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Tracking Adaptation and Measuring Development (TAMD) in Mozambique

Appraisal and Design Phase Report

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**TAMD Appraisal and Design Phase Report:
Appraisal of Existing Monitoring and Evaluation
Systems in Mozambique and
Design of TAMD Prototypes**

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March 2013

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Executive Summary

Vulnerability to climate change in Mozambique is a threat to development efforts. This report examines the national monitoring and evaluation processes in Mozambique relevant to development planning and climate change adaptation.

The Government of Mozambique has integrated disaster risk reduction and environmental issues into ongoing development planning. The Ministry for the Coordination of Environmental Affairs (MICOA) is the institution responsible for environmental and climate change related strategies and interventions. It will operate through a dedicated Climate Change Unit.

Strategic planning for climate change is relatively recent, and began with the National Adaptation Plan of Action in 2007. Since then, the Strategy and Action Plan on Gender, Environment and Climate Change (2010) and the National Strategy for Climate Change (2012) have been approved. Additionally a National Strategy on Climate Change and Disaster Reduction has been proposed. Implementation is limited so far. Many of the NAPA priorities are still to be addressed, although the first funding for interventions was secured last year.

There is evidence of strategic effort, supported by the development partners, to ensure a more systematic and streamlined government response to climate change. The most notable recent programme is the Strategic Programme for Climate Resilience (SPCR), part of the Pilot Programme on Climate Resilience. The Africa Adaptation Programme was another important project that sought to mainstream climate adaptation mechanisms into policy, development and investment frameworks.

Social and economic planning is overseen by the Ministry of Planning and Development and the Ministry of Finance. The M&E for development follows two distinct routes. The first focuses on monitoring and requires each ministry to report at regular intervals with input from the provincial and local levels. The second approach is coordinated centrally by the National Institute of Statistics, using socio-economic data gathered by various household surveys. It is primarily this second approach to M&E that the Ministry of Planning and Development employs to assess socio-economic performance. A Performance Assessment Framework has been set up by donors and the Government to assess various indicators that can span sectors. Establishing adaptation baselines is challenging, however. For national M&E there are a variety of data sources but interviewees highlighted issues of data quality, coordination, collation and management.

Whilst the national M&E system is slowly migrating towards a system of results-based management (instigated in 2011), it is still largely based on monitoring progress and activities undertaken. The government is seeking to integrate climate change into national M&E processes and indicators through a cross-sectoral approach. However, unless the whole system is transformed very quickly the emphasis will remain on progress monitoring rather than evaluation. There are ongoing challenges, including a lack of harmonisation between sectoral plans, over-ambitious targets for M&E systems, the reliability of data and consequently the usage of information. There are also issues around capacity amongst personnel. With specific regard to climate change, scientific studies have been carried out, but there are still gaps in local data which can make it difficult to establish a vulnerability baseline. The data that is collected is largely in dissimilar project formats and has not been rationalised or collated.

Climate change adaptation interventions are relatively new in Mozambique and until recently there has been an uncoordinated approach to climate change in development planning. This is set to change, however, with the framing of climate change as a cross-cutting issue, and the inclusion of climate change in the annual budget of the Ministry for the Coordination of Environmental Affairs.

The M&E for adaptation within the government is very much in the early stages; a framework is envisioned as being in place by the end of next year, but for the moment, adaptation of M&E broadly suffers from many of the constraints of the national M&E system. Currently, no fully developed climate change M&E frameworks exist at the national level, although they are in development. Previous development partner projects have focused on institutional indicators and capacity. Results frameworks for each of the SPCR components are in development. The SPCR also has the explicit aim to generate learning around M&E, but it remains to be seen how this will be achieved.

In the national system little of the M&E process appears to feed back into future planning and learning. Whilst there have been several climate change related projects in Mozambique, there does not seem to have been any consolidated learning on the M&E of climate change or adaptation.

Adaptation projects supported by development partners do not have a dedicated home in the government, and, depending on the nature and scope of the project, will instead span a number of ministries. The development partners and a series of broker organisations such as the implementing agencies play an important role in supporting climate change projects and M&E. However the differing requirements under each development partner project lead to a fragmented approach to M&E. Whilst there are efforts to streamline and coordinate donor efforts through a working group, the M&E of projects may still be hampered through a lack of human capacity and inadequate socio-economic data, as well as gaps in climatic information.

The Government is considering how the TAMD approach may develop and strengthen the national processes in place and those planned under the National Strategy for Climate Change. Under the leadership of the Environment Ministry (MICOA), a stakeholder group has been formed to design a national M&E system for climate change adaptation, as part of the national climate mitigation and adaptation strategy. The TAMD project has appointed a national research coordinator, and outputs from the TAMD project will feed into the national climate M&E system design process.

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Key Acronyms

INGC National Institute for Disaster Management

PARP Poverty Reduction Strategy Paper

MICOA The Ministry for the Coordination of Environmental Affairs

A note on adaptation and resilience – from an ecosystems perspective resilience and adaptive capacity are distinct while descriptions of social systems often use the terms interchangeably. This report addresses mainly how social systems respond to climate change, so for simplicity the term adaptation has been used with the assumption that it is a means to achieving climate resilience.

1. Introduction and Context

The aim of the appraisal was to assess the M&E systems currently in use in Mozambique and how the TAMD approach¹ to assessing the developmental effectiveness of climate adaptation investments could enhance them. A similar appraisal was carried out in other countries.

These Appraisal and Design Phase reports describe the degree to which climate change adaptation has been mainstreamed into development planning, the existing M&E systems for development in the economic and social sectors, and the systems currently in place for the M&E of climate change and adaptation interventions. They present the components of a national evaluative framework for climate adaptation and identify interventions that could be appropriate for testing the utility and feasibility of the TAMD approach.

The appraisal in Mozambique was based on a literature review and interviews with key informants. The literature review included analysis of global and national publications on climate change and disasters as well as reports and strategies from the national government, NGOs and UN agencies on the issue of climate change and disaster reduction. Interviews were carried out with key stakeholders both within and outside of the government. Twenty experts were consulted from the Ministry of Agriculture, The National Planning Directorate, Ministry for Planning and Development, Ministry of Finance, Ministry for Coordination of Environment Affairs, United Nations Development Programme, PMA/WFP, GIZ, District Services for Economic Activities-Moamba, MITUR, SETSAN, Livaningo, and the National Institute for Disaster Management, amongst others. Key informants commented on drafts of the report at round table discussions and via email.

1.1 Current and Future Climate Effects and Vulnerabilities

Mozambique is highly vulnerable to climate change. Although economic growth has been impressive over the past years, with a reduction of the absolute poverty by 15% over the period 1997-2003 (MPF et al 2004), by 2008 more than half of the population still lived on less than \$1 US per day. Nearly half of the children under the age of two were chronically malnourished and more than half of the population had no access to potable water and hospital care (UNDP & GoM 2008, p.12). Due to the prevailing poverty, Mozambique has been depending on external aid for more than 25 years (Arndt et al., 2006, p.3; Renzio and Hanlon, 2007, p.3).

Climate change has become one of the major factors hampering international and national development efforts. The majority of the population lives in the rural areas, making their livelihoods mainly from agriculture and natural resources, which are highly impacted upon by increased climate variability and changes. Droughts, floods and cyclones have been on the rise and are expected to increase over the coming years as illustrated in Figures 2 and 3 below (INGC, 2009).

¹ The Tracking Adaptation and Measuring Development (TAMD) approach offers a 'twin track' framework for use in many contexts and at many scales to assess and compare the effectiveness of interventions that directly or indirectly help populations adapt to climate change. TAMD emphasises the need to assess development interventions in the light of changing climate risks. The TAMD approach was elaborated by IIED, Garama 3C Ltd and Adaptify. See <http://www.iied.org/tracking-adaptation-measuring-development>, [http://pubs.iied.org/search.php?k=TAMD%3A+A+framework+for+assessing+climate+adaptation+and+development+effects&z=+](http://pubs.iied.org/search.php?k=TAMD%3A+A+framework+for+assessing+climate+adaptation+and+development+effects&z=)

Figure 2: Observed Rise in the Frequency of Natural Hazards

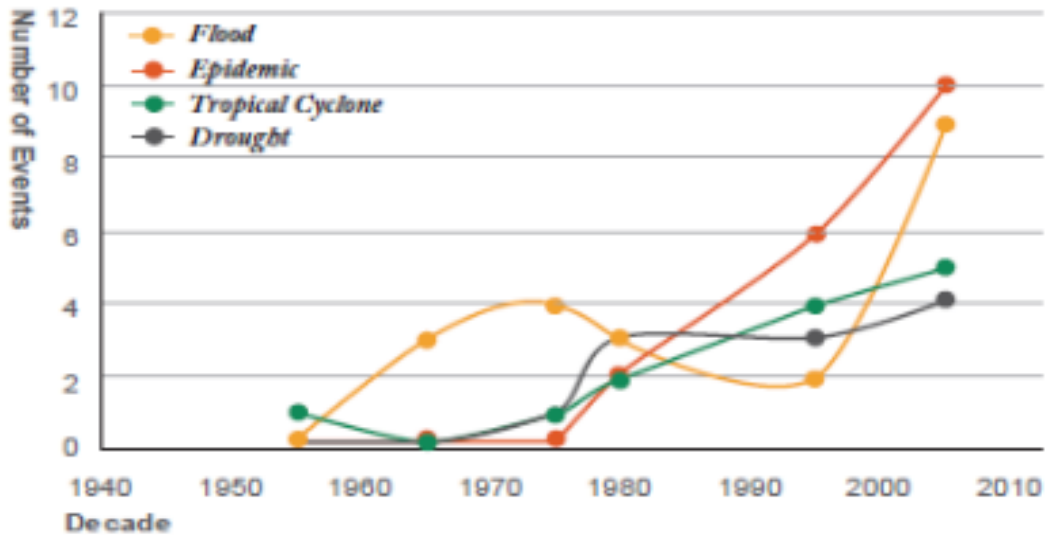
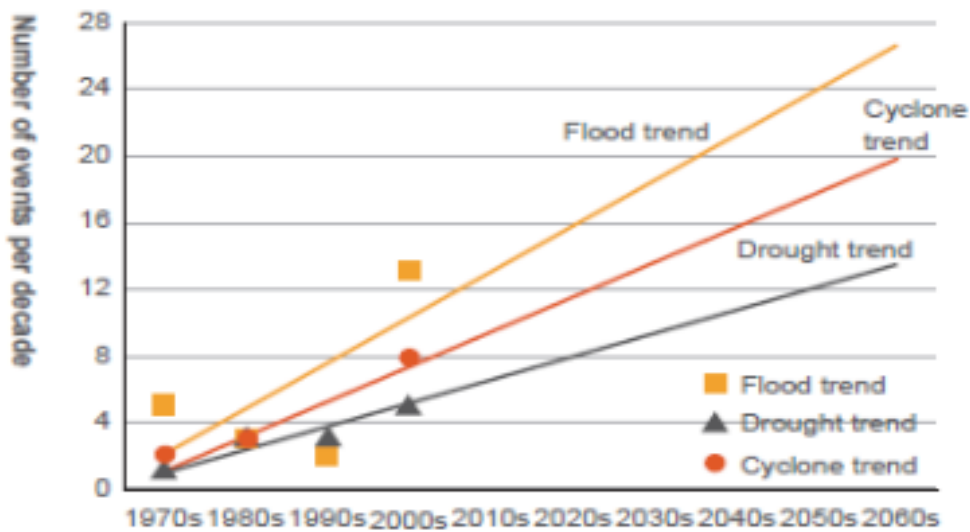


