arid and semi – arid areas. | | |
| | 2.4 Strengthening the role of Multiple Use Resource Centres (CERUM) to support local communities on the | | |

| | | | |
|---|---|---|---|
| | efficiency increasing of natural resources management and use as well as the mapping of vulnerable areas | | |
| | 2.5 Ensure the establishment and training of Local Committees for Disaster Risk Management. | | |

**Strategic area 1.2.:** Water resources

| No | Strategic actions | Core Result Indicators | Institutions Responsible |
|---|---|---|---|
| 3 | **To increase the capacity of water resources management** | | DNA (MOPHRH) |
| | 3.1 To strengthen the capacity of management of shared water resources | Percentage of households with access to safe water all year | |
| | 3.2 To build capacity to fit regular and peak flood and drought (dams / dikes) and / or diversion (evaluating the sustainability of exchange of water between river basins) | | |
| | 3.3 To improve knowledge about the quality and quantity of the subterranean water resource | | |
| 4 | **Increase access and the ability of capturing, storing/conservation, treatment and distribution of water** | | DNA (MOPHRH) |
| | 4.1 Use practices that allow for aquifer recharge | | |
| | 4.2 To improve drainage systems for rain water and urban and rural sanitation | | |
| | 4.3 Increase storage capacity per capita at all levels (household, community, urban, national) to ensure water supply to population and economic sectors (see DNA with the reservoirs system) | | |
| | 4.4 To keep rainwater in Subterranean and excavated tanks mainly in arid and semi arid areas within the country | | |

| | | | |
|---|---|---|---|
| | 4.5 Build agro - hydro infrastructures in major courses of small dams surface water that are easy to maintain for irrigation purposes and for animals drinking | | |
| | 4.6 Ensure no contamination of water in case of shortage or inundations so as to prevent the spread of waterborne epidemics. | | |
| | 4.7 Promote low water consumption systems and reduce waste in the existing distribution water network for urban areas. | | |

**Strategic area 1.3:** Agriculture, Fisheries and Food Security and Nutrition (FSN)

| No | Strategic actions | Core Result Indicators | Institutions Responsible |
|---|---|---|---|
| | **Increase the resilience of agriculture and livestock** | | MASA |
| | 5.1 Diversify and introduce resistant crops to climate parameters variations | **Number of households involved in agriculture adapted to climate change.** | |
| | 5.2 Improving agricultural production and productivity through the provision of technologies and appropriate inputs to Climate Change | **Change in the average yield of maize producers involved in improving soil and water conservation techniques** | |
| | 5.3 Pest and disease combat and control in crops and on the storage | | |
| | 5.4 Reinforce agro - ecological zoning and land use planning | | |
| | 5.5 Develop programmes and national action plans for soil conservation and nutrition (agriculture of conservation/Conservation farming) | | |
| | 5.6 Improve animal nutrition through husbandry techniques of pasture and forage production | | |
| | 5.7 Improvement in the epidemiological surveillance and control of animal diseases | | |

| | | | |
|---|---|---|---|
| | 5.8 Improve and expand technical assistance to producers in quality of intervention. | | |
| 6 | **Increasing the fishing resilience** | | Ministry of fisheries (MIMAP and MITADER play a crucial role) |
| | 6.1 Promoting aquaculture as an alternative means to decrease the amount of fish and increased demand | | |
| | 6.2 Regenerating mangroves and implement protective measures for algae and seagrass, corals and other spawning and feeding of fish | | |
| | | | |
| | 6.3 Improving the quality of information and capacity of small-scale fishing | | |
| | 6.4 Strengthen measures to control and management of fisheries by ensuring access to clean technologies to ensure the renewal and maintenance of stocks. | | |
| 7 | **Ensuring adequate levels of food security and nutrition** | | SETSAN |
| | 7.1 Improving the availability, access and utilization of food | | |
| | 7.2 Improving the mechanisms that facilitate the flow, transport and marketing of food products | | MIC |
| | 7.3 Establish community-based processing industries and food preservation | | |
| | 7.4 Promoting agro-processing for the proper utilization of food | | |

**Strategic area 1.4:** Social Protection

| No | Strategic actions | Core Result Indicators | Institutions Responsible |
|---|---|---|---|
| 8 | **Increase the adaptive capacity of vulnerable people** | | MGCAS |
| | 8.1 Develop and apply innovative approaches for community -based adaptation | Number of households covered by the Social Action Programme Production in districts identified by INE as vulnerable to Climate Change | |
| | 8.2 Strengthening of the existing social protection systems in relation to Climate Change so that they contribute to the resilience of vulnerable populations | | |
| | 8.3 Strengthen the capacity, guidance and targeting of basic social protection programmes to increase productive resilience of vulnerable groups | | |
| | 8.4 Strengthening the links between systems of social protection systems and response to natural disasters, including coordination with the early warning systems. | | |

**Strategic area 1.5:** Health

| No | Strategic actions | Core Result Indicators | Institutions Responsible |
|---|---|---|---|
| 9 | **Reduce the vulnerability of people to vectors of disease transmission associated with climate change** | | MISAU |
| | | | |

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|---|---|---|---|
| | 9.1 Strengthen the capacity to prevent and control the spread of vector-borne diseases through correct mapping of their spatial distribution and mobility (IOT's) | Number of districts and municipalities listed by the National Institute for Disaster Management (INGC) as high risk, which introduced and tested protocols for prevention, preparedness and response to disasters, to provide health services. | |
| | 9.2 Promote and use clean technologies and create spaces and forest recreation areas and buffer zones in cities | | |
| | 9.3 Establish a system of surveillance and control measures on specific diseases favoured by climate change | | |

**Strategic area 1.6:** Biodiversity

| No | Strategic actions | Core Result Indicators | Institutions Responsible |
|---|---|---|---|
| 10 | **Ensuring and protecting biodiversity** | | MITADER |
| | 10.1 Develop actions and programs for an adaptive conservation to climate change; | Number of Management Plans that include climate change | |
| | 10.2 Identify and implement adaptation actions to ensure the protection of flora and wildlife at risk of extinction | | |
| | 10.3 Establish trans frontier conservation areas to maintain ecosystem functions and allow migration of wildlife | | |
| | 10.4 Apply management practices that increase the adaptive capacity of ecosystems, maximizing the utilization of habitats and biodiversity conservation | | |

| | | | |
|---|---|---|---|
| | 10.5 Reclassify and establish new limits of conservation areas, identifying areas of risk of loss of biodiversity. | | |

**Strategic area 1.7:** Forests

| No | Strategic actions | Core Result Indicators | Institutions Responsible |
|---|---|---|---|
| 11 | **Promoting mechanisms of tree planting and establishment of forests for local use** | | |
| | 11.1 Develop planting programmes multiple use and economic value trees in order to meet the needs of products for local community, looking for value local initiatives, combating deforestation and preventing fires and their spread | Area (Ha) planted or managed by communities | MASA/MITADER |
| | 11.2 Explore Agro - Silvipastoral systems, allowing diversification of livelihoods and incomes | | |
| | 11.3 To promote community management of forest resources programmes. | | |
| | 11.4 Regenerate Mangroves and implement protective measures on algae and seagrass, coral and other spawning grounds and feeding of fish | | |

**Strategic area 1.8:** Infrastructure

| No | Strategic actions | Core Result Indicators | Institutions Responsible |
|---|---|---|---|
| 12 | **Develop mechanisms of resilience of urban areas and other settlements** | | MOPHRH/ANE |
| | 12.1 Prepare and update the instruments of planning and land use planning climatically robust and strengthen its implementation | Percentage of district roads rehabilitated from 2014 in the pilot provinces (Gaza and West Inhambane) in accordance with the standards, guidance and technical specifications that take into account Climate Change. | |
| | 12.2 Mapping of vulnerable infrastructures or at risk, depending on the type of weather phenomena (floods, cyclones, sea level rise) | | |
| | 12.3 Reformulate building codes of infrastructure in transport, telecommunications, energy distribution, buildings, and water infrastructure and wastewater treatment in order to make them resilient to climate | | |
| | 12.4 Ensure that investment, particularly public in risky areas are climate proof | | |
| | 12.5 Promote the design and implementation of potential mechanisms of insurance against climatic risks in the built heritage. | | |
| 13 | **Adapt the development of tourism and coastal areas to reduce the impacts of climate change** | | MICUTUR |
| | 13.1 Assess the main climate risks over resources and areas of tourist interest | | |
| | 13.2 Advise operators about proper building codes | | |

| | | | |
|---|---|---|---|
| | 13.3 To promote best practices among operators and tourists, through public- private partnerships aimed at the sector's resilience and ecosystem conservation | | |
| | 13.4 Develop conservation practices and coastal protection | | |
| | 13.5 Promote the adoption of the climate insurance for tourist activities and infrastructure. | | |

## 1.C. Core Result Indicators for Pillar 2 of the ENAMMC

**Strategic area 2.1: Energy**

| No | Strategic actions | Core Result Indicators | Institutions Responsible |
|---|---|---|---|
| 1 | **Improving access to renewable energy** | | MIREME |
| | 1.1 Promote electrification of rural communities through use of renewable energy | Energy intensity by sector (industry and transport) | |
| | 1.2 Promote the use of renewable energy (biogas, biomass, solar, wind, thermal, wave and geothermal) | | |
| | 1.3 Promote the expansion of the national network or the creation of micro - power distribution networks | | |
| | 1.4 Promote and disseminate techniques and production technologies and sustainable use of biomass energy | | |
| | 1.5 Evaluate mitigation mechanisms in infrastructure for production and transmission of electricity | | |
| 2 | **Increasing energy efficiency** | | MIREME |
| | 2.1 Ensure availability and access to low carbon fossil fuels; | | |
| | 2.2 Promote initiatives of replacement of high-carbon fuels and non- renewable by low carbon fuel or renewable in sectors of transport and in productive processes; | | |
| | 2.3 3 Ensure the implementation of regulatory instruments , programmes and projects for low carbon transport sector as production of biodiesel for use in transportation fleets that generate new sources of income and economic diversification in rural areas ; and | | |

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|---|---|---|---|
| | 2.4 Use of "clean coal" technologies in coal- powered energy plants (including the use of cogeneration, where applicable). | | |
| | 2.5 Reduce emissions associated with thermal power plants | | |
| 3 | **Ensure compliance of regulated standards for emissions from extractive industries** | | MIREME |
| | 3.1 recover methane during extraction of mineral oil and hydrocarbons | | |
| | 3.2 Evaluate the possibilities for carbon sink and storage. | | |
| 4 | **Promoting low-carbon urbanization** | | MIREME |
| | 4.1 Elaborate and implement policies and measures to integrate the guidelines of construction of infrastructure such as buildings, roads and related structures, the component of energy efficiency and the use / utilization of renewable energy | | |
| | 4.2 Develop projects and programmes energy of micro generation in commercial and residential buildings (e.g. solar systems) | | |
| | 4.3 Promote natural gas dissemination use in domestic, industrial and public and private transportation sectors as alternative to less clean energy sources | | |
| | 4.4 promote through codes of construction and norms of production practices of energy efficiency and the utilization of equipment of renewable sources of energy use and of decentralised production of energy | | |
| | | | |

