



THE UNITED REPUBLIC OF TANZANIA

VICE PRESIDENT'S OFFICE

**MONITORING AND EVALUATION
FRAMEWORK FOR CLIMATE CHANGE
ADAPTATION IN TANZANIA**

NOVEMBER, 2012

FOREWORD

Climate change is now a global issue posing challenges to the survival of mankind and sustainable development. The adverse impacts of climate change are now evident almost everywhere. It poses a serious risk to poverty reduction efforts and threatens to undo decades of development efforts. The impacts of climate change are, and will continue to be more pronounced in the least developed countries. These countries have contributed the least to the problem and are the ones least able to cope with the impacts.

In Tanzania the impacts of climate change are already vivid affecting local communities and all sectors of the economy. In recent years we have witnessed extreme weather events such as severe floods and recurrent droughts in many parts of our country triggering food shortages and power crisis. Since our economy continues to depend heavily on climate-sensitive sectors, Tanzania will further be exposed to the adverse impacts of climate change.

Cognizant of the fact that adaptation to the adverse effects of climate change is vital for Tanzania and in order to reduce vulnerability to the impacts of climate change, the Government has put in place a number of initiatives to address the challenges of climate change. Some of these initiatives include enactment of the Environmental Management Act, 2004; development of the National Adaptation Programme of Action (NAPA), 2007; mainstreaming of climate change into the National Strategy for Growth and Reduction of Poverty Phase II (NSGRP-II, 2010 - 2015); National Climate Change Adaptation Strategy and Action Plan, 2009; and National Climate Change Strategy (NCCS), 2012. There are also various sectoral initiatives that aim at addressing the impacts of climate change and strengthen resilience of communities. In addition, a number of programmes and projects have been formulated all aimed at strengthening the adaptive capacity of our communities to the adverse impacts of climate change.

More adaptation related policies, plans, strategies and projects are expected to be formulated to address the impacts of climate change.

In order to effectively and efficiently implement all these initiatives at all levels, a comprehensive Monitoring and Evaluation Framework need to be in place so as to assist responsible authorities to track progress and evaluate the impacts of the envisaged adaptation initiatives in addressing the impacts of climate change.

It is against this backdrop that, I am honoured to avail to you this Framework which will provide guidance for undertaking monitoring and evaluation of adaptation initiatives. This Framework will enable stakeholders to monitor and evaluate progress and performance of climate change adaptation initiatives in the country.

I call upon all stakeholders to make use of this Framework in monitoring and evaluation of the impacts of adaptation initiatives in your areas of jurisdiction with the aim of further improving their implementation.



Hon. Dr. Terezya Luoga Huvisa (MP)

**Minister of State – Environment
VICE PRESIDENT’S OFFICE**

ACKNOWLEDGEMENT

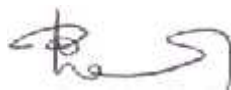
The preparation of the Monitoring and Evaluation (M&E) Framework for Climate Change Adaptation in Tanzania involved various stakeholders whose efforts and inputs are worth acknowledging.

I am grateful to the National Task Force, under the coordination of the Vice President's Office, for drafting the M&E Framework. Members were drawn from the Vice President's Office; First Vice President's Office– Zanzibar; Ministry of Works; Ministry of Agriculture, Food Security and Cooperatives; Ministry of Water; and Ministry of Education and Vocational Training and National Environment Management Council (NEMC).

I wish to express my gratitude to the National Steering Committee of the Africa Adaptation Programme (AAP) for their guidance and advice during the preparation of this Framework. I am also thankful to the management of the Vice President's Office, for their supervisory role in the development process of this M & E Framework.

I would like to use this opportunity to extend special thanks to the Government of Japan through the United Nations Development Programme for providing financial support to the Africa Adaptation Programme which enabled the preparation of this Framework.

Finally, let me express my sincere gratitude to all stakeholders who in one way or the other contributed in the preparation of this Framework.