Figure 3: Expected Trend of the Frequency of Natural Hazards



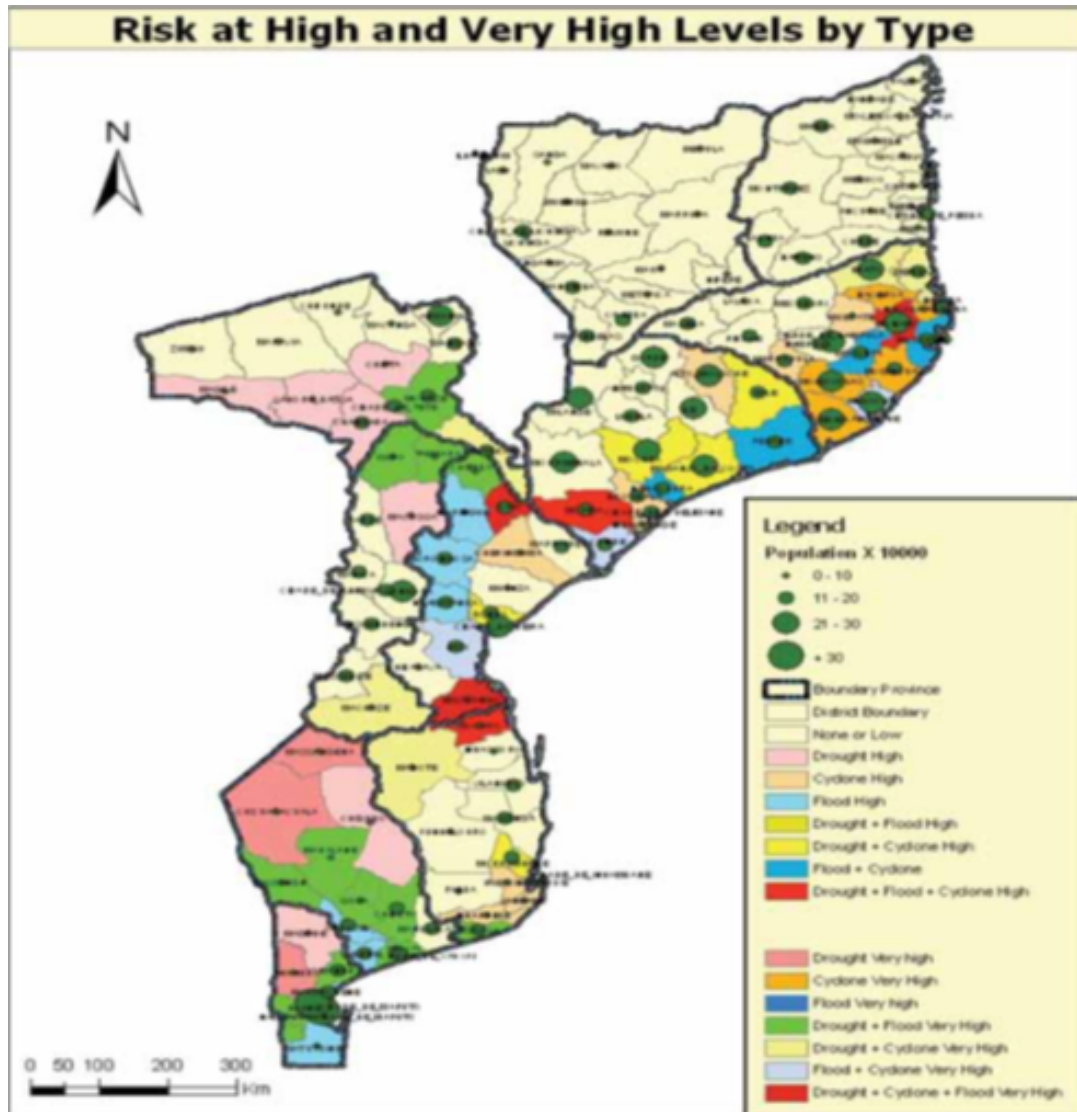
Mozambique is highly vulnerable to the impacts of climate change. It ranks 8th in the world of countries most vulnerable to climate change, according to the 2011 world risk report (BEH & UNU-EHS 2011, p.28). About 60% (20.5 million) of the population lives along the coastline and nearly 45% of the country is below 100 meters altitude. These areas are vulnerable to increased cyclones and sea level rise. The country is the lower riparian area for 9 international rivers and more than 50% of the country’s water flow depends on the countries upstream. Drought has historically been recorded with particular focus on the southern region in the interior of the Gaza and Inhambane provinces, while flooding badly affects the Zambezi and Limpopo basins. During the past 50 years more than 100 thousand people died from, and more than 28 million were effected by, 68 events caused by natural hazard. About a quarter of the total Mozambican population - in the areas presented in Figure 4 below - is at risk from natural hazards (World Bank 2010, p.8). Economic analysis from these hazards suggests that Mozambican GDP growth is cut by an average of 5.5% when a major shock

occurs (World Bank *ibid*). The 2000 great flood provides an illustrative case. It led to economic losses estimated at US\$ 600 million (GoM 2000, p.17), with a decline in national GDP from an expected 10% growth to just 1.6% in 2000, and inflation rose from 2.9% in 1999 to 12.7% in 2000 (MICOA 2011, p.9).

Studies on climate change in Mozambique record that temperatures have increased by between 1.1-1.6°C. Statistics show a reduction in cold days and the winter period but an increased number of hot days and longer summer period. There is also a shift in rain patterns, with a noticed reduction in the rainfall and changes in the start and end of the rain season all over the country (INGC 2009). By 2050, Mozambique is predicted to have an increase of temperatures of 1-2 °C no matter what the scenario (World Bank 2010, p. xv). This is expected to lead to further increase in frequency and intensity of flooding, drought, cyclones and sea level rise by 2100, though with regional differences (INGC 2009).

Recent economic analysis of the impacts of climate change in Mozambique suggest that, if no adaptation measures are taken, the national GDP could fall between 4-14% by 2040-50 and the country could experience annual losses estimated at about US\$ 400 million while more economically viable adaptation options vary from US\$ 190 million to US\$ 470 million per year depending on the sea level rise scenario (World Bank 2010, pp xix-xx).

Figure 4: Risk Map of Mozambique (World Bank 2010a, p. 19)



1.2 National Approaches to Mainstreaming Climate Change Adaptation

The Mozambique response to climate change can be traced back to 1994. Following the civil war in 1992 and the World Summit on Sustainable Development in Rio, 1992, Mozambique established the Ministry for the Coordination of Environment Affairs (MICOA) in 1994. It ratified the three Rio conventions: Conventions on Biodiversity and on Climate Change in 1995, and the Convention on Desertification in 1996. In 1998 Mozambique produced its first inventory on greenhouse gases (updated in 2000) and submitted its first National Communication on climate change to the UNFCCC in 2003 (updated in 2006). The Government has been addressing environment and disaster risk reduction as cross-cutting issues in every major five-year development plan and the Poverty Reduction Strategy Papers of 2001, 2006 and 2011. Both these sets of plans have highlighted the need for the Government to design and implement strategies to reduce losses of lives and property from disasters, by enhancing a culture of disaster prevention, mitigation, environment protection and sustainable use of natural resources.

1.2.1 Key National Institutions for Mainstreaming Climate Change

Over the past five years, three government institutions have emerged as critical players in improving climate risk management, namely the Ministry for the Coordination of Environmental Affairs, the National Institute for Disaster Management and the Ministry of Planning and Development.

The **Ministry for the Coordination of Environmental Affairs (MICOA)**, is mandated to coordinate environment and climate change related interventions, and in so doing, to develop related strategies, regulation and interventions. The following strategies address environmental protection directly and climate change mitigation and adaptation indirectly:

- National Environmental Policy (1995),
- Environmental Law (1997),
- Action Plan to Reduce Desertification (2003-2006),
- Strategy for Biodiversity Conservation (2003-2013),
- Environmental Plan and Strategy (2005-2015),
- Environmental Strategy for Sustainable Development (2007-2017).