**Strategic area 2.2: Industrial processes and product Use**

| No | Strategic actions | Core Result Indicators | Institutions Responsible |
|---|---|---|---|
| 5 | **Control emissions of industrial processes including waste and associated effluents** | | MIREME/MITADER |
| | 5.1 Develop policies and measures of supervision and regulation of industrial activity in order to monitor compliance with national legislation and international conventions | Number of legal instruments created for supervision and regulation of industrial activity in order to control the length of national and international legislation | |
| | 5.2 Encourage investors to evaluate potential GHG emissions in investment projects at the time of consideration of technologies and clean energy sources | | |
| | 5.3 Promote energy microgeneration programs and projects in the industrial sector. | | |

**Strategic area 2.3: Agriculture, forest and other land uses**

| No | Strategic actions | Core Result Indicators | Institutions Responsible |
|---|---|---|---|
| 6 | **Develop low-carbon agricultural practices** | | MASA |
| | 6.1 Promote agricultural practices that reduce GHG emissions (in particular in the harvest of sugar cane) | Percentage of Forest Concessions, with approved management plans | |
| | 6.2 Use energy efficient water pumping systems for irrigation of crops | | |
| | 6.3 Recover methane from agricultural activities in intensive farming systems (particularly in rice fields) | | |
| | 6.4 Promote the collection and bio digestion of plant and animal waste for utilization of methane for power generation. | | |
| | 6.5 Promote energy microgeneration programs and projects in the industrial sector. | | |

| | | | |
|---|---|---|---|
| 7 | **Ensure appropriate levels of food safety and nutrition** | | |
| | 7.1 Explore forests in a sustainable manner in order to maximize its potential for the capture and sequestration of carbon | | SETSAN |
| | 7.2 Promote mechanisms leading to natural regeneration of forests | | |
| | 7.3 Establish mechanisms to prevent the spread of fires. | | MIC |
| 8 | **Plan and manage biodiversity and coastal ecosystems** | | |
| | 8.1 Develop programs of sustainable exploitation, regeneration and protection of mangroves, algae and seagrass associated to the potential of capture and sequestration of methane. | | MITADER |

**Strategic area 2.4: Waste**

| No | Strategic actions | Core Result Indicators | Institutions Responsible |
|---|---|---|---|
| 9 | **Manage and value waste** | | Municipalities/MITADER |
| | 9.1 Promote the reduction, reuse and recycling of waste | Quantity (kg) of recycled waste (paper, plastic, metal and glass) in major cities. | |
| | 9.2 Encourage the establishment of landfills with recovery and consequent utilization of methane | | |

| | | | |
|---|---|---|---|
| | 9.3 Promote the generation of energy from waste using anaerobic digestion processes, mechanical or heat treatment. | | |

**1.D Secondary Result Indicators for Pillar 1 of ENAMMC**

**Strategic Area 1.1:** Risk Reduction

| | **Strategic Actions** | **Secondary Result Indicators** | **Institutions Responsible** |
|---|---|---|---|
| 1 | **Early warning system strengthening** | 1.1 Percentage of districts endowed with the early warning system considering the risk at which each is exposed | INGC/INAM/DNA |
| | | 1.2 Medium time connection between the issuance of the warning / alert of an extreme event and its occurrence in the field | |
| 2 | **(Increase) the preparedness of response to climate risks** | 2.1 Percentage of vulnerable communities with established and functional Local Committees for Disaster and Risk Management and Multi- Use Resource Centre (CERUMs) | INGC |
| | | 2.2. Percentage of sectors that integrate risk management in their development plans | |

**Strategic area 1.2.:** Water resources

| No | Strategic Actions | Secondary Result Indicators | Institutions Responsible |
|---|---|---|---|
| 3 | **To increase the capacity of water resources management** | 3.1 Number of watersheds with management plans, master plans or other plans of water resources sharing taking into account the issues of climate change, | DNA (MOPHRH) |
| | | 3.2 Number of dams with management plans for flood peaks, or master plans management for water integrating issues of climate change, disasters and water quality issues; | |
| | | 3.3 Number of districts with mapped water resources including subterranean water. | |
| 4 | **Increase access and the ability of capturing, storing/conservation, treatment and distribution of water** | 4.1 Percentage of households with access to safe drinking water throughout the year | DNA (MOPHRH) |
| | | 4.2 Area with access to drainage systems | |
| | | 4.2.2 Number of established drainage systems | |
| | | 4.3 Volume of water stored in major dams (cubic meters) to supply to urban and districts per capita | |
| | | 4.4 Volume of water (in cubic meters) and the kept in subterranean and excavated reservoirs in the main arid and semi arid areas within the country | |
| | | 4.5 Number of reservoirs / dams and levees built and in operation | |
| | | 4.6 Number of cases of water borne diseases | |
| | | 4.7.1 Number of incentive policies for low water consumption techniques (special taps) | |
| | | 4.7.2 Percentage of water losses | |

**Strategic area 1.3:** Agriculture, Fisheries and Food Security and Nutrition (FSN)

| No | Strategic Actions | Secondary Result Indicators | Institutions Responsible |
|---|---|---|---|
| | | | |
| 5 | **Increase the resilience of agriculture and livestock** | 5.1.1 Number of new seed varieties resistant to climate variability in the Process of production introduced in Mozambique | MASA |
| | | 5.1.2 Area lost due to extreme weather effects (flooding) | |
| | | 5.1.3 Area lost due to extreme weather effects (dry) | |
| | | 5.2.1 Percentage of Households using AgroChemicals in the production process | |
| | | 5.2.2 Number of farmers using integrated process management Pest (IPM) | |
| | | 5.2.3 Percentage of Households using improved barns | |
| | | 5.3 Percentage of producers using Agrochemicals and integrated pest management (IPM) for combating pests and constructing improved barns | |
| | | 5.4 Extension hectares (ha) of available land for agricultural practice | |
| | | 5.5 Percentage of agricultural land cultivated by using conservation farming method | |
| | | 5.6 Area of fodder banks | |
| | | 5.7.1 Number of animals vaccinated for disease control (goats, cattle, pigs, poultry) | |
| | | 5.7.2 Number of animals lost due to extreme conditions (diseases, flooding, droughts) | |
| | | 5.8 Number of agricultural extension officers available in each district (one extension officer per thousand inhabitants | |
| 6 | **Increasing the fishing resilience** | 6.1 Number of aquaculture tanks in operation | |
| | | 6.2 Stocks of inventoried fishery resources | |

| | | | |
|---|---|---|---|
| | | 6.3 Number of inspected Fishing units (Small scale, semi industrial and industrial and supported to ensure sustainable methods of fishing resources | |
| 7 | **Ensuring adequate levels of food security and nutrition** | 7.1.1 Number of People under food insecurity conditions | SETSAN |
| | | 7.1.2 Rate of Malnutrition in children under 5 years of age (acute malnutrition, chronic malnutrition and underweight) | |
| | | 7.2 Number of new police agents facilitating conservation and disposal of food products | MIC |
| | | 7.3 Number of conservation and processing industries created and in operation | |
| | | 7.4 Number of agro - processing industries created and implemented | |

**Strategic area 1.4:** Social Protection

| No | Strategic actions | Secondary Result Indicators | Institutions Responsible |
|---|---|---|---|
| 8 | **Increase the adaptive capacity of vulnerable people** | 8.1.1 Number of households covered by the Productive Social Action Programme in districts identified as vulnerable to Climate Change by the INE | MGCAS |
| | | 8.1.2 Number of constructions / goods created by Programme for Social Action Production (PASP) for the prevention and mitigation of climate change effects. | |
| | | 8.2 Number of vulnerable households benefiting from housing built in safe places during the post-flood period. | |
| | | 8.3 Number of new administrative posts covered annually by PASP | |
| | | 8.4 Number of households that have abandoned areas at risk of natural disasters as a result of early warnings | |

**Strategic area 1.5:** Health

| No | Strategic actions | Secondary Result Indicators | Institutions Responsible |
|---|---|---|---|
| 9 | | | MISAU |
| | **Reduce the vulnerability of people to vectors of disease transmission associated with climate change** | 9.1.1 Incidence rate of malaria in vulnerable districts to extreme events of climate change | |
| | | 9.1.2 Rate of incidence of waterborne diseases (cholera, diarrheal diseases) in vulnerable districts events extreme climate change | |
| | | 9.2 Rate of incidence of diseases of respiratory origin (bronchitis) in districts vulnerable to climate change extreme events | |
| | | 9.3.1 Number of people who lost their lives after being affected by extreme events (intense heat or intense cold weather) | |
| | | 9.3.2 Number of health centres built and in operation | |
| | | 9.3.3 Relationship between number of nurses per 1000 inhabitants | |

**Strategic area 1.6:** Biodiversity

| No | Strategic actions | Secondary Result Indicators | Institutions Responsible |
|---|---|---|---|
| 10 | **Ensuring and protecting biodiversity** | 10.1 Number of Management Plans that include climate change for the Areas of conservation | MITADER |
| | | 10.2 Area (ha) in conservation areas under full protection of resources | |
| | | 10.3 Area (ha) of cross-border region established to maintain functions of the ecosystem and allow migration of wildlife | |
| | | 10.4 Number and area (ha) of conservation areas affected by wildfires (uncontrolled burning) | |

**Strategic area 1.7:** Forests

| No | Strategic actions | Secondary Result Indicators | Institutions Responsible |
|---|---|---|---|
| 11 | **Promoting mechanisms of tree planting and establishment of forests for local use** | 11.1 Area (Ha) of forest concessions managed by communities | MASA/MITADER |
| | | 11.2 Total amount of money accumulated through marketing of forest products (plants, fruits, honey, and other products from the forests) | |
| | | 11.3.1 Number of new forests annually under presidential initiative (one leader, one new community forest). | |
| | | 11.3.2 Number of Committees revitalized under the action to revitalize the forest resources management committees | |
| | | 11.4.1 Area (Ha) of Mangroves inventoried and mapped | |
| | | 11.4.2 Area (Ha) of Surface Coral reefs in good condition (healthy) | |