Sazi B. Salula

Permanent Secretary
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ABBREVIATIONS

AAP	Africa Adaptation Programme
CCA	Climate Change Adaptation
CDM	Clean Development Mechanism
CEMO	City Environmental Management Expert
DEMO	District Environmental Management Officer
DNA	Designated National Authority
EMA	Environmental Management Act
FY	Financial Year
HIV/AIDS	Human Immuno Deficiency Virus / Acquired Immuno Deficiency Syndrome
LDCs	Least Developed Countries
LGAs	Local Government Authorities
M&E	Monitoring and Evaluation
MDAs	Ministries, Departments and Agencies
MEAs	Multilateral Environmental Agreements
MEMO	Municipal Environmental Management Officer
MOV	Means of Verification
NAPA	National Adaptation Programme of Action
NCCS	National Climate Change Strategy
NCCFP	National Climate Change Focal Point
NCCSC	National Climate Change Steering Committee
NCCTC	National Climate Change Technical Committee
NEMC	National Environment Management Council
NSGRP	National Strategy for Growth and Reduction of Poverty
OVI	Objectively Verifiable Indicators
REME	Regional Environmental Management Expert
TEMO	Town Environmental Management Officer
TMA	Tanzania Meteorological Agency
TOR	Terms of Reference

TShs	Tanzanian Shillings
UNEP	United Nations Environment Programme
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
VPO	Vice President's Office

TABLE OF CONTENTS

FOREWORD.....	i
ACKNOWLEDGEMENT	iii
ABBREVIATIONS.....	iv
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background Information	1
1.2 Climate Change Adaptation Efforts in Tanzania	6
1.3 Rationale for M&E Framework.....	7
1.4 Objectives of the M&E Framework	8
1.5 Scope of Monitoring and Evaluation Framework	8
1.6 Method for developing the Monitoring and Evaluation Framework	8
CHAPTER TWO: POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK FOR	10
MONITORING AND EVALUATION	10
2.1 Policy and Legal Framework	10
2.2 Institutional Framework	10
CHAPTER THREE: THE MONITORING AND EVALUATION (M&E) FRAMEWORK	15
3.1 Elements of Monitoring and Evaluation Framework	15
3.1.1 Performance Indicators.....	15
3.1.2 Performance reports.....	16
3.1.3 Performance review	16
3.1.4 Evaluation	16
3.1.5 Information and Data management system.....	17
3.2 Monitoring and Evaluation Tools	17
3.2.1 The Logical Framework (logframe).....	18

3.2.2	Monitoring and Evaluation Plan.....	18
3.2.3	Indicator Tracking Matrix	19
3.2.4	Activity Tracking Matrix	19
3.2.5	Budget monitoring and expenditure tracking	19

CHAPTER ONE

INTRODUCTION

1.1 Background Information

Climate change is one of the greatest global environmental and developmental challenges. It has the potential to impact negatively on almost all sectors of the economy. In the African continent, climate change and variability pose a major threat due to both weak adaptive capacity, which is further exacerbated by limited coping strategies and the existing low levels of development. Tanzania like other African countries has been experiencing impacts of climate change which include frequent and prolonged droughts, declining crop yields, loss of livestock, inadequate water availability and poor quality, severe floods, sea level rise, and an increase in vector and water-borne diseases. All of these have resulted in severe socio-economic impacts.

In the last 40 years Tanzania has experienced adverse effects of climate change in various sectors and areas. Such impacts and evidences on various sectors are as follows:-

Freshwater resources: Increasing rainfall variability and prolonged droughts has caused serious pressure in the country's available water resources. Severe and recurrent droughts in the past few years triggered decrease in water flows in rivers and hence shrinkage of receiving lakes and decline of water levels in lakes and hydropower dams. In the recent past, two-thirds of rivers in Tanzania have had reduced water volume as a result of decreased rainfall. The projection is that water flow change will be between 5% and 10% in all basins in Tanzania by 2025.