The **National Institute for Disaster Management (INGC)** was created in 1999 to coordinate interventions on Disaster Risk Reduction, replacing the Department for Natural Disaster Prevention and Mitigation established in 1980. The institute is part of the Ministry for State Administration. It receives recommendations and advice from the Disaster Management Coordinating Council, which is composed of ministers whose areas are disaster-sensitive such as agriculture, defence, health, education, environment, industry and trade. There is also a Technical Council for Disaster Management, which provides technical advice to individual ministries and to the coordinating council on issues regarding disaster risk reduction.

The Institute plays a crucial role in disaster management and was the first national institution to set up a framework to improve climate risk management. In 1999, the Government approved the National Policy for Disaster Reduction, which outlined interventions on disaster risk reduction and the institutional setup for disaster risk reduction. It mandates that all interventions related to disaster risk reduction, preparedness, response, recovery, and reconstruction are coordinated by INGC. In order to do this, INGC included all relevant sectors through the Technical Council for Disaster Management, which is a structure similar to Inter-Institutional Group on Climate Change. The main difference between them is that the Inter-Institutional Group focuses on climate change while the Technical Council focuses on disasters. The Technical Council is represented at national, provincial and district level. At community level there are local committees for disaster management. With this set up, it has been possible to mainstream disaster risk reduction into individual institutions and to better coordinate disaster risk reduction interventions across different geographical areas.

The **Ministry of Planning and Development** was created in 2005, with the mandate to lead and coordinate all development planning in Mozambique. Since its creation, it has also addressed climate change issues by creating its own institutional capacity for tackling climate change and by leading or co-leading different projects on climate change. It states that climate change, far from being an environmental issue, is a developmental problem requiring appropriate development planning. The ministry, in partnership with MICOA, will lead the national Pilot Program for Climate

Resilience (PPCR) funded by the World Bank, African Development Bank and IFC (see section 1.4 below).

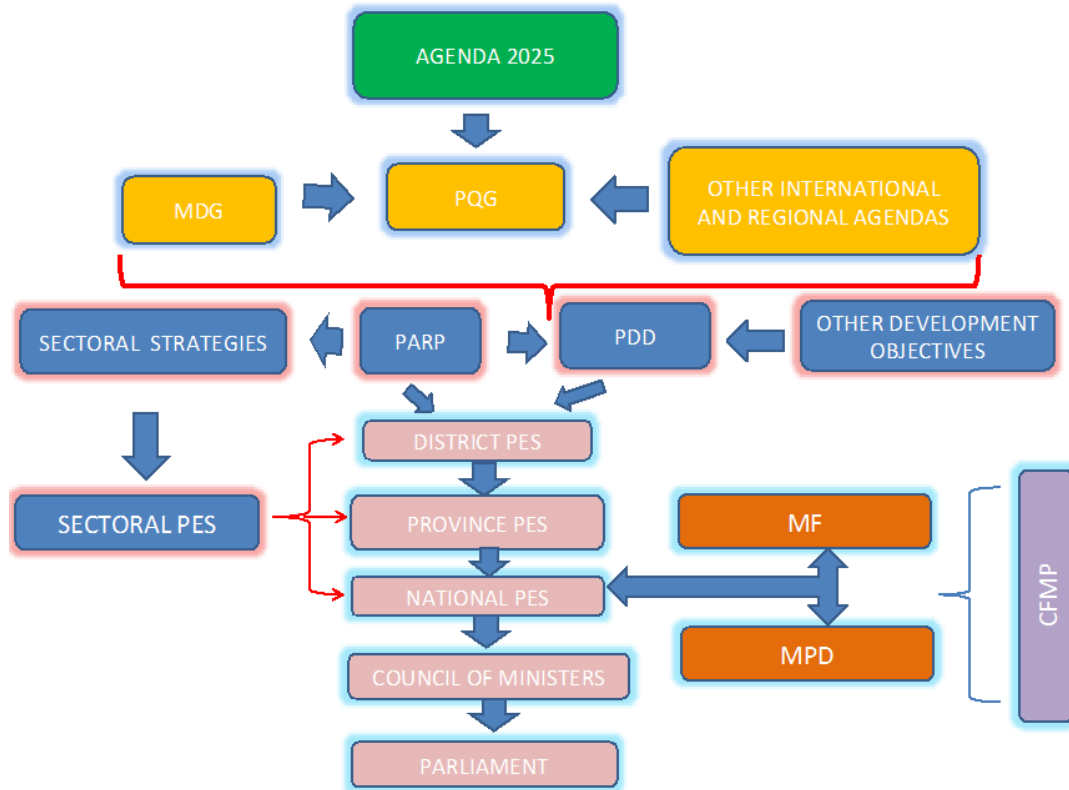
Because the Ministry of Planning and Development coordinates the overall development planning, its awareness and sensitivity to the issues of climate change is crucial for climate change to be part of the normal planning and budgeting. From 2011, it has been very active in recommending that annual sectoral planning should include activities related to climate change adaptation and mitigation. Climate change was included, for the first time, in the 2013 government plan and budget. For more details on this refer to section 3.1.

The **National Strategy on Climate Change** (more details below) proposes the establishment of a Centre of Knowledge on Climate Change, to be hosted at the Ministry of Science and Technology. It is intended that this centre will gather, manage and disseminate scientific knowledge on climate change and feed in to policy and planning processes. The overall coordination of climate change interventions will be done by MICOA and for this endeavor there will be a Climate Change Unit within the ministry, hosted at the National Council for Sustainable Development secretariat. The secretariat, which has ministerial representation and is chaired by the country's Prime Minister, will provide political support and guidance, while its technical council, which has director level representation and is chaired by MICOA vice Minister, will provide technical and political support to the unit.

The **Climate Change Unit** is tasked with the overall coordination of climate change interventions and the support of inter-institutional linkages. The unit will also prepare annual intervention plans related to the National Strategy on Climate Change, and implement and monitor the strategy. It is also tasked to provide technical advice on projects and programs on climate change that are funded through multilateral sources and donors. The unit will get technical support from the Inter-Institutional Group on Climate Change, from the National Council for Sustainable Development and its technical unit and from the Disaster Management council and its technical council.

The management of multilateral funds for climate change will be led by the National Environmental Fund at MICOA, that will then allocate the funding to different implementing institutions. Figure 5 below summarises the approved institutional arrangement for climate change in Mozambique.

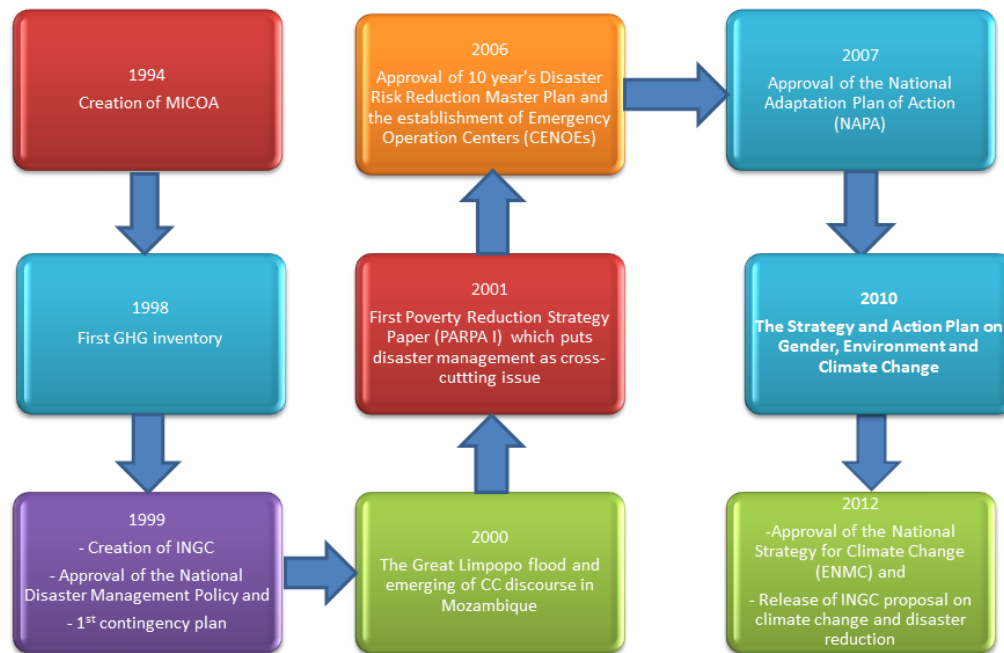
Figure 5: Climate Change Institutional Architecture



1.2.2 Government Policies, Plans and Strategies for Mainstreaming Climate Change

On the government side, INGC started in 1999-2000 to produce annual disaster contingency plans and in 2006 approved a 10-year Master Plan on disaster risk reduction, now being updated. In 2006 and 2007 INGC established three regional Emergency Operation Centres to enhance disaster preparedness and response. It also created a unit for civil protection and rescue operations, a department for drought mitigation, and a cabinet for resettlement and reconstruction.

Strategic planning focusing on climate change has taken place only recently. The turning point was the approval of the 5-year National Adaptation Plan of Action (NAPA) in 2007. Figure 6 charts the major developments regarding climate change and disaster management, and the key strategies are outlined below.

Figure 6: Main Climate Change Related Measures in Mozambique

The **National Adaptation Plan of Action** was approved in December 2007 with the overall objective of strengthening national capacity to cope with the adverse impacts of climate change.² Four major areas for intervention emerged, and were costed at about US\$ 9.2 million: (i) strengthening the early warning system, (ii) strengthening the capacity of producers to cope with climate change, (iii) reduction of climate change impacts in coastal zones, and (iv) management of water resources under climate change. Despite approval in 2007, there has been very limited implementation of the Adaptation Plan priorities. Only in 2012 did MICOA secure the first NAPA funding for interventions on coastal zones, and activities are due to start in 2013³.

The **Strategy and Action Plan on Gender, Environment and Climate Change** was approved in 2010 to promote gender equity and improve the participation of women and poor communities in climate change mitigation and adaptation interventions, and in environment management. This is a government effort to mainstream gender in climate change and it puts forward MICOA's role in fostering gender equity on climate change and environment.