**_Strategic area 1.8:** Infrastructure

| No | Strategic actions | Secondary Result Indicators | Institutions Responsible |
|---|---|---|---|
| 12 | **Develop mechanisms of resilience of urban areas and other settlements** | 12.1 Number of new keys investments (road and rail system, schools / public buildings, tourist constructions) complying with building standards and climatically robust land use plans. | MOPHRH/ANE |
| | | 12.1.2. Number of new districts created for safe transfer of communities prone to climate change (floods / erosion) | |
| | | 12.2 Infrastructure losses and damages (road and rail system, schools / public buildings, tourist enterprises) due to extreme weather events | |
| | | 12.3 Number of policies to build resilient infrastructure to climate embedded in the local planning system | |
| | | 12.4.1 Number of works of art (bridges, drifts) constructed / rehabilitated or improved to comply with the standards of climate resilience | |
| | | 12.4.2 Mileage (km) of roads built / rehabilitated that meet the design standards reviewed taking into account climate resilience | |
| | | 12.5.1 Mileage (km) of planted trees along streets in urbanized neighbourhoods | |
| | | 12.5.2 Mileage (km) of roads with low cost rainwater drainage system | |
| 13 | **Adapt the development of tourism and coastal areas to reduce the impacts of climate change** | 13.1 Inventory of tourist resorts built within the limits of protection regulated; | MICUTUR |
| | | 13.2 Number of awareness campaigns on the operators building codes that meet the standards codes reviewed taking into account climate resilience | |
| | | 13.5 Number of legal instruments and regulations established climate insurance for tourism development | |

**1.E. Secondary Result Indicators for Pillar 2 of ENAMMC**

**Strategic area 2.1: Energy**

| No | Strategic actions | Secondary Result Indicators | Institutions Responsible |
|---|---|---|---|
| 1 | **Improving access to renewable energy** | 1.1 Percentage contribution of renewable energies in the diversification of the energy matrix | MIREME |
| | | 1.2 Percentage of energy needs met by renewable energy (biogas, biomass, solar, wind, thermal, wave and geothermal). | |
| | | 1.3 Number of households and institutions with solar thermal systems and photovoltaic systems installed. | |
| | | 1.4.1 Number of generators, vehicles and agricultural machines using natural gas or biofuels. | |
| | | 1.4.2 Number of households using improved stoves (*To be provided in partnership with Energy Fund (FUNAE)* | |
| | | 1.4.3 Number of institutions using improved stoves *(To be provided in partnership with FUNAE)* | |
| 2 | **Increasing energy efficiency** | 2.1 Percentage of improvement in energy efficiency (comparison between the amounts of energy consumed before introducing fossil fuels with the consumed amount with the introduction of fossil fuels)) | MIREME |
| | | 2.2 Energy intensity by sector (total primary energy supply per capita). | |
| | | 2.3 Number of generators, vehicles and agricultural machines using natural gas or biofuels. | |

| | | | |
|---|---|---|---|
| | | 2.4 Number of policies and systems implemented, M & E developed | |
| | | 2.5 Energy intensity by sector (industry and transport) (Total Primary Energy Supply (TPES[7]) / GDP) | |
| | | 2.6. Number of policies or instruments that encourage the abolition forms of lighting / energy not environmentally friendly | |
| 3 | **Ensure compliance of regulated standards for emissions from extractive industries** | 3.1 Percentage of plants using carbon capture technologies | MIREME |
| | | 3.2 Number of regulations established to standardize emissions from Extractive Industry | |
| 4 | **Promoting low-carbon urbanization** | 4.1 Natural gas consumption level broken down by sector (transport, domestic , industrial ) | MIREME |
| | | 4.2.1 Number of public buildings, tourist facilities and private homes in urban areas with integrated solar systems | |
| | | 4.2.2 Number of "C" graded or higher appliances sold. | |
| | | 4.3 Number of public or private facilities using gas as source of energy | |

[7] *Total primary energy supply (TPES)*

**Strategic area 2.2: Industrial processes and product Use**

| No | Strategic actions | Secondary Result Indicators | Institutions Responsible |
|---|---|---|---|
| 5 | **Control emissions of industrial processes including waste and associated effluents** | 5.1. Percentage of institutions from different sectors that control and disclose annually their emissions | MIREME/MITADER |
| | | 5.1.2 Number of legal instruments created for supervision and regulation of industrial activity in order to control the length of national and international legislation | |
| | | 5.2 Percentage of institutions from different sectors adopting good environmental practices and have been certified with the seal of good practice (ISO 14000; 21000) | |
| | | 5.3 Percentage of energy used in the industrial sector produced from renewable (and clean) sources. | |

**Strategic area 2.3: Agriculture, forest and other land uses**

| No | Strategic actions | Secondary Result Indicators | Institutions Responsible |
|---|---|---|---|
| 6 | **Develop low-carbon agricultural practices** | 6.1 Lost area on account of burnings (including areas with sugar cane where fires are made at time of harvest cane) | MASA |
| | | 6.2 Number of irrigation systems using alternative energy sources (wind, solar) | |
| | | 6.3 Percentage of forested area annually affected by fire outbreaks | |
| | | 6.4 Percentage of annual deforestation of forests | |
| | | 6.5 Forest area included in REDD + projects or initiatives | |
| 7 | **Ensure appropriate levels of food safety and nutrition** | 7.1.Percentage of Forest Concessions with Management Plans approved | MASA/MITADER |
| | | 7.2 Reforested area (ha). | |
| | | 7.3.1 Number of district plans with management plans of uncontrolled fires | |
| | | 7.3.2 Percentage of Natural Resource Management Committees trained in techniques of prevention and mitigation of uncontrolled fires | |
| 8 | **Plan and manage biodiversity and coastal ecosystems** | 8.1 Number and area of carbon projects on coastal ecosystems | MITADER |

**Strategic area 2.4: Waste**

| No | Strategic actions | Secondary Result Indicators | Institutions Responsible |
|---|---|---|---|
| 9 | **Manage and value waste** | 9.1 Quantity (kg) of recycled waste (paper, plastic, metal and glass) in major cities. | Municipalities/ MITADER |
| | | 9.2 Number of landfills | |
| | | 9.3 Percentage of landfills with methane recovery. | |

**1.F. Evaluation Criteria for Impact Indicators in Pillar 3**

| | | | |
|---|---|---|---|
| 3 Building the institutional and human capacity, and to explore opportunities for access to technological and financial resources to implement the ENAMMC | **3.1. Mainstreaming of climate change into the national Planning process:** | MITADER /CONDES | To be collected by the rostering system. Baseline 2013 |
| | 3.1.1 Stage of development of policies, strategies and action plans for response to Climate Change | | |
| | 3.1.2 Level of mainstreaming of Climate Change in the long, medium (PARP and Five Year Plan) and short term (PES and PESOD) National Plans | | |
| | 3.1.3 Development of institutional mechanisms for mainstreaming climate change in national budgeting and development planning | | |
| | 3.1.4 Development of a framework for effective funding for the response to Climate Change | | |
| | **3.2. Level of coordination of the response to climate change.** | MITADER /CONDES | |
| | 3.2.1. Establishment and operation of a national coordination system for the implementation of ENAAMC | | |
| | 3.2.2 Inclusion and representation of key stakeholders (civil society) in the coordination mechanisms | | |
| | 3.2.3 Equal participation of men and women in the coordination mechanisms | | |
| | **3.3 Institutional Capacity Building and knowledge management for the response to climate change** | MITADER /CONDES | |
| | 3.3.1 Availability of assessments of risk and climate vulnerability that supports the development of policies and planning | | |
| | 3.3.2 Technical Competence on Climate Change within the mechanisms [iii] of national coordination. | | |
| | 3.3.3. Production, access and use of information on climate change | | |
| | **3.4. Planning to the local level taking into account the climatic aspects** | MITADER /CONDES | To be collected by |

| | | | |
|---|---|---|---|
| | 3.4.1 Number of districts that implemented climate resilience actions as a result of local adaptation plans to climate risk | MITADER | the rostering system. Baseline 2013 |
| | **3.5 Inclusion level of climate change aspects in the budgeting process in Mozambique** | MEF/FUNAB | |
| | 3.5.1. Proportion of the state budget allocated to meet the adaptation and mitigation needs to the effects of climate change (by sector, budgetary and extra budgetary). | | |

**1.G . Baseline for Impact Indicators in Pillar 3**

| | Target | Baseline 2013 | Progress 2013 | Evaluation 2015 | Progress 2015 |
|---|---|---|---|---|---|
| **3.1. Integration of climate change into the national planning process:** | | | | | |
| 3.1.1 At the policy development stage, strategies and action plans are responding to Climate Change | 9 | 2 | 22% | 3 | 33% |
| 3.1.2 The level of integration of Climate Change in the National Plans of long, medium (Five-Year Plan ((PQA)) and short term (PES and PESOD) | 9 | 1 | 11% | 3 | 33% |
| 3.1.3 Development of institutional mechanisms for the integration of climate change in development planning and national budgeting | 4 | 1 | 25 % | 2 | 50% |
| 3.1.4 Developing an effective funding framework for responding to climate change | 12 | 2 | 17 % | 2 | 17% |
| **3.2. Level of Coordination to respond to climate change** | | | | | |
| 3.2.1 Establishment and operation of a national coordination system for the implementation of ENAMMC | 9 | 2 | 22% | 5 | 56% |
| 3.2.2 Inclusion and representation of key stakeholders (civil society) in the coordination mechanisms | 7 | 2 | 29% | 4 | 57% |
| 3.2.3 Gender balance in the mechanisms of coordination of activities GIIMMC: | 5 | 4 | 80% | 5 | 100% |

| | | | | | |
|---|---|---|---|---|---|
| **3.3 Institutional capacity building and knowledge management for the response to climate change** | | | | | |
| 3.3.1 Availability of Assessments of vulnerability to Climate Change that supports the development of policies and planning | 7 | 1 | 14 % | 1 | 14% |
| 3.3.2 Technical expertise on climate change within the mechanisms national coordination. | 7 | 3 | 43 % | 4 | 57% |
| 3.3.3 Production, access and use of information on climate change | 8 | 1 | 13 % | 2 | 25% |