Coastal and Marine environment: Major climate change related impacts are results of increase in sea surface temperature and associated sea level rise. The impacts are

increasingly manifested by accelerated beach erosion in many parts of the coastal areas and in some cases destruction of mangroves caused by strong sea waves. It has also led to intrusion of sea water into freshwater wells and crop fields particularly in Bagamoyo, Pangani, Rufiji and Zanzibar. Other impacts include submergence of small islands like Maziwe in Pangani and Fungu la Nyani in Rufiji; destruction of coastal infrastructures e.g. some beach hotels in northern Dar es Salaam and Pangani wall; and some human settlements. Furthermore, it is estimated that about 3,520 ha of land (and 1,025 ha of mangroves) in Tanga, 3,300 ha land area (and 1,800 ha seasonal swamps) in Bagamoyo (Coast region), and about 2,780 ha of mangroves in Mtwara are vulnerable to 0.5m of sea-level rise. With 1 metre sea-level rise, it is estimated that 9 km² and 2,117 km² of land could be lost due to erosion and inundation respectively. The estimated damages as a result of sea level rise in Dar es Salaam alone amounts to USD 48-82 million (Tsh. 72-123 billion) for a 0.5 and 1m sea level rise, respectively.

Agriculture: The changing climate has resulted in a general decline in agricultural productivity, including changes in agro-diversity. The prevalence of crop pest and diseases has also increased, posing more challenges to agriculture. Among the emerging diseases includes a range of fungal, bacterial and viral diseases such as batobato, Banana Xanthomonas wilt, Panama, Elihuka, coffee wilt, head smuts, fusarium wilt, maize streak, cassava mosaic, cassava purple stripes, cassava root rot, and rust. Furthermore, increase in temperatures has led to increased incidences of some of weed species (e.g. *Striga spp*, a noxious weed particularly for cereal crops); insect pests (e.g. *Prostephanus truncatus*, and *Bemisia tabacci*); and vermin such as the mole rats. Prevalence of crop pests and diseases has caused increased demand for pesticides.

Climate change has also resulted in shifts of agro-ecological zones. Present evidence of climate change supporting the shift paradigm is the observed shift in rainfall patterns from bimodal to unimodal rainfall regimes in some areas. For example, Manyara and some parts of Morogoro and Kigoma regions which have long been characterised by

bimodal rainfall distribution are now experiencing a shift towards unimodal rainfall regime. The shifts in agro-ecological zones have resulted in considerable changes in the types of crops grown in agro-ecological zones with declining production trends. The declining productivity of maize and sorghum has necessitated introduction of drought tolerant crops such as cassava in Muheza and vanilla in Muleba.

Energy: In the past, hydropower used to be a major source of commercial energy in Tanzania contributing to more than 60% of electricity supply. However, in recent years, frequent and persistent droughts have led to decreased water volumes in major rivers and hydropower dams (including Ruaha River; and Mtera, Kidatu and Nyumba ya Mungu dams) resulting in declining hydropower production. This consequently, prompted to increased use of fuel generated electricity, power rationing and impaired economic activities and social development. The hydropower share to the power supply is currently (2012) at 41%.

Livestock: The livestock sector is affected by various climate change impacts, drought being the most serious. More than 80 per cent of the livestock in the country are highly vulnerable to climate extremes. For instance, in 2009 some areas of Northern Tanzania were hit by severe drought that resulted in shortage of water and pasture leading to deaths of 735,929 livestock (Longido district - 231,832 heads of cattle, 171,435 goats and 92,235 sheep; Monduli district - 56,555 heads of cattle, 39,766 goats and 28,883 sheep; and Ngorongoro district - 115,223 heads of cattle). Drought has also led to unauthorised migrations of pastoralists to other parts of the country searching for water and pasture, resulting into resource use conflicts between crop cultivators and livestock keepers, for example the recent conflicts in Kilosa, Kilombero and Rufiji.