Under the **National strategy on climate change and disaster reduction (ENARC)**, INGC implemented a number of scientific studies on climate change and its impacts. Phase II of the "Climate Change in Mozambique" project identified adaptation interventions that are, to a large extent, aligned with

² NAPA eight objectives to be attained over a period of 5 years: Strengthen the early warning system in the country; Strengthen farmers' ability to deal with the adverse impacts of climate change; Improve knowledge and strengthen the management of water resources; Actions to limit erosion and develop sustainable fisheries; Promote actions that will contribute to the mitigation of GHG; Public awareness and education on climate change; Improve inter-institutional coordination, M&E on climate change, and; Promote the integration of climate change into decentralised district planning.

³ Despite limited direct funding to NAPA at MICOA, many outside MICOA claimed that their CCA interventions are aligned with NAPA approved areas and they use NAPA to sustain their proposals.

interventions proposed in the NAPA. It outlined 9 themes, of which ENARC is one⁴. Released in June 2012, and budgeted at about US\$ 10 million for 5 years, the strategy addresses interventions in 5 areas: (i) preparing and enabling people and community for climate change, (ii) building capacity and inter-institutional coordination, (iii) planning and budgeting for climate change adaptation, (iv) communication and information sharing, and (v) empowering private sector for climate change. As this strategy highlights, the national planning and budgeting processes still need to be reframed to include climate change adaptation and mitigation.

The **National Strategy for Climate Change** was approved by the Government in November 2012, and aims to reduce vulnerability to climate change, and improve the living conditions of the Mozambican people by implementing climate change adaptation and disaster risk reduction measures. It also focuses on mitigation by targeting low carbon development. The strategy has been developed around 3 themes: (i) Adaptation and climate risk management, (ii) mitigation and low carbon development, (iii) cross-cutting issues that include institutional and legal reform for climate change, research on climate change, and training and technology transfer. For theme (i), Adaptation and Climate Risk Management, the strategy proposes 13 interventions, most of them aligned with the NAPA, the adaptation recommendations in the INGC phase II studies, the ENARC intervention areas, and with the Pilot Program for Climate Resilience⁵.

The Strategy is to be implemented in three phases over the short, medium and long term. For the short term the strategy budgets US\$ 142 million to start piloting adaptation interventions and low carbon development, as well as to create national capacity on climate change. The funding should be used to create the Climate Change Unit and a Center for Climate Change Knowledge Management. The government proposes as well to use the first phase to develop indicators and design the M&E system, which will be refined during phase two and be fully functional during phase 3 (2020-2025). Initial activities addressing climate change have already been proposed in the government budgeted for the year 2013. See Fig 7 below for a summary of the different interventions outlined in the NAPA, Phase II of INGC studies, National Strategy for Climate Change and PPCR.

Figure 7: Comparison of Interventions

NAPA	PHASE II INGC STUDIES	ENMC	PPCR
1. Strengthen the early warning system	1. Strengthen the early warning system	1. Strengthen the early warning system and preparedness and response capacity	
2. Improve farmers' ability to deal with the adverse impacts of climate change;	2. Focus on food security	3. Increase agriculture and livestock resilience 4. Increase food security capacity	1. Resilient Agriculture: Diversification of seeds, cropping and water management techniques. 2. Sustainable Land and Water management
3. Augment knowledge and strengthen the management of water resources	3. More efficient water usage	5. Improve water resource management capacity 6. Increase water harvesting, storage and distribution capacity	3. Natural resources: Community-based approaches to watershed management. 4. Hydrometeorology: Developing a hydro-meteorological system to reduce climate risk.

⁴ The outlined themes from INGC phase II are: Strengthen the early warning system; Coastal areas protection; Cities and climate change; Private sector and climate change adaptation; Water – doing more with less; Food security; Preparing people for climate change; Climate change and extremes- focus on oceans, and; the National strategy on climate change and disaster reduction (ENARC).

⁵ PPCR is discussed further in the section 1.4.

4. Actions to limit erosion and develop sustainable fisheries.	4. Coastal areas protection 5. Climate change and extremes - focus on oceans	7. Increase resilience on fisheries 8. Ensure adequate development of tourist and coastal area to reduce climate change impacts	5. Transport: Design and management of unpaved roads.
5. Promote actions that will contribute to the mitigation of GHG	6. Cities and climate change 7. Private sector and climate change adaptation	9. Ensure biodiversity protection 10. Tree planting and development of forest areas 11. Ensure resilience in urban and other populated areas	6. Private sector: Credit lines to encourage private investment in forest management, sustainable timber harvesting and / or tourism 7. Urban: Cities and climate change: Upgrading infrastructure in coastal cities to cope with more extreme weather events.
6. Public awareness and education on climate change	8. Preparing people for climate change	12. Increase adaptive capacity of the vulnerable people	
7. Improve inter-institutional coordination, M&E on climate change	9. National strategy on climate change and disaster reduction (ENARC).	13. Reduce vulnerability to diseases related to climate change	8. Programme Management and Technical Assistance
8. Promote the integration of climate change into decentralised district planning			

For the **identification and prioritisation of national adaptation objectives and interventions**, the MICOA led an inter-institutional group in the preparation of a draft proposal. This was based on a review of the national legal and institutional frameworks and studies related to climate change. The group is made up of people from key ministries, private sector, NGOs, academia, and civil society organisations based on their background, training and interest to become focal points on climate change. The draft proposal was submitted to public debate, and the feedback incorporated. After approval by the Council of Ministers the strategies were ready to enter into annual planning and budgeting processes. Alongside the government-led planning process for adaptation, there are parallel processes undertaken by community-based organisations, NGOs and donors. Their setting of adaptation objectives and interventions is based on their perceptions of the contexts and institutional mandates and objectives.

1.3 Large-Scale Interventions on Climate Adaptation

There have been several adaptation interventions funded by development partners over the past 5 years in Mozambique. The main programme currently running that is specifically on climate change adaptation is the Pilot Programme for Climate Change. The Africa Adaptation Programme has also been active in Mozambique, and details of these two are given below.

The Pilot Programme for Climate Change (PPCR)

The PPCR is one of three programmes under the Strategic Climate Fund of the Climate Investment Funds. The programme has the overall objective of piloting projects that demonstrate how to

integrate climate risk and resilience into core development planning, while complementing other ongoing development activities. Mozambique's Strategic Program for Climate Resilience (SPCR) prioritises investments to be financed by the PPCR. The funding (about US\$ 102 million) will be used to integrate climate resilience into mainstream development investment - in agriculture, natural resource management (including water), coastal infrastructure development, roads, and private sector investment. In total 8 projects have been approved:

- Project 1: Introducing climate resilience into the design and management of Mozambique's unpaved roads
- Project 2: Coastal cities and climate change
- Project 3: Climate-resilient water-enabled growth, transforming the hydro-meteorological services
- Project 4: Sustainable land and water resources management
- Project 5: Enhancing climate resilience - agricultural production and food security
- Project 6: Developing climate resilience in the agricultural and peri-urban water sectors through provision of credit lines from Mozambican banks
- Project 7: Developing community climate resilience through private sector engagement in forest management, sustainable timber harvesting and / or tourism.
- Project 8: Complementary project: Climate change policy lending - Development Policy Operations / Programme Management and technical assistance

The Africa Adaptation Programme (AAP)

This programme was established under the Japan-UNDP Joint Framework for Building Partnership to Address Climate Change in Africa in 2008. It is being implemented in 20 African countries and focusses on strengthening the five capacities perceived as crucial to designing and implementing a resilient development agenda, namely: data and information management, institutions and leadership, analysis and implementation, knowledge management and innovative finance. By strengthening these capacities AAP seeks to mainstream climate change adaptation mechanisms in Mozambique's policy, development and investment frameworks, to improve inter-ministerial coordination and create an enabling environment for addressing climate change.

Other Interventions

The USAID **Mozambique Integrated Information Network for Decision Making** allocated funds for partners to carry out interventions to strengthen early warning systems, develop inter-institutional coordination, build capacity and produce an atlas for disaster preparedness and response along the Limpopo basin. German support through GTZ and national partners pioneered **Community Based Disaster Management**. This model was later institutionalised by the government and is now being replicated nationwide. The **Netherlands Climate Adaptation Programme** worked on strengthening the national institutional capacity to address climate change and reduce disaster risks, through mainstreaming climate change. It published a number of studies on local impacts of climate change, and allocated resources for the preparation of the national communication and NAPA. The **Environment Mainstreaming and Adaptation to Climate Change** programme had the objective of mainstreaming environment and climate change policies, and enhancing the adaptive capacity of communities in the Limpopo region. It had a component on Environment and Climate Change Mainstreaming and another on Adaptation to Climate Change. The **Livelihood Protection and Promotion Programme** addressed the impact of natural, social and health risks through the

integration of food assistance in four sectors: (i) disaster preparedness and response, (ii) livelihood protection and promotion, (iii) social assistance, and (iv) health and nutrition. The **Strengthening Local Risk Management and Mainstreaming Disaster Risk Reduction in Mozambique** programme contributed to the joint programme for Strengthening Disaster Risk Reduction and Emergency Preparedness. The **Floodplain Management in the Zambezi Valley** project aimed to minimise exposure to risk and enhance resilience of livelihoods to recurrent weather hazards.

2. National M&E Systems for Development in the Economic and Social Sectors

Climate change adaptation is a relatively new field and its M&E is still emerging. Given that adaptation interventions must work within existing M&E frameworks wherever possible, this section outlines the main national M&E processes, before looking in detail at the M&E of climate change interventions in Section 3.

The National Social and Economic Plan is an aggregation of the different interventions to be carried out annually by the 23 ministries. These sectoral social and economic plans are submitted to the Ministry of Planning and Development and to the Ministry of Finance. Since 2011, the planning is supposed to be programme / result based and each ministry is supposed to present about 5 major programmes. Each of these is expected to outline around 5 actions to achieve the programme targets⁶.