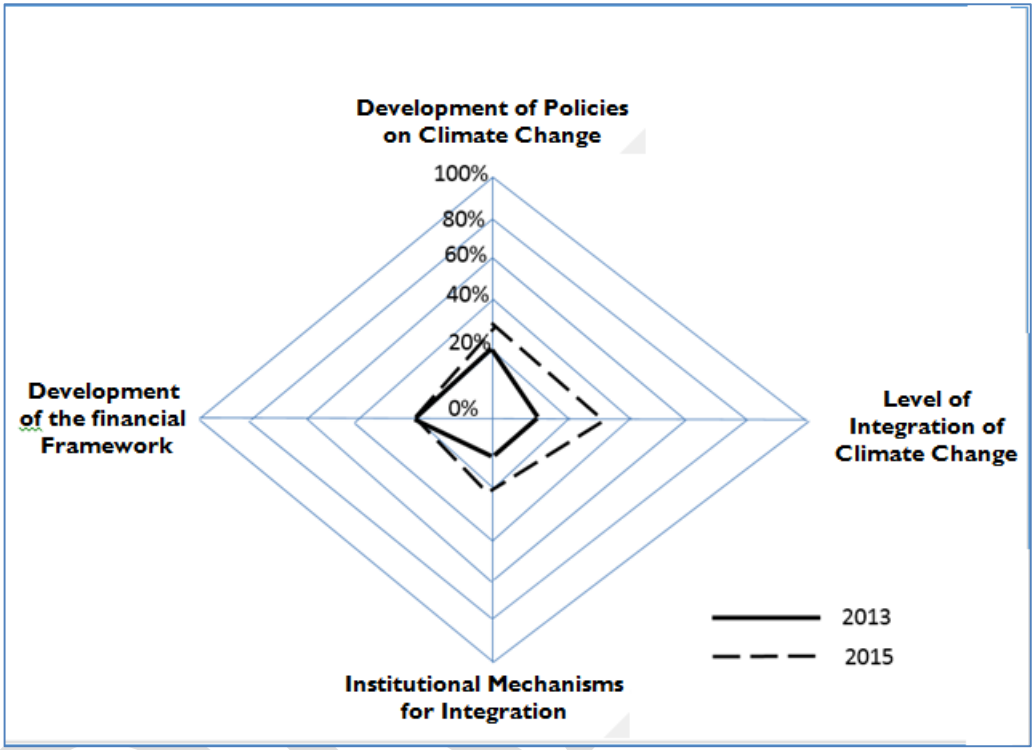


**Figure 5: Baseline on Integration of Climate Change on the National Planning process**

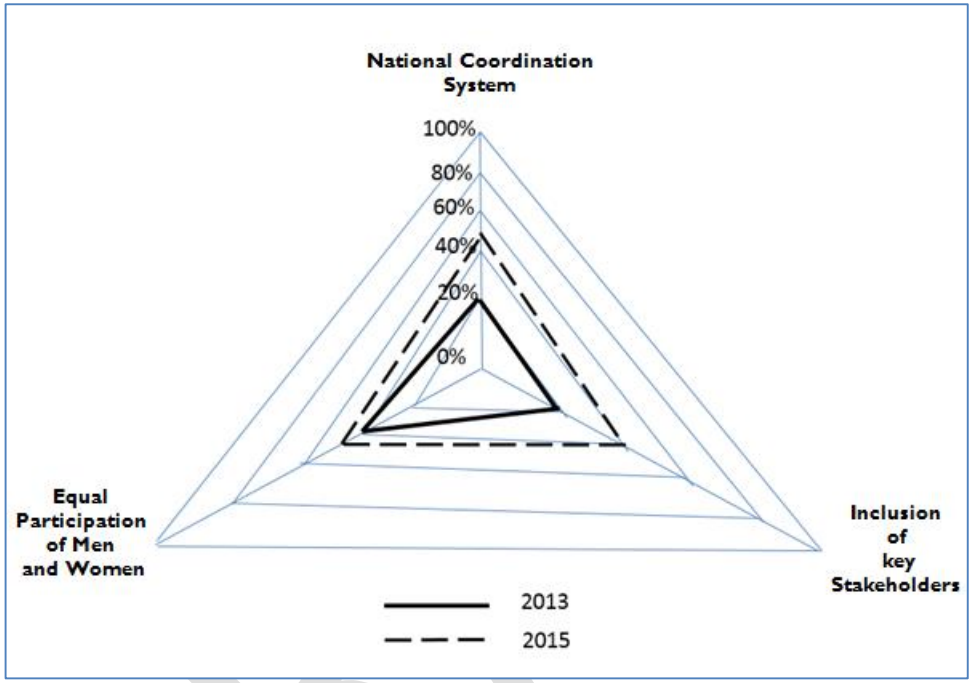


**Figure 6: Baseline of the Coordination Levels of response to Climate Change**

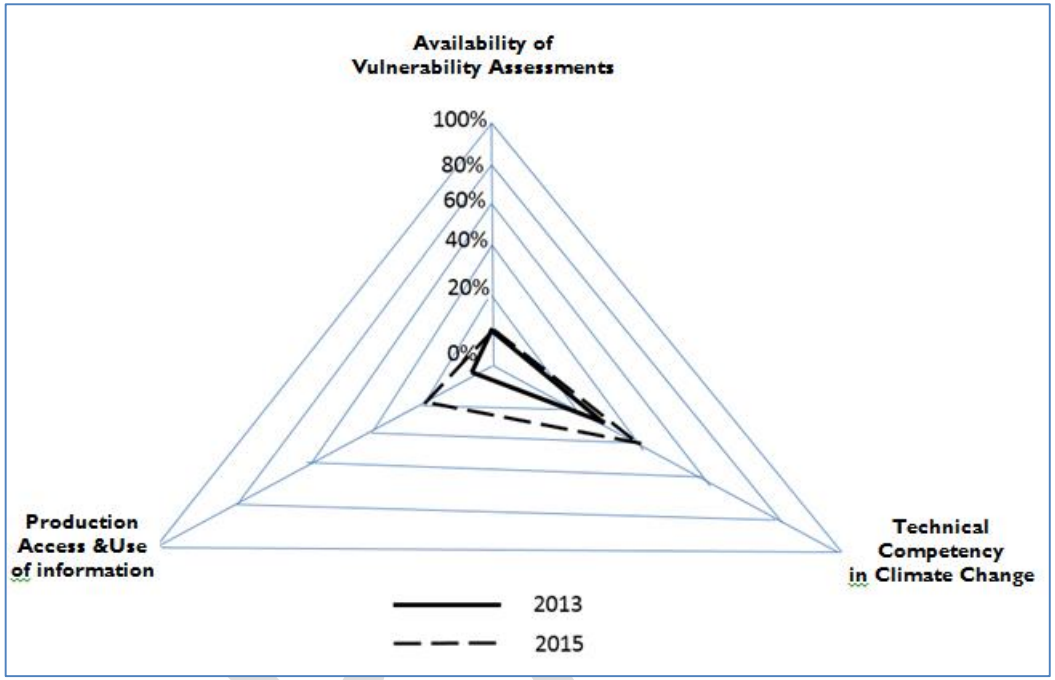


**Figure 7: Baseline on Capacity Building for the response to Climate Change**

**Annex 2 : Details of Impact Indicators in ENAMMC Pillar 3 (ladder approach)**

**2A. Mainstreaming of Climate Change in the National Planning Process (Time Interval: 2013-2019)**

**3.1.1 Stage of development of policies, strategies and action plans developed to respond to Climate Changei (code 1b)**

| Step | Scorecard Element | Achievement |
|---|---|---|
| 0 | No existing Climate Change policy, strategy or specific national action plan. | |
| 1 | A National Programme of Action for Adaptation (NAPA) developed under the UNFCCC process, but the adaptation response is still limited to a project-based approach. | |
| 2 | A National Strategy for Climate Change integrating adaptation, Disaster Risk Reduction and mitigation response approved by the Council of Ministers[8]. | X |
| 3 | A formally established integrated subsystem of Monitoring and Evaluation for climate change and disaster risk management[9]. | |
| 4 | A budgeted and approved Action Plan for Climate Change with specific measures to address climate change, accompanied by details about implementation mechanisms and deadlines and priorities[ii]. | |
| 5 | At least 5 budgeted and approved Sectoral Action Plans for Response to Climate Change. | |
| 6 | At least 2 developed and budgeted Local Plans for Adaptation in each province. | |
| 7 | Action Plan for Climate Change updated based on evidence issued by the Monitoring and Evaluation framework and a new Action Plan is prepared at the end of the planning cycle. | |
| 8 | Recommendations for the revision of the legal framework in place, resulting in the systematic mainstreaming of climate change | |
| 9 | The National Strategy for Climate Change is updated based on the evidence provided by the Monitoring and Evaluation framework. | |

*[8] This landmark represents a Goal of Development Policy Operation on Climate Change (DPO) of the World Bank and to be completed in 2013 (DPO1).*
*[9] This landmark represents a Goal of Development Policy Operation on Climate Change (DPO) of the World Bank and to be completed in 2014 (DPO2).*

### 3.1.2 Level of integration of Climate Change in the National Plansiii of long, medium (PARP and Five Year Plan) and short term (PES and PESOD) (code 1c)

| Step | Scorecard Element | Achievement |
|---|---|---|
| 0 | No mention of Climate Change in the Five Year Plan and / or PARP. | |
| 1 | Climate changes are mentioned in the Five Year Plan and / or PARP but no specific measures or budgetary allocations identified to address these issues. | |
| 2 | Climate Change Response is clearly articulated in the Five Year Plan and specific measures identified. | |
| 3 | Climate Change Response is clearly articulated in PARP, specific measures and budgetary allocations identified. | X |
| 4 | At least 5 sectoral strategies integrating Climate Change, identifying specific actions and budget necessary properly indicated in the Medium Term Fiscal Framework. | |
| 5 | At least 10 sectoral strategies integrating Climate Change, identifying specific actions and budget necessary properly indicated in the Medium Term Fiscal Framework. | |
| 6 | Actions contained in the Sectoral Action Plans for Climate Change included in Economic and Social Plan (PES)[10] . | |
| 7 | At least 10 districts budget in PESOD[11] actions indicated in the Local Adaptation Plans of climate change. | |
| 8 | At least half of the most vulnerable[12] districts budget in PESOD[13] actions indicated in the Local Adaptation Plans of climate change. | |

*[10] This Element represents a Goal of Development Policy Operation on Climate Change (DPO) of the World Bank and to be completed in 2014 (DPO[3]).: "Key Actions of the National Strategy for Climate Change are adopted on Social Economic Plan (PES) that is submitted to Parliament for approval.".*

*[11] This Element represents a Goal of Development Policy Operation on Climate Change (DPO) of the World Bank and to be completed in 2015 ): "There is a need to check if this is consistent with the PAF indicator Performance Appraisal Framework (PAF) in 2013: ". Cumulative number of sectors / institutions and provinces that comprise actions of natural disasters risk reduction, adaptation and mitigation of climate change in the planning process."*

*[12] The classification of districts according to the Climate Change Vulnerability Index applied at national level is no longer available; this classification should be established based on the Baseline Assessment of Vulnerability to Climate Change to be completed by 2015 in conjunction with the results of the IOF 2014.*

*[13]This Element represents a Goal of Development Policy Operation on Climate Change (DPO) of the World Bank and to be completed in 2015 ): "There is a need to check if this is consistent with the PAF indicator (PAF) in 2013: ". Cumulative number of sectors / institutions and provinces that comprise actions of natural disasters risk reduction, adaptation and mitigation of climate change in the planning process."*

| | | |
|---|---|---|
| 9 | All most vulnerable[14] districts budget in PESOD[15] actions indicated in the Local Adaptation Plans of climate change. | |