The rising temperature and uncertainties in rainfall associated with global warming have also resulted in ecological shift where changes in plant and pasture species have been evident in many parts of the country. In this context, non-palatable and toxic plant species have replaced the palatable and nutritious plant species, thus affecting the

livestock industry. In addition, increased global warming has created favourable conditions for insects and pests leading to incidences of livestock diseases such as Rift Valley Fever which occurred in the country recently.

Human Health: Tanzania is already experiencing high burdens of the climate-sensitive diseases such as malaria, onchocerciasis, schistosomiasis, trypanosomiasis, filariasis, plague, leishmaniasis, cholera, Rift Valley fever, yellow fever and tick-borne haemorrhagic fevers due to increased temperature that favours the disease vectors. For instance, there are incidences of epidemic malaria especially in highland areas that were traditionally free from mosquitoes and malaria such as Lushoto in Tanga, Kilimanjaro, Njombe, Iringa, Kagera and Mbeya, among others. Generally, increased disease incidences due to climate change reduce labour productivity in various development undertakings undermining poverty alleviation efforts.

Infrastructure and human settlements: In recent years, Tanzania has experienced increased rainfall due to climate change causing flood damage to buildings and transport and communication infrastructure. In January 2008, extreme rainfall flooded mining pits at Mererani, killing over 70 people and displaced hundreds of people. In December 2009, Kilosa district was affected by floods where 5,867 houses were submerged. Also, in January 2010, widespread flooding in Morogoro (Kilosa) and Dodoma (Mpwapwa and Kongwa) regions led to severe damage on roads; bridges; dams; railway and power lines; drainage and water supply networks; and human settlements. Furthermore, six bridges, several roads and human settlements were destroyed in Morogoro (Kilombero) due to floods that occurred in April 2011. The floods in Kilosa district in 2009 and 2010 led to displacement of a total of 23,980 people, whereas 19,000 persons were displaced in Mpwapwa and Kongwa districts. In April 2011, floods in Kilombero valley in Morogoro region demolished 663 homesteads and submerged 2,942 others, making 9,000 people homeless. The floods destroyed food stores, farms and other infrastructure. Approximately 2,256 hectares of crops including paddy and maize were destroyed. In December 2011, Dar es Salaam city experienced

one of the worst floods which killed over 40 people and destruction of various infrastructure and property. In all these cases, the costs of addressing the flood situation were enormous. For example, the cost of restoration of the infrastructure and services ravaged by floods in Kilosa and Mpwapwa amounted to Tshs. 329 billion

Forestry and Wetlands

The Forest sector is threatened by various challenges posed by climate change. They include: Degradation in the areas with unimodal rainfall pattern, and increased frequency and intensity of forest fires. Already, Mount Kilimanjaro, the Eastern Arc Mountains and Coastal forests are increasingly being deforested and degraded, with consequent change in vegetation composition and reduction in carbon sinks.

The impact of climate change on forest ecosystems and biodiversity are expected to vary depending on vegetation type. Overall, the National Adaptation Programme of Action forecasts change to drier forests/ecosystems as a result of climate change. Species that are expected to be more vulnerable are those with limited geographical range and /heat intolerant; low germination rates; low survival rate of seedlings; and limited seed dispersal/migration capabilities. Knowledge on the magnitude of effects on individual species is limited.

Wetlands in Tanzania cover 10% of the total land area, of which 5.5% is presently 4 Ramsar sites. Among them include Malagarasi - Moyovosi (32,500 km²), Lake Natron Basin (2250 km²), Kilombero valley floodplain (7,950 km²) and Rufiji-Mafia-Kilwa (5,969.7 km²). Many people depend on wetlands for fishing and related livelihood activities. Wetlands are also important ecosystems, which play an important role in the water cycle through numerous functions. In spite of the numerous benefits and their contribution to socio-economic development, wetlands are facing increasing challenges of climate change, particularly frequent droughts. Furthermore, with increasing evapotranspiration because of increased temperature, wetland water characteristics will change with catastrophic consequences for the biodiversity within, for example

increased pH levels in Lake Natron affecting the breeding sites of flamingos.