2.1 Availability and Quality of Data

Different ministries produce socio-economic performance data. However, it is the survey-based data produced by the National Institute of Statistics that is mainly used to assess socio-economic performance. This data is used by the National Research and Policy Analysis Directorate at the Ministry of Planning and Development to evaluate well-being and poverty reduction in three areas: (i) consumption index, (ii) property ownership and access to public and private services (education, potable water, health care), and (iii) child malnutrition / anthropometric data. The Household Budget Survey has been a major data source for accessing socio-economic performance. Its timing interval of 5-6 years, however, makes regular analysis of socio-economic performance difficult, so scholars and donors such as the World Bank are encouraging more systematic data collection. Hence, the government has approved a yearly survey of key socio-economic indicators related to poverty reduction, to start in 2013.

Development partners such as USAID, DFID, JICA are investing in capacity building for data collection and analysis as an important facet of development and climate change. In 2009 and 2010, existing socio-economic and climatic data was used to offer an analysis of climate change in Mozambique by the INGC and the World Bank. In conjunction with other studies (see Hanlon, 2007), it was concluded that there are significant gaps in data in Mozambique.

2.2 The M&E of Major Government Interventions

The mechanisms for monitoring and evaluating the main development plans in Mozambique follow two major approaches. The first is sectoral monitoring and evaluation of the National Social and Economic Plan (largely top-down), and the second makes use of data collected by different institutions under the coordination of the National Institute of Statistics (largely bottom-up surveys).

⁶ Before 2011 each sector used just to present a list of interventions without much substance regarding objectives, targets, indicators, location etc.

Regarding the sectoral line, each ministry produces trimester, semester and annual reports, with both quantitative and qualitative data. Meetings are held to discuss sector performance and to devise ways to overcome barriers. In the meantime, staff from headquarters or from the provinces are deployed to the local level to monitor and evaluate achievements, identify challenges and to provide recommendations to keep plans on track.

Monitoring and evaluation based on the second approach includes the use of data from different databases hosted at the National Institute of Statistics⁷. Some of these databases (such as the Household Budget Survey, Well-Being Indicators Survey, Labour Force Survey) collect their data on a mid-term base (about 5 years) and have, generally, been used to evaluate the performance of the main development plans. Others such as Agrarian Census and General Populations and Habitation Census are done every 10 years, and generally cover two development plans. Overall, none of the databases cover issues related to climate change and disaster risk reduction, but discussions are underway to include questions related to climate change and disaster reduction in the coming surveys and census.

The progress-based monitoring (the first approach) is used for institutional / sectoral planning and decision-making. The government also takes sectoral information to compile a national progress-based monitoring report, which is presented to parliament as part of the government evaluation of the achievements of annual plans. This information is sent to the Ministry of Planning and Development, which plays a strategic role in national M&E. This system is set up to monitor national progress rather than have an evaluative function.

The sectoral planning systems for the climate vulnerable sectors of Health and Agriculture are outlined as case studies below, to highlight strengths and challenges in the sectoral M&E systems.

Case 1: Ministry of Health

The Ministry of Health is mandated to oversee the national health system in the public, private and community realms. Implementation of interventions is guided by the five-year development plan, the Poverty Reduction Strategy Paper and the 2007-2012 sectoral strategy. Additionally, there are a number of disease specific plans such as those for tuberculosis, HIV/AIDS, and Malaria. Each has specific targets and indicators. For example, the tuberculosis plan has 16 indicators and the Malaria strategy 25 indicators. Based on the different plans and indicators, the ministry has set 38 key sectoral performance indicators to be reached by the end of 2014, in line with the Poverty Reduction Strategy Paper, all of which are either process / output or outcome indicators.

Data for monitoring and evaluating performance is collected by the Department of Information for Health, Monitoring and Evaluation, hosted at the National Directorate of Planning and Cooperation. There are quarterly, semester and annual reports. Collation of health information begins at the service or facility level with patient paper-based files, which are aggregated into a health unit or

⁷ These include the (i) Household Budget Survey- *Inquerito ao Orçamento Familiar (IOF)*; (ii) Health Demographic Survey- *Inquerito Demografico de Saude (IDS)*; (iii) Labour Force Survey- *Inquerito da Forca de trabalho (IFTRAB)*; (iv) Agrarian Census- *Censo Agro-Pecuario (CAP)*; (v) Multiple Indicators Survey- *Inquerito de Indicadores Multiplos (MICS)*; (vi) HIV and AIDS Survey- *INSIDA*; (vii) Agrarian Survey- *Trabalho de Inquerito Agricola (TIA)*; (viii) Well-Being Indicators Survey- *Questionario de Indicadores de Bem-Estar (QUIBB)* and (ix) General Populations and Habitation Census- *Censo Geral de População e Habitacao (CGPH)*.

hospital dataset. These reports are then entered into a computer database at the district level, and electronic aggregated reports are transmitted to the province level, and then onwards to the central level.

A specific monitoring system was set for the surveillance of the 10 priority diseases. Reporting is undertaken on a weekly basis, and data on these diseases is analysed on a weekly basis through the Weekly Epidemiological Bulletin.

A specific Data Quality Assessment Protocol has been developed by the Department of Information for Health, Monitoring and Evaluation in order to conduct a multi-record assessment of reliability in recording and reporting at the facility level; compare consistency of source data with reported data; and compare the consistency of data as it flows from facility to district to province and to national levels. Soumbey-Alley et al (2010, p.8) noted in 2010 that 14 facilities were visited, and reporting of deliveries had a perfect score, but several inconsistencies were found regarding HIV/AIDS therapies. It was ultimately concluded that overall there is no system of assessing data quality and making adjustments for clinical and administrative data. Furthermore, there was no reporting on completeness and accuracy from facility or districts to national levels.

Besides the Ministry's M&E system, the National Institute of Statistics is a key actor in providing health data and analysis. The data they provide includes: Demographic and Health Surveys, General Population and Habitation Census, Malaria Indicator Survey and the AIDS Indicator Survey.

A literature review (see World Bank 2004; WHO 2007; O'Laughlin 2010; Soumbey-Alley et al 2010; Action For Global Health 2011) supports claims by interviewees that a major challenge faced in the sector is a lack of clear guidance and standards in data collection and reporting.

Case 2: Ministry of Agriculture

Since 2005, the focus of the Ministry of Agriculture has been on designing, implementing and monitoring policies and strategies toward achieving food security and establishing agriculture as the basis for country's long-term development. Annual planning follows targets set in the five-year development plan, the Poverty Reduction Strategy Paper and the sectoral strategy for 2011-2020.

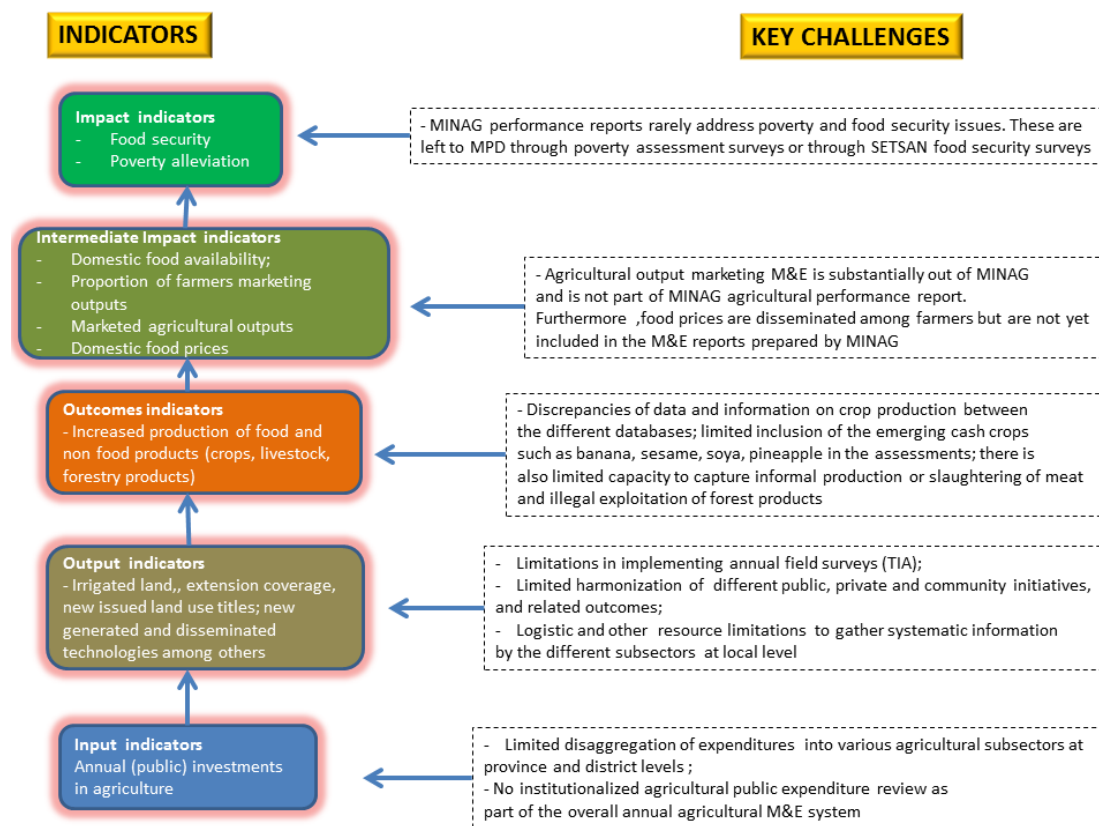
The M&E of interventions is dependent on data provided by internal ministerial branches as well as external bodies such as the National Institute of Statistics. Information is disseminated to the National Directorate of Agrarian Economics, which has oversight of the entire data management system. M&E data is collected primarily at the local level by the District Services for Economic Activities. Information is collected at the district level, and sent to the provincial and national level in a similar system as described for the Ministry of Health above. At the province level, Provincial Directorates of subsectors such as agriculture, veterinary, forestry and extension each collect specific information.