### 3.1.3 Development of Institutional mechanisms for the integration of climate change into development planning and national budgeting[iv]

| Step | Scorecard Element | Achievement |
|---|---|---|
| 0. | There are not specific mechanisms at the Ministry of Planning and Development and the Ministry of Finance to incorporate climate change into development planning and national budgeting. | |
| 1. | There is a mechanism at the Ministry of Planning and Development and the Ministry of Finance to incorporate climate change into development planning and national budgeting but it is not systematically used | |
| 2. | Specific Unit / Technicians are mandated (with specific methodology) to integrate climate change in planning at the level of the Ministries of Relevant Sectors and the Ministry of Planning and Development. | X |
| 3. | Specific Unit/Technicians are mandated (with specific methodology) to oversee the integration of climate change in budgeting at the Ministry of Finance. | |
| 4. | Formal procedures come into force at the Ministry of Planning and Development for the screening of large investments against climate risks[v]. | |

### 3.1.4 Developing of framework for effective funding for the response to Climate Change

| Step | Scorecard Element | Achievement |
|---|---|---|
| 0 | There is no a coordinated funding to the response to Climate Change and funding is based mainly on bilateral and multilateral resources. | |
| 1 | A national fund for a coordinated management of climate funding is created (FUNAB). | |
| 2 | There are clear mechanisms for managing the State Budget financial resources, bilateral and multilateral for response to climate change. | X |
| 3 | Budget execution module (MEO) includes allocations for Climate Change. | |

[14] *The same as the previous footnote.*

[15] *This landmark represents a Goal of Development Policy Operation on Climate Change (DPO) of the World Bank and to be completed in 2015 ): "There is a need to check if this is consistent with the PAF indicator (PAF) in 2013: ". Cumulative number of sectors / institutions and provinces that comprise actions of natural disasters risk reduction, adaptation and mitigation of climate change in the planning process."*

| | | |
|---|---|---|
| 4 | Methodology and guidelines for budgetary coding of Climate Change allocations exist and are applied by at least five key sectors. | |
| 5 | First analysis of climate public expenditure is undertaken and a baseline reference is available. | |
| 6 | Annual analysis of climate costs produced. | |
| 7 | A Framework for Financing Climate Change is created. | |
| 8 | Bilateral and multilateral Budgetary resources mobilized less than 30% of the needs identified in the Action Plan[16] on Climate Change. | |
| 9 | Bilateral and multilateral budgetary resources mobilized between 30% - 50% of the needs identified in the Action Plan[17] on Climate Change. | |
| 10 | Bilateral and multilateral budgetary resources mobilized at least at 80% of the needs identified in the Action Plan[18] on Climate Change | |

**2.B. Level of Coordination of Climate Change Responsevi (Time Interval: 2013-2019)**

**3.2.1 Establishment and operation of a national coordination system for the implementation of ENAMMC**

| Step | Scorecard Element | Achievement |
|---|---|---|
| 0 | Different institutions address the issues of climate change without a clear mechanism for global coordination | |
| 1 | Inter-institutional Group on Climate Change meets regularly to facilitate the implementation of ENAMMC. | |
| 2 | Creation of Climate Change Unit (UMC) under the supervision of the Secretariat of the National Council for Sustainable Development (S-CONDES) | X |
| 3 | Specific Unity / Technicians are mandated (with specific methodology) to mainstream climate change in key sectors. | |
| 4 | Annual meetings are held to review progress of ENAMMC and Plan of Action on Climate Change involving a group representing the stakeholders. | |

*[16] This landmark will be calculated annually starting from the year in which the Action Plan for Climate Change is approved with a well-defined budget. After the first year it will To be calculated as a ratio of the annual average for period under reference (for example: if the Action Plan is approved in 2014, in 2017 the percentage will be calculated as follows: resources allocated in 2015 + 2016 + 2017 / budget of the action plan in 2015 + 2016 + 2017)*

*[17] The same as the previous footnote.*

*[18] The same as the previous footnote.*

| | | |
|---|---|---|
| 5 | The Technical Council for the National Council for Sustainable Development (CT-CONDES) to meet at least two times per year with Technical Council for Disaster Management (CTGC), Technical Secretariat for Food Security and Nutrition (SETSAN), and other relevant parties to present the report of activities | |
| 6 | Regular production and dissemination of information on implementation progress of ENAMMC. | |
| 7 | Medium and long-term Reviews of ENAMMC. | |
| 8 | The ENAMMC revised incorporating the recommendations of the evaluations for medium and long term. | |
| 9 | UMC consisting on technicians that are integrated with the Technical Staff of MITADER that meets the needs of coordination and technical assistance. | |

N.B.: The implementation of institutional mechanisms at ministerial level will be assessed separately for each sector / ministry in the sector working groups.

### 3.2.2 Inclusion and representation of key stakeholders (civil society) in the coordination mechanisms

| Step | Scorecard Element | Achievement |
|---|---|---|
| 0 | The coordination mechanism involves only governmental institutions. | |
| 1 | The coordination mechanism involves some civil society, academy and private sector organizations | |
| 2 | Organisations representing civil society, academies and the private sector are included in the coordination mechanisms at central level | |
| 3 | A sub-national (provincial) mechanism for the analysis of progress is established and consultations are conducted as planned. | |
| 4 | A district mechanism for review of progress is established and consultations on progress and implementation are carried out as planned. | X |

### 3.2.3 Gender balance in the mechanisms to coordinate the activities of GIIMMC:

| Step | Scorecard Element | Achievement |
|---|---|---|
| 0 | Less than 10% of the members of the coordination mechanism are women. | |
| 1 | Between 10% and 20% of the members of the coordination mechanism are women. | |
| 2 | Between 20% and 30% of the members of the coordination mechanism are women. | |

| | | |
|---|---|---|
| 3 | Between 30% and 40% of the members of the coordination mechanism are women. | |
| 4 | At least 50% of the members of the coordination mechanism are women. | X |

**N.B:** It is not necessary to establish a baseline for this indicator. It will be monitored by the Climate Change Unit on the basis of attendance register of meetings.

**2.C. Institutional capacity building and knowledge management for climate change response (Time Interval: 2013-2019)**

**3.3.1 Availability of assessments of climate vulnerability and risk that supports the development of policies and planning[vii]:**

| Step | Scorecard Element | Achievement |
|---|---|---|
| 0 | No assessment of vulnerability to climate change and / or risk available nationwide. | |
| 1 | Uncoordinated assessment of climate vulnerability and / or risk for some specific areas or sectors available, but no global assessment at national level. | X |
| 2 | A functional assessment methodology of climate vulnerability established. | |
| 3 | A national baseline assessment of climate vulnerability and / or risk available. | |
| 4 | Sectoral assessments of vulnerability focused on priority sectors identified in ENAMMC available. | |
| 5 | There is evidence that a vulnerability assessment and / or risk were used to inform the formulation of national policies, action plans and investments. | |
| 6 | Free access of assessments and data on vulnerability to Climate Change for use by stakeholders at different levels. | |
| 7 | The assessment of climate vulnerability and / or risk nationally is updated regularly. | |

**3.3.2 Technical expertise in Climate Change within the national coordination mechanisms[viii].**

| Step | Scorecard Element [19] | Achievement |
|---|---|---|
| 0 | There is little or no general knowledge of climate change issues among planning technicians. | |

[19] *Adapted from: TAMD Working Paper 2, Indicator 4: Institutional knowledge*

| | | |
|---|---|---|
| 1 | Few technicians have general training in issues of climate change (for example: science, policy), but do not play key roles and the impact of their knowledge is limited. | |
| 2 | Some technicians are familiar with the field of climate change but this knowledge is still limited, both in terms of number of people who hold it and the degree of knowledge. Climate change is still seen by some / many as a matter of natural disasters. | |
| 3 | Technicians with high level of awareness about climate change and about what it means in terms of potential risks to development. | |
| 4 | Many Technicians have a formal training (short or long) on climate change | X |
| 5 | Key technicians in positions of influence attended accredited courses that deal with issues of adaptation and integration of climate change. | |
| 6 | Technicians with considerable experience, knowledge or training, which have the ability / mandate to integrate climate change in planning and influence global discussions. | |

### 3.3.3 Production, access and use of information[ix] on Climate Change:

| Step | Scorecard Element | Achievement |
|---|---|---|
| 0 | Climate change related information is widespread in various institutions; there is no policy for data exchange. | |
| 1 | Inter-ministerial protocol for data exchange among public institutions is approved and implemented[20]. | |
| 2 | The Knowledge Management Centre for Climate Change is created and operational. | X |
| 3 | Public database which lists information on climate change is available on the website. | |
| 4 | Fast, free access to climate data obtained from meteorological, hydrometric, hydro or through models via (internet, phone, via extension, other networks, organizations, etc.) stations[21]. | |
| 5 | Design of database of good adaptation practices in Mozambique available on the internet. | |
| 6 | Design of database of climate risk, vulnerability assessments and planning for scenarios used extensively and routinely to support the development of policies and initiatives[22] to adapt to climate changes. | |

[20] *This Element corresponds to the World Bank Development Policy Operation (DPO) for Climate Change.*
[21] *Adapted from: TAMD Working Paper 2, Indicator 5: Climate Information.*
[22] *The same as the previous footnote.*

**Annex 3: Indicator Technical Notes**

| | |
|---|---|
| **NAME** | |
| **DEFINITION** | |
| **TYPE OF INDICATOR** | |
| **CÓDE** | |
| **METHODOLOGY (FÓRMULA, UNITY OF MEASURE)** | |
| **FREQUENCY OF INFORMATION COLLECTION** | |
| **MEANS OF VERIFICATION** | |
| **LIMITATIONS OF THE INDICATOR** | |

*Notes on connecting to the international requirements for preparation of report:*

[i]*This indicator is used to evaluate the indicator 1 main PPCR, question (b): "There is a National Plan / Sector for Climate Change approved?"*

[ii]*This event will be used to evaluate the indicator 1 main, question (e), "have been identified and prioritized measures, for example investments and programs to address climate resilience"*

[iii]*This indicator is used to evaluate the indicator 1 main PPCR, question (c): "The climate resilience strategies were integrated into the plans of the Central Government / major sectoral plans"*

[iv]*This indicator is used to assess key indicator 2 of the PPCR, question (d): "the responsibility was assigned to the institutions or people planning to integrate climate resilience?"*

[v]*This indicator will be used to inform the assessment of the main window 1 of the PPCR, question (f): "All planning processes are a routinely screening of climate risks"*

*Notes on connecting to the international requirements for preparation of report:*

[vi]*This indicator is used to assess the main indicator 2 of the PPCR: "Coordination Mechanism"*

*Notes on connecting to the international requirements for preparation of report:*

[vii]*This indicator is used to evaluate the indicator 2 main PPCR, question (b): "Is there information, studies, assessments that address climate change, variability and climate resilience"*

[viii]*This indicator is used to evaluate the indicator 2 main PPCR, question (c): "Is there appropriate expertise on climate change"*

[ix]*This indicator is used to evaluate the indicator 2 of the PPCR, issue: "There is relevant information on climate resilience in the public domain?"*