Industries

Industrial manufacturing activities in Tanzania are relatively small and at an infancy stage, contributing to about 8.6% of the GDP in the last decade. Most industrial development in Tanzania is either light manufacturing industries or agro-processing plants and mills located mainly in urban centres. Small-scale industries concentrating in domestic production sectors are scattered throughout cities and municipalities; and some are located mostly in residential areas.

Most of industries are concentrated on manufacturing of simple consumer goods - food, beverages, tobacco, textiles and furniture as well as wood and allied products of which they depend much on agro-products. The large dependence on agricultural raw materials means that the industrial sector is, like agriculture, vulnerable to the impacts of climate change. Despite the agro-based nature of most of these industries, the power supply is mainly from hydro sources which are again vulnerable to climate change impacts, particularly drought. Therefore climate change impacts will adversely affect the sector and peoples wellbeing at large.

1.2 Climate Change Adaptation Efforts in Tanzania

The government of Tanzania has undertaken several initiatives geared towards addressing the adverse impacts of climate change. Some of these include development of a National Climate Change Strategy (NCCS), Climate Change related Technological Needs Assessment in 2011; National Adaptation Programme of Action (NAPA, 2007); In-depth analysis of climate change impacts on Agriculture, Health and Water Sectors, 2007; mainstreaming climate change into the Strategy for Growth and Poverty Reduction Phase II; and Strategy for Urgent Actions on Land Degradation and Water Catchments, 2006. In addition, various climate change adaptation programmes and projects are being implemented including the Africa Adaptation Programme (AAP);

Mainstreaming Sustainable Forest Management in the Miombo Woodlands of western Tanzania; Developing Core Capacity to Address Adaptation to Climate Change in Productive Coastal Zones of Tanzania; Eco-village; and Implementation of Concrete Adaptation Measures to Reduce Vulnerability of Livelihood and Economy of Coastal Communities in Tanzania.

Supporting integrated and comprehensive approaches to climate change adaptation in Tanzania through development of Monitoring and Evaluation (M&E) framework for Climate Change Adaptation (CCA) is yet another government efforts that intends to: collect and provide information that will be used to track progress on implementation of all components of the comprehensive CCA activities; identify gaps and weaknesses during the course of implementation of the CCA policies, plans and programmes; plan, prioritize, allocate and manage resources; monitor the impacts of CCA activities to the communities and measure effectiveness of the projects, programmes, plans and strategies to the targeted communities.

1.3 Rationale for M&E Framework

Tanzania is implementing various initiatives towards adaptation to the adverse impacts of climate change. These initiatives, among others, include adaptation strategies, plans, programmes and projects that are implemented at national and local levels. However, monitoring and evaluation framework for tracking progress and results emanating from these initiatives is lacking. This Monitoring and Evaluation (M&E) Framework provides guidance for undertaking monitoring and evaluation of various adaptation initiatives at national and local levels. It responds to the growing demand for practical support to the MDAs and LGAs in evaluating adaptation progress and performance for effective implementation of climate change adaptation initiatives.

1.4 Objectives of the M&E Framework

The overall objective of the M&E framework for climate change adaptation is to guide MDAs and LGAs to monitor and evaluate development objectives that need to take into account climate change adaptation.

Specific objectives are to:

- i) track progress on implementation of CCA programmes, plans and projects ;
- ii) identify gaps and weaknesses during the course of implementation of the CCA related programmes, projects and plans;
- iii) plan, prioritize, allocate and manage resources for CCA;
- iv) monitor the positive and negative impacts of CCA activities to the communities; and
- v) measure effectiveness of the programmes, projects and plans to the targeted communities.