Data collected by the different units at the Ministry of Agriculture feeds the three subsystems of i) public service provision, ii) industrial and export crops, and iii) food security and early warning. It is collected by field staff based at district, province and national level. Quarterly, semester and annual

achievement reports are produced at different levels and harmonised centrally at the National Directorate of Agrarian Economics. The ministry and the National Institute of Statistics undertake annual field surveys to assess agricultural production and collect socio-economic data. The M&E system is constrained at different levels by insufficient resources and overburdened staff at the local level leading to reduced quality of data collection and / or recording. It is also affected by political pressure to show results, limited information management systems, heavy hierarchical lines, bureaucracy and staff de-motivation.

Gemo et al (2012) looked at the major indicators used by the ministry's M&E system and found the limitations shown in Figure 9 below.

Figure 9: Major Indicators Used by Ministry of Agriculture's M&E System⁸



2.3 Appropriate M&E Methodologies in Use Across Government

Government institutions generally have departments for planning and M&E⁹ to help prepare the annual National Social and Economic Plan, to oversee its implementation throughout the year, and to produce the reports. Every ministry holds a mid-term evaluation and annual evaluation of implementation of the plan. Departments of Planning and M&E produce sectoral performance reports, which are submitted to the Ministry of Planning and Development, which aggregates and produces an overall national report.

⁸ Adapted from Gemo et al. (2012 p. 27)

⁹ The exact name of the department varies across ministries but the functions are, generally the same

For the mid-term national development, Mozambique's Poverty Reduction Strategy Paper (PARP 2011-2014) contains a section on monitoring and evaluation. The instruments and mechanisms to be used for monitoring and evaluation in the National Planning System include:

- (i) Annual monitoring of activities and targets associated with the output indicators, through the Balance Sheet of the Economic and Social Plan and the Budget Execution Report.
- (ii) The monitoring and evaluation mechanisms will be participatory, involving government, civil society and international cooperation partners, and using among other forums the Development Observatories, the annual review process, and the planning meeting process based on the strategic matrix.

The Monitoring and Evaluation Strategy of the Poverty Reduction Strategy Paper (PARP 2011-2014) contains five fundamental principles:

1. Alignment with the existing mechanisms for monitoring government programs.
2. Differentiation between, on the one hand, outcome indicators, which assess the scope of specific objectives and, on the other hand, output indicators, which measure the degree of fulfillment of activities performed.
3. A combination of quantitative and qualitative monitoring, with the resulting implications as to procedures for collecting information and institutional partnerships to this effect.
4. The dynamic approach of the PARP, using the PARP monitoring process as a mechanism for ongoing review of targets and programs, maintaining key strategic objectives.
5. The participatory approach of the monitoring and evaluation process, particularly as it relates to the use of institutionalised forums for participation at the central, provincial and district levels in order to ensure involvement of other development stakeholders.

The impact evaluation of the PARP 2011-14, reflecting the performance of sector programs, will be conducted in 2015, through the Fourth National Poverty Assessment. This will be a quantitative evaluation of the poverty situation in Mozambique and associated trends. As the Household Budget Survey does not assess all areas of PARP activity (in particular, the governance area), other surveys and studies will be rolled into the PARP evaluation, namely the Demographic Health Survey, Labor Force Survey, Core Welfare Indicators Questionnaire, Agricultural Survey Project, Multiple Indicator Cluster Survey, the Assessments of Public-Sector Reform, and other social and anthropological studies.

The successful monitoring and evaluation of the PARP 2011-2014 will depend on the sound functioning of the Statistical Information System headed by the lead body of the National Statistics System, as well as the sharing of information among the principal development stakeholders. Thus, monitoring and evaluation activities will be conducted by the Ministry of Planning and Development, in coordination with the National Statistics Institute (IMF, 2011).

Besides the M&E of PARP, donors and government have set up a Performance Assessment Framework whereby donors and government meet annually to assess the achievement of the agreed indicators in different sectors.

3. M&E of Climate Change Adaptation Interventions

The national M&E Framework on Climate Change will be developed incrementally, over time, through a learning process. The intention is that it will be place by the end of 2014, with the first national M&E reporting to the Council of Ministers in 2015, with full implementation only by approximately 2020.

3.1 Relevant Institutions, Frameworks and Practices within Government

Climate change adaptation interventions are relatively new in Mozambique and mainstreaming climate change is an ongoing process. Nearly all large-scale interventions on climate change attempt to mainstream climate change into development planning and to improve climate risk management.

3.1.1 M&E of Climate-Related Measures in the Main Government Programme

There is currently no national M&E system for climate related measures, but the National Strategy for Climate Change recommends the development of an M&E system on climate change, over the period 2013-14. Project level M&E does exist, and the many climate adaptation projects across different government and non-government agencies use a variety of M&E systems. These will be outlined below.

Disaster risk reduction, environment and now climate change are described by the government as cross-cutting issues to be addressed by all governmental institutions. This means that climate change adaptation needs to be included at sectoral strategy level as well as in sectoral annual planning and budgeting. Many government institutions are now updating or reframing their strategies to include climate change. The new National Strategy for Climate Change has included in its annual budget proposal for 2013 a project line on climate change. However, inclusion will not necessarily, per se, lead to an institutional approach to M&E for climate change adaptation. With the integration of climate change into development planning, each institution will have an M&E system for annually planned activities, and this will include climate change related activities. This will require each Planning and M&E department across levels to look at climate change adaptation-related indicators (yet to be defined). Within this approach, climate change M&E will be subject to many of the challenges inherent in the existing system outlined in Section 2.

The government is working on the 20 year National Development Strategy 2013-2035, which sets development targets.¹⁰ These are the macro indicators that adaptation interventions should aim at contributing to, if development is to be resilient by 2035. To reach these national targets, each sector designs its own sectoral strategy and sets its own targets. Hence, there are various sets of indicators from different sectoral strategies, which make it very difficult to come up with a common set of indicators. The setting of adaptation targets is limited by a sector's lack of information on climate change impacts. Sectors that do have climate change targets and indicators, have limitations in practice on how to embed them in their strategies and everyday operations.

¹⁰ Such as attaining an annual GDP growth between 8-11%, and to increase GDP per capita from the current US\$500 to US\$ 5,000 by 2035. Further, by 2035, the government target is that no people will be living under the poverty line. Other targets includes decreases in the current inflation rate (10.4% in 2011) to about 5.2%; agricultural contribution to the GDP to decrease from 24% in 2011 to 18% and industry contribution to rise from 13% in 2011 to 22%.

Furthermore, shifts to new standards require technological and institutional innovations from a wide range of actors, who need to be familiarised with climate change issues.

The national M&E system for climate change, which is still to be developed, may provide some institutional guidelines on how to measure, monitor and evaluate sectoral climate change interventions in the future.

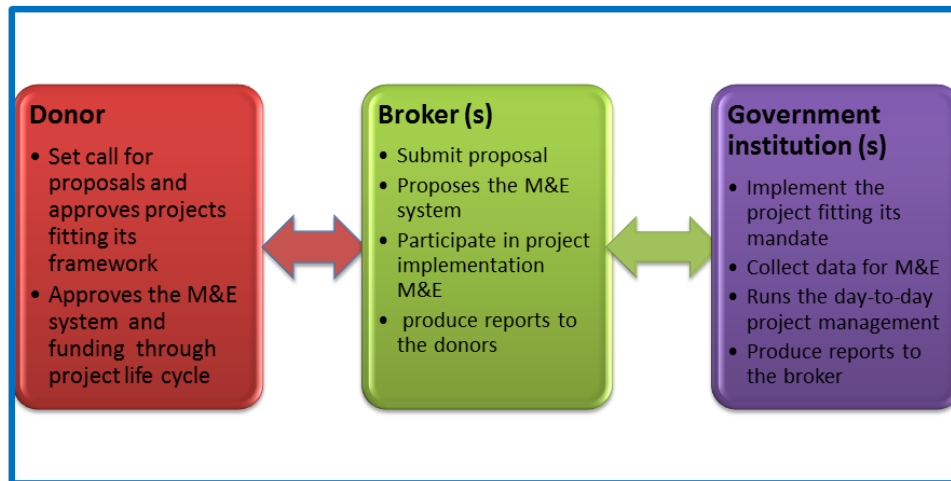
3.1.2 M&E of Climate Change Adaptation Projects

Climate change adaptation interventions also take place through projects supported by development partners. As there is currently no single governmental entity responsible for adaptation projects, some sit with the Environment Ministry (MICOA), others with the Agriculture Ministry, and still others with the National Institute for Disaster Management.

Currently each project sets its own M&E system. Once the project is approved and budget released, it is common practice to set up a project management team, which runs the internal M&E. Usually, funding runs from the donor to the organisation that secured the funding (the Broker) and then to the governmental implementing partner(s). Reporting starts from the governmental implementing partner(s), goes through the project management team that collects information and prepares a financial and working report, to the broker agency, and then to the donor.

Each government implementing institution might have more than one adaptation project and for each it has different bank accounts and management teams. For example, MICOA is coordinating a project on coastal area resilience (brokered by UNDP) which has an environmental component implemented by itself, an agricultural component implemented by the Ministry of Agriculture, a disaster risk reduction component implemented by the National Institute for Disaster Management, and an early warning component implemented by the National Institute of Meteorology. In this case, each participating government institution must have a focal point for the project to look after project implementation at its own institution. Figure 8 below summarises current practices on climate change adaptation interventions:

Figure 8: Current Practices for Climate Change Adaptation Interventions



The **Strategic Programme on Climate Resilience** is one of the main adaptation interventions in Mozambique. It was developed by the government, though the Ministry of Planning and Development and the Environment Ministry, in collaboration with a number of donors. The Government representatives interviewed during this appraisal overwhelmingly described the initial process as externally led, with donor agencies identifying the opportunities, setting the timetable and leading the activities. After the Government formally accepted the invitation to participate in the PPCR in 2009, both the initial scoping mission and the full joint mission were planned, designed and led by the World Bank and the African Development Bank. The latter mission, in which the multilateral development banks were supported by the UK Department for International Development and the UN Development Programme, effectively determined the content of Mozambique's PPCR programme, (see also Chambote & Shankland, 2011).