## STRATEGIC AREA 1.1: RISK REDUCTION

| ***General Information*** | |
|---|---|
| *Name of indicator* | Variation in the average time observed between a warning issued by the ARAs / DNA due to flooding, and the issuance by the INGC of a red warning state in the basins of Limpopo (bottom) and Incomati Rivers. |
| *Indicator Description* | |
| *Type (impact, Core result, Secondary Result)* | Core Result Indicator |

| | |
|---|---|
| *Definition* | Measuring the time required to transmit a notice by INGC that may respond to an emergency in the basins of Limpopo (bottom) and Incomati rivers |
| *Code* | |
| *Strategic Actions* | Strengthen the early warning systems |
| *Strategic Actions (Details)* | 1.2 Increasing the scale of the warning system, reaching the district (through sectoral institutions in the improvement of specific early warning system, particularly for agriculture, water and health) |
| ***Data Collection*** | |
| *Means of Verification* | |
| *Data Source* | (INGC) |
| *Agency Responsible* | INGC |
| *Contact* | (INGC) |
| *Collection Methodology* | |
| *Measurement* | (Total Sum, in minutes, the last time periods between each warning issued by ARAS / DNA and the issuance by the INGC of a red warning state in the basins of Limpopo (bottom) and Incomati River in the year "n ") - (total Sum, in minutes, the last time periods between each warning issued by ARAS / DNA and the issuance by the INGC of a red warning state in the basins of Limpopo (bottom) and Incomati the previous year "n-1") |
| *Unit of Measure* | H (hours) |
| *Frequency* | The INGC consigns the data for each occurrence of unpredictable frequency. In preparing the annual update of SNMAMC, data is consolidated by the District and National level, per month and per year. By consequent, the frequency of data availability is: Annual |
| *Area of reference* | Basins of the Limpopo (bottom) and Incomati river |
| ***Observations*** | |
| *Context, history and Prospects* | A notice allows decision making in time and time by the various actors, including the populations that may well evacuate their interests in the target area. Early warning systems need to be calibrated to the specific needs of the areas they cover, and put the day on a regular basis. The INGC is mandated to validate the early warning systems used at the district level.<br><br>This indicator is related to the indicator of ENAMMC: 1.2 Connection Average time between the issuance of the notice / warning an extreme event and their occurrence on the ground (also part of INGC indicators / MITADER). |

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| Indicator limitations | Each type of event you may need to communicate warnings differently (eg: radio report, localized information, direct notice to interested parties, etc ...). It implies that the design of each early warning system should include the warning modes and be validated qualitatively by INGC and the District level.<br><br>The indicator focuses on the INGC responsiveness and is not limited as far as total time enables local authorities and communities respond to an extreme event expected to cut term.<br>A response is the provision of emergency services, including public assistance during or immediately after an extreme event, in order to save lives, reduce its impact on health, ensure public safety and basic subsistence needs of those affected. |

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| BASELINE 2014: | |

## STRATEGIC AREA 1.2: WATER RESOURCES

| ***General Information*** | |
|---|---|
| *Name of indicatorr* | 4.1 Percentage of households with access to safe water all year |
| *Indicator Description* | |
| *Type (impact, Core result, Secondary Result)* | Core Result Indicator |
| *Definition* | World Health Organization (WHO) and United Nations Children Fund (UNICEF) define access to clean water as follows:<br>- Drinking water is water used for domestic purposes, for drinking, cooking and personal hygiene;<br>- Access to drinking water means that the source is less than one kilometer away from its place of use and that it is possible to reliably at least 20 liters per household member per day;<br>- A water is considered drinkable when its microbiological, chemical and physical characteristics that correspond to WHO guidelines or national standards on drinking water quality;<br>- Access to safe water is the proportion of people using improved drinking water sources: household connection; public standpipes; bore; well protected; Source / protected spring; rainwater. |
| *Code* | |

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|---|---|
| *Strategic Actions* | Increase access and the ability to capture, store, treatment and distribution of water |
| *Strategic Actions (Details))* | 4.1 Implement practices that enable the aquifer recharge |

| **Data Collection** | | |
|---|---|---|
| *Means of verification* | | |
| *Data Sources* | MOPHRH/Municipalities | |
| *Agency Responsible* | MOPHRH/DNA | |
| *Contact* | (DNA) | |
| *Other information* | See UNICEF, MISAU, MITADER | |
| *Collection Methodology* | | |
| *Numerator* | Number of households in urban areas with access to safe water all year | Number of households in rural areas with access to safe water all year |
| *Denominator* | Total number of households, according to the last census available | Total number of households, according to the last census available |
| *Unit of Measure* | % | |
| *Frequency* | In preparing the annual update of SNMAMC, data is consolidated by the District and National level, per month and per year. By consequent, the frequency of data availability is: Annual | |
| *Area of reference* | District (allows aggregation nationally) | |

| **Observations** | |
|---|---|
| *Context, history and Prospects* | The types of rural water supply services are wells or boreholes equipped with hand pumps, rainwater harvesting systems, protected springs and small water supply systems serving villages. The Government favors the expansion of the smaller water supply systems for towns and villages, according to the development.<br>The minimum service level is set at national level (see DNA data, in 2007: a fitted supply with manual pump that serves 500 people with a consumption of 20 liters / person / day). The provision of water supply services should offer technological options that comply with the ability and willingness to pay of consumers. |

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| *Indicator limitations* | The indicator has well-defined attributes in the various dimensions that make up the access to drinking water: water quality, distance, amount per person, ... corresponds to an essential element in the context of water use for human consumption.<br><br>However, the indicator does not take into account the development of other types of water consumption (agriculture, industrial, ...) and is thus insufficient to measure the effectiveness of any action which enables recharging of aquifers (see Strategic Action 4.1) . |
| Other observations of interest | This indicator is directly related to the indicator 14 MITADER. "Population with access to a safe water source." Safe water sources include private taps (at home) or public related to a supply network, boreholes, protected dug wells, protected springs and rainwater collection. Unsafe sources include for example unprotected wells and surface water (rivers / streams / lakes). The indicator measures the proportion of the population with access to safe water source, separating urban areas to rural areas.<br>The indicator is based on information gathered through surveys such as Multiple Indicator Cluster Survey.<br><br>Internationally, see the Millennium Development Goal (MDGs) (Obj 7-10) - The proportion of the population with sustainable access to an improved water source, urban and rural, is the percentage of the population using any of the following types of water supply for drinking : piped water, public tap, protected well, hole. Improved water sources do not include water provided by itinerant vendor, bottled water, trucks, wells and / or natural sources without protection. |

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| BASELINE 2014: | |

## STRATEGIC AREA 1.3: AGRICULTURE, FISHERIES AND FOOD SECURITY AND NUTRITION

| ***General Information*** | |
|---|---|
| ***Name of indicator*** | **Number of households involved in agriculture adapted to climate change.** |
| *Indicator Description* | |
| *Type (impact, Core result, Secondary Result)* | Core Result Indicator |

| | |
|---|---|
| *Definition* | Following the percentage of producers who use specific techniques to improve products of agriculture, since the level of production to storage as part of better adaptation to climate change. |
| *Code* | |
| *Strategic Actions* | Increase the resilience of agriculture and livestock |
| *Strategic Actions (Details)* | 5.3. Combat and control pests and diseases in crops and storage |
| ***Data Collection*** | |
| *Means of Verification* | |
| *Data Source* | Quarterly reports of agricultural extension workers to MASA<br>Integrated Agricultural surveys<br>National Statistics Institute (INE)<br>Department of Plant Protection<br>National Directorate of Agricultural Extension |
| *Agency Responsible* | MASA (DNSA, DNEA, DNP) |
| *Contact* | MASA (DNSA, DNEA, DNP) |
| Other information | This indicator is the result of the aggregation of indicators 5.2.1., 5.2.2, and 5.2.3 of ENAMMC |
| *Collection Methodology* | |
| *Numerator* | Sum of farmers using agro chemicals, integrated pest management (IPM) to combat pests, and the construction of improved granaries |
| *Denominator* | Total number of households engaged in agriculture |
| *Unit of Measure* | % |
| *Frequency* | Annual |
| *Area of Reference* | By Province, except Maputo Province. Provincial departments have data for district level. |
| ***Observations*** | |

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|---|---|
| *Context, history and Prospects* | The Integrated Agricultural Surveys were designed for a twice-yearly performance. In fact, they are carried out every 2 to 3 years. The Integrated Agricultural Surveys are made at national level, with data available at the district level. The non-use of agrochemicals and improved seed varieties is often considered (also in PARP) the main cause of lack of productivity among small-scale farmers in Mozambique. However, estimates are that only a small share of households use agro-chemicals (approx. 4%).<br><br>Whereas certain pesticides used in agricultural activities for the control of pests and pests can pose environmental risks, we need to foster the development and control of these agrochemicals. In case you need to use, are guided farmers to adopt integrated pest management processes and pests.<br><br>The losses during harvest and storage in crops such as Maize, for example, can reach 30 to 40% (corresponding for example to 30 to 40 kg per 100 kg of maize produced). The losses are mainly caused by insects, rats, moisture and fungi. The need to improve the storage conditions also justified the prescription price of agricultural products. When the producers fail to conserve and maintain the grain with good quality for a long time, choose to sell in as possible. This leads to less availability of food (cereals) and accentuates the features difficult times of food shortage, such as an increase in the number of malnourished children |
| *Indicator Limitations* | This indicator does not take into account the industrial products. However, are the largest users of pesticides, and with potentially the greatest impact on GHG emission levels. |
| Other observations of interest | This indicator is directly related to the indicator: 5.3 Percentage of farmers using agro chemical and integrated pest management (IPM) to combat pests and construction of improved granaries, and complete the indicators 5.2.1, 5.2.2 and 5.2.3 the ENAMMC, indicating the possible progression margin in the dissemination of techniques considered.<br><br>Agrochemicals are products and agents of physical, chemical or biological processes intended for use in production areas, storage and processing of agricultural products, in the pastures, in the protection of forests, native or planted, and other ecosystems and urban environments, water and industrial and intended to change the composition of flora and fauna in order to preserve them from harmful action of living beings considered harmful, as well as substances of products used as defoliants, desiccants, growth inhibitors and stimulators.<br><br>Integrated pest management is part of the main quality management systems in both the agricultural production phase and in the post-harvest phase. These systems aim to ensure the production of safe |

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| | food by identifying, monitoring, proper management and traceability of contaminants at all stages. These standards are generally based on internationally recognized protocols that enable implement traceability and certification systems, allowing the marketing of quality products that meet market demands.<br><br>Improved barns aim to improve the conservation of post-harvest agricultural products, for example protecting the attack of the seeds from rodents or preventing the development of toxins (e.g. aflatoxins, influenced by unfavorable and harmful temperatures to human health).<br><br>For more information on these techniques, see: extension Manual, National Directorate of Agricultural Extension, Ministry of Agriculture. |
| BASELINE 2014: | |

| ***General Information*** | |
|---|---|
| ***Name of Indicator*** | **Change in the average yield of maize producers involved in improving soil and water conservation techniques** |
| *Indicator Description* | |
| *Type (impact, Core result, Secondary Result)* | Core Result Indicator |
| *Definition* | Agricultural Yield: ratio between the produced amount and the surface (output per unit area).<br><br>Soil and water conservation: a set of activities that enables the maintenance of fertility of the soil and water availability, ensuring agricultural production in the future. |
| *Codes* | |
| *Strategic Actions* | Increase the resilience of agriculture and livestock |
| *Strategic Actions (Details)* | 5.4 Strengthening the agro-ecological zoning and land use planning |
| ***Data Collection*** | |
| *Means of Verification* | |
| *Data Source* | MASA(DNSA) |
| *Agency Responsible* | MASA (DNSA, DNEA, DNP) |
| *Contact* | |
| *Collection Methodology* | |

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|---|---|
| *Measurement* | (Average Annual income of Maize producers involved in improving conservation techniques in the reference year "n") - (Average annual income of maize producers involved in improving conservation techniques in the previous year "n-1") |
| *Unit of Measure* | T / Ha (Tons per Hectare) |
| *Frequency* | Annual |
| *Área of Reference* | All Provínces except Maputo |
| ***Observations*** | |
| Indicator limitations | In combination with this information, you need to qualify the type of farming used (extensive, semi-intensive, intensive), the purpose of following the progress observed in the types of agriculture. |
| Other observations of interest | The misuse of agricultural land is one causes of the low farmer income and the acceleration of erosion and desertification.<br><br>Among the factors to consider in conservation agriculture are stabilizing or increasing the level and quality of organic matter, soil erosion protection and saving water stored in it.<br><br>The improvement of income should also be compared with: the area in production, the number of producers, the labor productivity, the market price of the agricultural product in question, the capabilities of storage and transport. The Useful Agricultural Area consists of all the land under temporary or permanent crops or permanent grassland, fallow land, the land under protected crops or herbs, culinary and medicinal or wicker and occupied lands with crops under forest plant cover space. They are considered to determine the Useful Agricultural Area wants the lands of the farm or of the waste, in this case only when used in the feeding of livestock effective exploitation. |

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| BASELINE 2014: | |

## STRATEGIC AREA 1.4: SOCIAL PROTECTION

***General Information***

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|---|---|
| ***Name of Indicator*** | 8.1.1 Number of households covered by the Social Action Programme Production in districts identified by INE as vulnerable to Climate Change |
| ***Indicator Description*** | |
| ***Type (impact, Core result, Secondary Result)*** | Core Result Indicator |
| ***Definition*** | Vulnerability describes the ability of people - or lack thereof - to withstand external shocks and risks, maintaining their livelihoods and their well-being.<br>Districts vulnerable to climate change are defined by INGC with National Statistical Institute (INE) data. |
| ***Codes*** | |
| ***Strategic Actions*** | Increase adaptive capacity of vulnerable people |
| ***Strategic Actions (details)*** | 8.1 Develop and apply innovative approaches to community-based adaptation |
| ***Data Collection*** | |
| ***Means of Verification*** | |
| ***Data Source*** | MGCAS |
| ***Agency Resposnible*** | MGCAS |
| ***Contact*** | MGCAS |
| ***Collection Methodology*** | |
| ***Measurement*** | Number of Households accounted for as PASP beneficiaries in the reference period |
| ***Unit of Measure*** | Units |
| ***Frequency*** | Annual |
| ***Area of Reference*** | District (allows aggregation nationally) |
| ***Observations*** | |

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|---|---|
| Context, history and prospects | The contrasting concept of vulnerability is the resilience, through which people have the ability to retain their property and maintain your well-being and livelihood in the face of adversity. Taking the vulnerability as an analytical concept that helps explain why some people are more likely to be poor, three main dimensions of vulnerability can be identified:<br>• Lack of internal defenses<br>• Exposure to external risks and shocks<br>• Social exclusion and discrimination.<br><br>According to the regulation enshrined in the Social Security Subsystem Basic, it anticipates a social action component that encompasses the activities that promote socio-economic inclusion of vulnerable populations with physical ability to work. The coordination of this component responsibilities are shared between the (MGCAS/ INAS and MEF, MASA, MOPHRH, INGC, and the District Authorities).<br>One of the MGCAS roles should be to ensure that the most vulnerable target groups have non-discriminatory access, and whenever possible, preferred to other forms promoting economic inclusion (e.g access to micro-finance, public services) . In terms of beneficiaries: the objective set is to cover 5% of households with elements of working age by 2014 (about 219,000 households). |

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| BASELINE 2014: | |

## STRATEGIC AREA 1.5: HEALTH

| ***General Information*** | |
|---|---|
| *Name of Indicator* | Number of districts and municipalities listed by the National Institute for Disaster Management (INGC) as high risk, which introduced and tested protocols for prevention, preparedness and response to disasters, to provide health services.. |
| *Indicator Description* | |
| *Type (impact, Core result, Secondary Result)* | Core Result Indicator |

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|---|---|
| *Definition* | For disaster prevention means actions to prevent or reduce the occurrence and intensity of disasters, by identifying, mapping and monitoring of risks, integrated into the process ongoing management of them.<br><br>For disaster preparedness means the actions to prepare the national bodies and communities public system in order to ensure an adequate response to disasters.<br><br>The answer sensed minimizes the consequential damages to a disaster, in view of clear objectives and / or specific scenarios.<br><br>Simulation tests are characterized as preparedness actions for disaster. |
| *Code* | |
| *Strategic Actions* | Strengthen the early warning system (Risk Reduction).<br><br>Reduce people's vulnerability to disease transmission vectors associated with climate change (Health). |
| *Strategic Areas (details)* | 1.1 Provide dedicated and adequate weather information to each user (including the development of fires warning) in a timely manner, identifying the most effective ways to reach different audiences with the most appropriate instruments and tools including local languages (Risk Reduction).<br>9.3 Establish a monitoring and specific control measures system on diseases favored by climate change (Health). |
| ***Data Collection*** | |
| *Means of Verification* | |
| *Data Source* | MISAU (INAM/DNA/INGC) |
| *Agency Responsible* | MISAU (INAM/DNA/INGC) |
| *Contact* | MISAU (INAM/DNA/INGC) |
| *Collection Methodology* | |
| *Numerator* | Number of Districts recognized by INGC and MISAU to have a protocol for managing "disaster" x 100 |
| *Denominator* | Total number of districts in Mozambique (150) |
| *Unit of Measure* | % |
| *Frequency* | The frequency of data availability is: Annual |
| *Areai f Reference* | District (allows aggregation nationally) |
| ***Observations*** | |
| *Context, history and Prospects* | Conduct simulation for the disasters are characterized as practical exercises involving the mobilization of resources and people to assess, in real time, the response process. Aims, among other things, assess the action taken, the resources and undertaken to |

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| | promote capacity building and training of teams to adequately address an emergency situation.<br><br>For disaster risk means the probability of loss and damage associated with the impact of an external physical event on a vulnerable population where the magnitude and extent of these events are such that exceed the ability of society affected to receive the impact and its effects and recover autonomously.<br><br>The capability response is also a function of variables such as the quality of the notices. A notice allows decision making in time and time by the various actors, including the populations that may well evacuate their interests in the target area. Early warning systems need to be calibrated to the specific needs of the areas they cover, and put the day on a regular basis. The INGC is mandated to validate the early warning systems used at the district level. |
| *Indicator Limitations* | The relevance of the protocols is to prepare the communities to reduce losses and minimize human suffering as a result of disasters.<br><br>To build and test the protocols there needs to be some communication and coordination between agencies, community and possibly other government and non-governmental sectors.<br><br>The quality of response will depend on the quality of the relationship between prevention and response agencies each other, with communities (including their own community organizations).<br><br>The challenge is to drive processes and relationships that remain after the completion of drills and are effective in actual emergency situations. Therefore, communication quality, a review of the roles and tasks, resources, and goals need to be constantly reviewed and updated. |

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| BASELINE 2014: | |

## STRATEGIC AREA 1.6: BIODIVERSITY

| ***General Information*** | |
|---|---|
| ***Name of Indicator*** | **10.1** Number of Management Plans that include climate change |
| *Indicator Description* | |

| | |
|---|---|
| *Type (impact, Core result, Secondary Result)* | Core Result Indicator |
| *Definição* | A management plan is a technical document by which, based on the overall goals of a conservation area, establishes the zoning and standards that should govern the use of the area and the management of natural resources, including the implementation of structures Physical necessary for the management of the conservation area. In the case of strictly protected areas, this instrument of planning and management should include a buffer zone and ecological corridors, listing measures that promote the protection of biodiversity and integrating the units to the economic and social life of surrounding communities.<br><br>A management plan that includes climate change must include specific activities to:<br>- To contribute to a better understanding of the effects of weather events in the conservation area, e.g. for data collection, which will observe changes in the characteristics of conservation areas,<br>- Improve the adaptation of the conservation area to climate change, including changes that only you can observe the long term,<br>- Improve response to extreme events of climate origin.<br><br>The indicator is broken down by type of conservation area (hunting area, natural park, e.t.c ...) |
| *Code* | |
| *Strategic Actions* | Ensure the protection of Biodiversity |
| *Strategic Actions (Details)* | 10.1 Carry out activities and programs for adaptive conservation to climate change; |
| ***Data Collection*** | |
| *Means of Verification* | |
| *Data Source* | MITADER |
| *Agency Responsible* | National Administration of Conservation Areas (MITADER) |
| *Contact* | MITADER |
| *Collection Methodology* | |
| *Measurement and Unit of Measure* | Number of management plans for each type of conservation area |
| *Area of Reference* | National |
| *Frequency* | Annual |
| ***Observations*** | |

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| **1.1.1** ***Context, history and Prospects*** | The creation and implementation of conservation areas is a worldwide strategy used in the pursuit of conservation of natural resources and environmental, economic and social sustainability. Conservation areas have a main objective of protection of fauna and flora, and are managed by the Law on conservation areas (Art. 13 of Law 20/97 of 1 October). There is an obligation that each conservation area has its management plan, regardless of their category. The management plans completed or started recently updated to include aspects related to climate change (in this context, Plans for Marine areas had more prominence). The plans usually have a 10-year basis but may be reviewed at mid-term. This review will take into account the vulnerability to Climate Change, following an environmental assessment conducted by MITADER |
| Indicator limitations | The management plans are mainly carried out by external consultants and validated by Government (MITADER). It is possible to include in an analysis in the Terms of References of Climate Change for integration into management plans.<br>The indicator does not measure the quality with which the Climate Change is well taken into account in the management plan. |