The **Climate Change Technical Assistance Project of the SPCR** is specifically designed to support the design and operation of the programme's M&E framework over the next three years, and to support the design of the national M&E system that is expected to ensure adequate monitoring and evaluation of the National Climate Change Strategy. The M&E system is intended to involve three levels:

- **Level 1: M&E of climate activities or input indicators.** This relates to project level M&E systems, which will report on detailed activities, such as the SPCR pilot investment projects. Input indicators will measure the number (or monetary amount) of interventions in climate-affected sectors. They will be of two types: (i) inputs whose primary objective is a development need other than climate change resilience but which will nevertheless increase resilience and (ii) inputs whose primary objective is climate change resilience.

- **Level 2: M&E of climate change outcomes.** This relates to measuring programme and strategy delivery as set out in the Results Frameworks. For instance the SPCR and the national M&E system for climate change will operate at this level.
- **Level 3: M&E of development outcome indicators.** This concerns measuring the achievement of development goals through impact assessments. This requires determining how to attribute climate change activities and outcomes to the achievement of national development objectives that have been set out, for example, in Mozambique's poverty reduction strategy.

There is uncertainty over the data. The SPCR is still developing the M&E system. Being project-based, each project has developed key indicators, and information will be collected accordingly. The initial frameworks in the SPCR document suggest that much of this data will come from government sources.

3.2 Climate Change Data Collection and Use

In Mozambique weather and climate data is gathered by the National Institute of Meteorology, which, despite improvements, still faces key constraints in terms of nationwide coverage, systematic data collection, and staffing.

In addition, the following sources provide relevant data for climate change analyses and adaptation: the National Center for Cartography and Remote Sensing, the National Institute of Hydrography and Navigation, the National Institute of Geology, the National Institute of Statistics, the Mozambican Agrarian Research Institute, and the National Institute for Disaster Management. The latter has, for example, mapped national vulnerability to droughts, floods, cyclones and earthquakes, and it holds data on deaths, people displaced and asset losses. The Ministry for Coordination of Environment Affairs holds considerable environmental assessment data and, together with the National Institute for Disaster Management, has carried out studies on climate change.

The National Institute for Disaster Management and the World Bank have used these data sources to develop studies on climate change in Mozambique that have become major references for climate change indicators, baselines and targets for Mozambique. Despite their relevance, these studies provided national and regional information only. To fill the need for local information on climate change, many projects start by carrying out Climate Vulnerability and Capacity Assessments to serve as the baseline for their interventions. However, there is currently no central repository for information from the different projects. UNDP had a GRIP project (ended 2011) which attempted to produce a database on different projects and interventions but this has been underutilised. The National Institute for Disaster Management has carried out some nationwide vulnerability mapping, indicating major flood, cyclone, drought and earthquake-prone areas, which is used in the government planning. But this tool appears to be large scale, without providing micro-level details.

A review of some of the most recent projects on climate change adaptation reveals that the information provided by the studies on climate change is used either to justify the relevance of the projects to climate change or to choose specific geographical and thematic intervention areas. The planning and M&E of specific projects tends to follow the project rationale, so indicators are often

not directly related to adaptation *per se* but rather to sectoral activities which are expected to contribute to climate change adaptation.

3.3 Capacity for Climate Change Adaptation M&E within Government

Climate change adaptation interventions are increasing in Mozambique and the overall national capacity to address climate change is being strengthened through different interventions. Many institutions across the government are directly involved in climate change interventions and many others have climate change focal points. However, as highlighted above, no governmental institution has so far designed and implemented an M&E system on climate change adaptation. Institutions have accumulated knowledge and skills for the M&E of development activities, but capacity for adaptation M&E is still required. During the interviews, technical staff tasked with M&E across the government stressed their need for knowledge on climate change M&E. They emphasised that adaptation M&E will only be feasible if it is embedded into the existing M&E systems and receives commitment from the higher levels.

Many interviewees mentioned the limited institutional capacity to design robust climate change related projects. For instance, despite the existence of different funding opportunities, Mozambique was able to secure only one project for NAPA to start in 2013, and that project was designed by external consultants. Further details on capacity are given in the challenges section 5.2.

3.4 Development Partner M&E Framework Coordination and Alignment

Mozambique has a donor working group on environment and climate change, which aims to harmonise support to the Government on environmental issues in general, including the activities within donor climate change portfolios. The group is coordinated by UNDP and includes Agence Française de Développement (AFD), DANIDA, DFID, World Bank and African Development Bank. The group meets regularly and has acted as a key coordination forum at various times, notably during the international lobbying effort to ensure Mozambique's inclusion in the PPCR.

On the other hand, the majority of donors comprising the working group are also part of the Programme Aid Partners that fund overall national development in Mozambique. Donors that belong to this subscribe to the Performance Assessment Framework, which is agreed between donors and the government. The framework sets key indicators and an agreed M&E system for donor-funded and government-implemented development interventions. The Programme Aid Partners hold meetings annually to assess M&E interventions. This offers a regular opportunity for harmonisation and coordination of the various programmes. However, the task of coordinating M&E efforts between government agencies appears to have becoming more challenging with the arrival of major new climate change-related funding, including the PPCR. Institutional rivalry is exacerbated when different actors seek to position themselves to access climate funds.

4. Components of a National Evaluative Framework for Climate Adaptation

4.1 Current Use of Data for M&E of Economic and Social Development

Data collected by the sectors themselves is seen by some as unreliable and politically motivated, and hence potentially of low quality. Therefore, increasingly, national and international institutions prefer to use data and information produced by the National Institute of Statistics. Contradictory accounts of performance have been found in reports by the Institute for Social and Economic Studies, the Centre for Public Integrity, and by the Administrative Tribunal responsible for auditing the National Social and Economic Plan.

There have been sectoral attempts to strengthen the M&E systems by introducing computer- and internet- based information systems. For example, the Ministry of Finance uses SISTAFE, the Customs Services use Janela Unica, and the Ministry of Health used M-OASIS. Cross-checking of data and information via field visits and alternative sources also take place, but limited funding and other resources may still hinder this process.

Institutional capacity for data analysis to feed policy debate and formulation is limited. Data is often analysed by academics and consultants who may be unable to effectively communicate with the relevant policy makers. Interviewees stressed the limited use of research outputs in policy formulation and planning, M&E and decision-making. This has led to calls for the establishment of policy analysis centres / units to help government in formulating and implementing sound policies and in backstopping governance systems. One example is that of the Centre for Agrarian Policies Analysis approved by the Eduardo Mondlane University in November last year.

The Performance Assessment Framework provides the best example of data being used for M&E of economic and social development. Under the framework, the government and donor agencies set socio-economic targets across different sectors to be reached within 3 to 4 years. This is based on the Poverty Reduction Strategy Paper, the 5-Year Plan, the MDGs and other macro strategies. The first framework (2004-2006) had 49 performance indicators; however, none addressed climate change. The current framework (2011-2014), comprising 35 performance indicators, has one related to climate change. Indicator 6 establishes the implementation of 24 projects on adaptation to climate change in 2012, 36 in 2013 and 40 in 2014. Each year government and donors assess the extent to which the annual agreed targets were reached and discuss routes forward. The government then integrates these conclusions into the respective sectors.

In addition to the Performance Assessment Framework, each government sector will hold a national meeting at least twice a year at which performance indicators will be selected and future plans will be established. Major sectoral indicators and macro-indicators include GDP, Poverty Index, food prices, school enrolment, HIV index, import-export balance, water and sanitation, deforestation, life expectancy, malnutrition, good governance and corruption index. These are, whenever possible, cross-checked and used by different planning institutions such as the Ministry of Planning and Development, UN agencies, World Bank, and NGOs to advocate a more focused approach in the planning process.

5. Good Practice and Challenges

5.1 M&E Good Practice

Government commitment. The government shows commitment to addressing climate change. It has identified it as a cross-cutting issue, established focal points for climate change in nearly every ministry, developed policy frameworks such as NAPA and National Strategy for Climate Change, and attempted to include climate aspects in development planning and budgeting. There is strong political leadership and government interest in adaptation M&E. A national M&E system for Climate change will be put in place, which uses a results-based approach and links all relevant existing and proposed M&E across different sectors and strategies.

The National Strategy for Climate Change was released in November 2012 and includes a road map to address climate change. It also sets 2014 as the deadline for a national M&E system for climate change. There is PPCR financial support to create an M&E system for both the PPCR and the National Strategy on Climate Change

Mainstreaming Climate change. Climate change and adaptation are increasingly being included into government institutions, and many are reframing their strategies and action plans to include climate change. Sector strategies are now addressing climate change; for example, the strategy released by the Ministry of Agriculture in 2010 attempts to deal with the issue of increased climate variability and change.

Capacity. Human and scientific resources for M&E are increasingly available despite capacity constraints. The training on M&E for existing adaptation projects has left some basis for setting up M&E systems for adaptation. Scientific evidence has been gathered on climate change and adaptation measures promoted. Attention has been focussed on climate change with the publication of recent studies, which have allowed some sectors to set targets and indicators for M&E.

Donor support. Mozambique has received considerable support from donors to address climate change and disaster risks. Current practices and information suggest that this donor commitment will continue to exist under the National Strategy for Climate Change. There is a donor working group on environment and climate change which is following the harmonisation principle under the Paris Declaration on Aid Effectiveness by attempting to coordinate efforts and to share information. It helps avoid diverse recommendations to the government, and more efficiently track donor interventions. The donor / government Performance Assessment Framework helps donors and government jointly discuss achievements and challenges, and plan ways forward.