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| BASELINE 2014: | |

## STRATEGIC AREA 1.7: FORESTS

| ***General Information*** | |
|---|---|
| *Name of Indicator* | 11.1 Area (Ha) planted or managed by communities |
| *Indicator Description* | |
| *Type (impact, Core result, Secondary Result)* | Core Result Indicator |
| *Definition* | Forested area: proportion of land area covered by forest, on the total area of the country (total land area less the area covered by inland waters such as major rivers and lakes). As defined in the evaluation of the 2000 forest resources, the Food and Agriculture Organization, the forest includes both natural forests and forest plantations. This term refers to land with a crown cover of more than 10% trees and an area of over 0.5 hectares, where trees reach a height of at least five meters. Forests are characterized by the presence of trees and the absence of other forms of land use. It includes land where trees have been removed, but that will be repopulated again in the foreseeable future. The masses of trees, whose main purpose is agricultural production such as orchards, are excluded. |

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| *Code* | |
| *Strategic Areas* | Promote tree planting mechanisms and establishment of forests for local use |
| *Strategic Areas (Details)* | 11.1 Develop planting programmes multiple use and economic value trees in order to meet the needs of products for local community, looking for value local initiatives, combating deforestation and preventing fires and their spread |
| ***Data Collection*** | |
| *Means of Verification* | |
| *Data Source* | MASA (DNTF) / MITADER |
| *Agency Responsible* | MASA (DNTF) / MITADER |
| *Contact* | MASA (DNTF) / MITADER |
| *Collection Methodology* | |
| *Measurement* | Sum of the identified forest areas |
| *Unit of Measure* | Hectares (Ha) |
| *Frequency* | Annual |
| *Area of Reference* | District (allows aggregation nationally) |
| ***Observations*** | |
| Indicator limitations | In practice in Mozambique, it is possible that wooded areas can be considered as forests, but without corresponding with the overall definition. |
| Other observations of interest | There are several methods for monitoring and forest inventory, for example using remote sensing satellite. The two commonly known are:<br>- For samples (JRC, UCL / FORAF / OFAC)<br>- Wall to Wall methodology (CARPE / SDSU / UMD / OSFAC) |

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| BASELINE 2014: | |

## STRATEGIC AREA 1.8: INFRASTRUCTURE

| ***General Information*** | |
|---|---|
| *Name of Indicator* | Percentage of district roads rehabilitated from 2014 in the pilot provinces (Gaza and West Inhambane) in accordance with the standards, guidance and technical specifications that take into account Climate Change. |
| *Indicator Description* | |
| *Type (impact, Core result, Secondary)* | Core Result Indicator |

| | |
|---|---|
| *Definition* | The standards under this indicator are technical documents that set out the minimum requirements that the roads should be observed to ensure a better match to the climatic conditions. |
| *Code* | |
| *Strategic Actions* | Develop resilience mechanisms in urban areas and other settlements |
| *Strategic Actions (Details)* | 12.4 Ensure that investments, particularly in the Roads area of risk areas are climate-proof |
| ***Data Collection*** | |
| *Means of Verification* | |
| *Data Source* | MOPHRH (ANE) |
| *Agency Resposnible* | MOPHRH (ANE) |
| *Contact* | MOPHRH (ANE) |
| *Collection Methodology* | |
| *Measurement* | District roads are rehabilitated in accordance with the standards of guidance and technical specifications to take into account climate change (km) divide by the Total district roads rehabilitated (km) x 100 |
| *Unit of Measure* | Km |
| *Unit of Measure* | (%) |
| *Frequency* | Annual |
| *Area of Reference* | Pilot Province (Gaza and West Inhambane) |
| ***Observations*** | |
| *Context, history and Prospects* | In practice, normalization is present in the manufacture of products, transfer of technology, improving quality of life through standards for health, safety and environmental preservation. The use of standards results in improved quality and reduction of prices and costs, and should feed the social development. |
| Indicator limitations | The indicator measures the ability to take into account new construction standards.<br>The following assumptions are:<br>- The availability at national level, reference standards for construction, climatically robust construction and rehabilitation,<br>- The existence and operability of good verification systems following the construction standards,<br>- Taking into account the climatic aspects, both technical than financial, in land-use plans providing for new works of rehabilitation. |

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| BASELINE 2014: | |

## STRATEGIC AREA 2.1: ENERGIA

| General Information | | |
|---|---|---|
| **Name of Indicator** | **2.5** Energy intensity by sector (industry and transport) | |
| *Indicator Description* | | |
| *Type (impact, Core Result, Secondary Result)* | Core Result Indicator | |
| *Definition* | Offer Total Primary Energy (OTEP), in the sectors of Industry and Transportation, in relation to Gross Domestic Product (GDP). The OTEP is equal to production plus imports minus exports, minus international deposits and includes (in more or less) the variation in energy stocks. Gross domestic product is the sum, in monetary terms, of all final goods and services produced in the country during a certain period (usually one year). | |
| *Code* | | |
| *Strategic Action* | Increasing energy efficiency | |
| *Strategic Actions (Details)* | 2.5 Reduce emissions associated with thermal power plants. | |
| **Data Collection** | | |
| *Means of Verification* | | |
| *Data Source* | MIREME | |
| *Agency Responsible* | MIREME | |
| *Contact* | MIREME | |
| *Collection Methodology* | | |
| *Numerator* | OTEP in the transport sector, in MW | OTEP in the industrial sector, in MW |
| *Denominador* | GDP, in Meticais (10^6) | GDP, in Meticais(10^6) |
| *Unit of Measure* | MW / MT (10^6) | |
| *Frequency* | Annual | |
| *Area of Reference* | National | |
| **Observations** | | |
| *Context, history and Prospects* | Indicator 2.5 has a relationship with the indicator 2.2.: Energy intensity by sector, with limited sectors of industry and transportation. The Ministry of Energy indicates that the various sectors have data, but the Energy Ministry did not start collecting this data. | |
| Indicator limitations (what the indicator can measure, and what it cannot measure) | It is recommended to follow the indicator information 2.5 with the percentage occupied by each sector in GDP. | |

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## STRATEGIC AREA 2.2: - INDUSTRIAL PROCESSES AND PRODUCT USE

| General Information | |
|---|---|
| *Name of Indicator* | 5.1.2 Number of legal instruments created for supervision and regulation of industrial activity in order to control the length of national and international legislation |
| *Indicator Description* | |
| *Type (impact, Core result, Secondary Result)* | Core Result Indicator |
| *Definition* | The instruments followed by this indicator must clearly acknowledge the regulatory nature of industrial activity, and how it is put into practice (improvement of taxation, quality aspects, tariff incentives, grants, ...). The indicator is cumulative, taking into account the instruments adopted in the year under consideration as the existing ones, provided they are in force. |
| *Code* | |
| *Strategic Actions* | Monitor emissions from industrial processes including waste and effluents associated |
| *Strategic Actions (Details)* | 5.1 Develop policies and measures of supervision and regulation of industrial activity in order to monitor compliance with national legislation and international conventions |
| **Data Collection** | |
| *Means of Verification* | |
| *Data Source* | MIREME |
| *Agency Responsible* | MIREME/MITADER |
| *Contact* | MIREME/MITADER |
| *Collection Methodology* | |
| *Numerator* | Number of tools |
| *Frequency* | Annual |
| *Area of Reference* | National |
| **Observations** | |
| Indicator limitations | It is recommended to provide the list of the instruments concerned to limit repetitions in subsequent years.<br><br>It would be necessary to take into account not only the number of instruments, but also its effects (quantified with simple indicators such as the number of potential beneficiaries, surveillance amounts, analyzes cost / benefits for each existing instrument,.).<br><br>It would also be important to have more details on the international regulation that is meant to translate the Mozambican context. |

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| BASELINE 2014: | |

## STRATEGIC AREA 2.3: AGRICULTURE, FORESTS AND OTHER USES OF SOIL

| ***General Information*** | |
|---|---|
| *Name of Indicator* | 7.1 Percentage of Forest Concessions, with approved management plans |
| *Indicator Description* | |
| *Type (impact, Core result, Secondary Result)* | Core Result Indicator |
| *Definition* | A Forest Concession is the right of government grants - through bidding - for a business or community in a certain public area, using forest products and services in a sustainable manner, while ensuring a management plan approved by the government. A management plan is a technical document prepared by various studies in order to plan the management and sustainable use of natural resources in a defined territorial unit. |
| *Code* | |
| *Strategic Actions* | Reduce the rate of deforestation and wildfires |
| *Strategic Area (Details)* | 7.1 Explore forests in a sustainable manner in order to maximize its potential for the capture and sequestration of carbon |
| ***Data Collection*** | |
| *Mean of Verification* | |
| *Data Source* | MASA (DNTF)/MITADER |
| *Agency Responsible* | MASA (DNTF)/MITADER |
| *Contactos* | MASA (DNTF)/MITADER |
| *Collection Methodology* | |
| *Numerator* | Number of forestry concessions with approved management plans (number) x 100 |
| *Denominator* | Total number of forest concessions (No.) |
| *Unit of Measure* | % |
| *Frequency* | Annual |
| *Area of Reference* | Per District |

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| BASE 2014: | |

## STRATEGIC AREA 2.4 - WASTE

| General Information | |
|---|---|
| *Name of Indicator* | 9.1 Quantity (kg) of recycled waste (paper, plastic, metal and glass) in major cities. |
| *Indicator Description* | |
| *Type (impact, Core result, Secondary Result)* | Core Result Indicators |
| *Definition* | Wastes are substances or objects that are removed, which are intended to be eliminated or which are required by law to be eliminated, also known as waste.<br><br>Recycling consists of a recovery operation, including the reprocessing of organic material, through which the material composition of the waste are reprocessed into products, materials or substances whether for the original purpose or for others, but that does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations; solid waste treatment processes involving changes in their physical, physicochemical or biological weapons, for the transformation of inputs or new products. |
| *Code* | |
| *Strategic Actions* | Manage and value waste |
| *Strategic Actions ( Details)* | 9.1 Promote the reduction, reuse and recycling of waste |
| **Data Collection** | |
| *Means of Verification* | |
| *Data Source* | (Municipalities/ FUNAB (MITADER)) |
| *Agency Responsible* | Municipalities/ FUNAB (MITADER) |
| *Contact* | (Municipalities/ FUNAB (MITADER)) |
| *Collection Methodology* | |
| *Measurement* | Sum of the masses of recycled waste, segregated by type: paper, plastic, glass, metal. |
| *Unit of Measure* | Kilograms (kg) or Tons (T) |
| *Frequency* | Monthly (allows aggregating the annual level) |
| *Area of Reference* | District (allows aggregation nationally) |
| **Observations** | |
| Indicator limitations (what the indicator can measure, and what it cannot measure) | The final waste have very different masses due to its nature - it is hard to compare recycling one glass bottle with recycling a plastic bottle. |

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