Decentralisation process. Adaptive capacity is being augmented at the local level indirectly by the decentralisation process which is allowing districts to set priorities, define their own development strategy, and receive state funding to implement interventions. Structures such as the District Consultative Council, consisting of representatives from different communities, encourage local participation in the decision making process.

Performance Assessment Framework. This has allowed the tracking of performance against indicators set by the government and donors, and allows donor funding to be channeled to the most

pressing sectors set by the framework. Moreover, as it is a joint framework of the donor community in Mozambique, it eases the government burden of satisfying each individual donor's indicator requirements.

5.2 M&E Challenges

Along with the findings of the appraisal team, areas of management capacity shortfall for the effective implementation of M&E in Mozambique laid out in a report for the PPCR¹¹ are included here:

Data. There are many national issues around data quality and management. There is often disparity between data from different sources, and limited sharing of data, methodologies, research outputs and lessons learnt. There is a general lack of a clear guidance on standards in data collection and reporting, which can lead to a lack of completeness and accuracy. There are weak systems for data validation in some ministries. Interviewees also commented that data at times becomes politicised. The national climate change M&E framework needs to function at the global, national, provincial and community level and it is a big challenge to link field data up to the global level. Mechanisms will need to be developed to engage local Government and organise reporting requirements at the community level.

Lack of M&E system on climate change adaptation. There is no institutional M&E on climate change adaptation; there are only project-based systems of M&E in institutions implementing sectoral adaptation interventions. Different strategies from different sectors provide different indicators and use different data sources. The challenge is to find a set of common indicators for different sectors that allows collective ownership and avoids inter-institutional clashes.

Coordination. Interviewees highlighted the limited harmonisation of different sectoral plans and of different levels of M&E. For example there is a lack of coordination between major production areas (Agriculture Ministry) and priority road networks (Ministry for Infrastructure) or between expansion of agricultural areas (Agriculture Ministry) and of environment conservation (Environment Ministry). Whilst the relevant institutional roles and responsibilities have been clearly delineated in the new National Strategy on Climate Change, these are yet to change in practice, and the Ministry for Coordination of Environment Affairs is yet to establish a unit to oversee the coordination of climate change interventions.

Capacity. Mozambique still has limited human capacity to develop, implement, monitor and evaluate climate change interventions. Different ministries, departments and agencies have different capacities for M&E and consequently will require different levels of support. Programmes are still often designed by broker institutions, and the implementing government line ministries are reliant on the brokers to assist them in M&E activities. There are limited human resources to set up the M&E system for climate change, and that will effect implementation of the new National Strategy for Climate Change. Although government institutions have dedicated M&E departments, financial and human resource constraints may hinder operational performance. For instance, there is a relatively high turnover of staff within government institutions. This is especially so of qualified

¹¹PPCR: The Strategic Program for Climate Resilience in Mozambique – towards measurable transformational change.

staff that tend to join NGOs and emerging private mega-projects offering better salaries and working conditions. This means that investments made in training are often lost. Within projects, temporary contract staff often manage the M&E and leave once projects are over. Hence, capacity building within the government cannot be assumed.

Indicators and baselines. Setting indicators and baselines is a critical challenge. The lack of data (e.g. in meteorological and hydrological data) makes it difficult to do so. Where indicators already exist, for instance from the Environmental Statistics Compendium, the challenge is to select indicators that reflect the needs of various sectors and objectives simultaneously, thereby allowing the linking of interventions to results and outcomes across sectors. A key challenge will be to set indicators that are of equal interest for all sectors, and to promote collective ownership of them. Ensuring all parties understand the indicators being used and the M&E processes will be an ongoing challenge requiring strong dissemination and training components to the new M&E framework.

Targets. M&E targets are seen to be very ambitious and unachievable. For example, the government attempted to remove all people from the lowland-flood prone areas and had high hopes for MDGs performance that could not be met.

Indicators and Attribution. Various projects that have been labelled climate change are currently underway or have been completed. However these projects are largely using M&E systems that focus on indicators related to climate variability. Because they have been focused on normal development activities it is difficult to know whether they have enhanced capacities to cope with increased climate variability and change.

Commitment to climate change. A functional M&E system needs commitment from the different institutions and actors who operate across different levels and perceive climate change and projects in different ways. Despite the political will for climate change, the actual implementation of climate change related projects is beset by different interpretations and interests across different institutions and geographical areas. This has implications on how actors prioritise the planning and budgeting of climate change interventions. Whilst it would appear that disaster preparedness has been integrated into national planning, climate change has not been mainstreamed to the same extent. Although the importance of disaster prevention and risk management are recognised, there is relatively more public attention on emergency responses. This means that more political clout - and indeed larger budgets - is derived from responding to emergencies rather than prevention.

Political priority. There is often little evidence of M&E being prioritised in practice. M&E is often defined under extreme time pressure; a long time may be spent on planning and budgeting, but very little on the M&E system. There is also very limited use of research or M&E lessons in planning and decision-making, and there is still limited attention given to cross-cutting issues in the planning process of the line ministries. In addition, there is a certain level of reluctance to embrace M&E systems. This is because it is often viewed as a part of an exercise that can lead to criticism and possible penalties, rather than an aid to reflection and performance improvement. The mistrust around the purpose of M&E can lead to a lack of willingness to engage in the system or prioritise it for funding. Whilst government has adopted a results-based framework for annual planning that supports M&E, the system is still in its infancy, and may not yet be fully understood at different levels of governance.

Overburden of climate change focal points. In some institutions the same focal point is mandated for all the cross-cutting issues of environment, gender, disaster risk reduction, climate change, food security, and rural development, which is a hefty and difficult task. This leads to reduced effectiveness in convincing staff of the importance and relevance of the issues. This in turn reduces the likelihood that cross-cutting themes will be afforded sufficient priority during strategic planning processes. This problem is a result of structural understaffing and under-budgeting, which inhibits performance.

Decision-making power. A process of decentralisation is underway. However, district administrations do not have control over any decisions related to the budgets that they receive. District level training on climate change carried out by GIZ, for example, have resulted in climate change adaptation and disaster risk management being included in local plans. However, decisions taken at the provincial level have often cut such activities from the budget. The process of planning interventions for adapting to climate change is beset with intra- and inter-location misunderstandings and power processes. In a recent publication of lessons learnt in Mozambique, the Food and Agriculture Organisation (FAO, 2012) noted that successful implementation of climate change adaptation programs requires time for (i) a better understanding of the context (including what knowledge is available, what works and what doesn't), and (ii) the full involvement and buy-in of the intended beneficiaries and local leadership.

Rivalry. The promise of significant funding for climate change, including through the PPCR, has amplified the level of institutional rivalry as different actors seek to implement climate programs and projects. This has further exacerbated a pre-existing challenge with respect to the coordination of M&E efforts between agencies.

Additional funding. SPCR funds are helping to put in place a National Climate Change M&E system, but additional resources will be required to ensure that Mozambique is adequately equipped to manage an integrated M&E system that responds in a timely fashion to national and international reporting and monitoring demands. In particular, funding is required to build and expand the capacity of the Climate Change Coordination Unit within the Ministry for Coordination of Environment Affairs and the proposed knowledge management centre.

6. Conclusions with Respect to TAMD Development

6.1 Ways Forward

There are reasons for optimism regarding the way forward. The government of Mozambique and other stakeholders are keen to focus interventions for climate adaptation on results. To facilitate this, a National Strategy is in place, which outlines key sectoral interventions.

There is also a good base of knowledge with respect to adaptation measures. This is partly due to experience gained as a result of Mozambique's relatively high exposure to hydro-meteorological risks, and partly due to a number of climate adaptation interventions that are either ongoing or have been finalised.

On the other hand, climate adaptation in Mozambique will face technical challenges – in particular, data availability and reliability, data access and management, and the lack of a coherent M&E system. There is also a range of governance related challenges, including institutional rivalry, political prioritisation of preparedness and adaptation measures in relation to emergency response, and the need for greater harmonisation of climate planning between district and provincial authorities.

In order to facilitate the development of M&E systems for climate adaptation in Mozambique there is a need to simplify the discourse and climate change terminology. To gain the attention of key political actors, clear messages on climate change, and the need for a climate adaptation M&E system, are needed. Political actors require feasible solutions, and messages that can be easily understood. Simply making clear that climate change means increasingly severe floods may be sufficient to convince politicians that action is needed to prevent extreme events from undoing development achievements, and the political gains that have been obtained as a consequence. Thus, summarising the message may generate the required political attention and prioritisation.

The Ministry for Coordination of Environment Affairs plans to establish a unit to oversee the coordination of climate interventions. In the meantime various actors have already begun to design and implement climate interventions in line with their respective set of requirements and interests. The establishment of a Coordinating Unit is therefore a priority.

The relative lack of capacity within national agencies compared to that of better-resourced international donors means that national stakeholders are becoming implementers of processes that are largely initiated, and led by, external partners. This risks compromising the level of political ownership of the development of climate M&E systems. All stakeholders involved in the development of M&E systems for climate adaptation should formulate their activities bearing in mind that the ultimate objective is for Mozambique to be capable to *independently* formulate, implement, monitor and evaluate national climate change policies and actions.

6.2 Development of the TAMD Approach

This report has outlined the current situation in Mozambique with respect to Government systems and institutional arrangements, and the M&E of climate change adaptation. The Government will now follow due process with all concerned stakeholders to consider how the TAMD approach may develop and strengthen the national processes in place and those planned under the National Strategy for Climate Change.

Update: A stakeholder group has been formed, under the leadership of the Environment Ministry (MICOA), to design a national M&E system for climate change adaptation, as part of the national climate mitigation and adaptation strategy. The TAMD project has appointed a national research coordinator and outputs from the TAMD project will feed into the national climate M&E system design process.

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