1.5 Scope of Monitoring and Evaluation Framework

This Framework covers key elements and tools for undertaking M&E and institutional arrangement for its implementation. The key elements include performance indicators, performance reports, performance review and evaluation. The M&E tools include logical framework (Logframe); Monitoring and Evaluation Plan; Indicator Tracking Matrix; Activity Tracking Matrix; and budget and expenditure tracking. The Framework will be used by MDAs, LGAs and other relevant institutions.

1.6 Method for developing the Monitoring and Evaluation Framework

The Framework was prepared in a participatory manner by involving different stakeholders. The process involved a Task Force drawn members from the Vice President's Office; National Environment Management Council (NEMC); First Vice

President's Office-Zanzibar; Ministry of Works; Ministry of Agriculture Food Security and Cooperatives; Ministry of Water; and Ministry of Education and Vocational Training. The method adopted by the task force in drafting M&E framework document included:

- i) Reviewing various documents such as; M&E framework for CCA (UNDP, 2007), M&E Framework for the Comprehensive HIV and AIDS Care, Management and Treatment Programme for South Africa (2004), M&E Framework for the Commonwealth Plan of Actions for Gender Equality 2005-2015 (2007), National Adaptation Programme for Action (NAPA, 2007), The Africa Adaptation Programme (AAP, 2010) Final Project Document: Tanzania and Draft National Climate Change Strategy and Action Plan (2011); and
- ii) Consultations with various stakeholders through interviews and workshops.

CHAPTER TWO

POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK FOR MONITORING AND EVALUATION

The Monitoring and Evaluation (M&E) Framework for climate change adaptation adopts and incorporates existing policy and legal framework in accordance with the Environmental Management Act (EMA) of 2004.

2.1 Policy and Legal Framework

Environment is a cross-cutting issue that requires a holistic approach and multi-level operation. Environmental Management in Tanzania is guided by three key frameworks: National Environmental Policy (NEP), 1997 which is now under review; Environmental Management Act, 2004; and Multilateral Environmental Agreements (MEAs) to which Tanzania is a Party.

2.2 Institutional Framework

According to EMA 2004, the following Institutional arrangement is responsible for environment management in Tanzania:-

a) National Environmental Advisory Committee (NEAC)

The committee is created to advise the Minister for environment (the Vice President's Office-VPO in this instance) or any sector ministry on any environmental matter which may be referred to it.

b) Minister Responsible for Environment

The Minister responsible for Environment articulates policy guidelines, makes regulations, guidelines, and designates any institution to perform any function or does any activity within a specified time as stipulated by EMA 2004. With regard to climate change, the Minister undertakes the following in consultations with other relevant sector ministries:

- i) Taking measures to address climate change particularly its impacts and adaptation measures;
- ii) Issuing guidelines periodically to Ministries and any other institutions in order to address climate change adaptation and its impacts as a result of global warming;
- iii) Requiring Ministries and independent Government departments to put in place strategies and action plans to deal with climate change, as well as advise on climate change adaptation to be mainstreamed in high learning Institutions' curriculum; and
- iv) Reviewing and approving any measures undertaken to address climate change adaptation by any sector or any individuals relating to the use of any natural resources within the country to sequester green house gases.

The Vice President's Office (VPO) is both National Climate Change Focal Point (NCCFP) for the United Nations Framework Convention on Climate Change (UNFCCC) and the Designated National Authority (DNA) for Clean Development Mechanism (CDM) projects under the Kyoto Protocol. Furthermore, EMA has facilitated establishment of various committees at both national and local levels addressing climate change. At national level, there is an established National Climate Change Steering Committee (NCCSC) chaired by the Permanent Secretary in the VPO to provide policy guidance to the NCCFP, ensure coordinated actions and participation within various sectors and institutions. There is also National Climate Change Technical Committee chaired by the Director of Environment which is responsible to provide technical advice to the NCCFP, stimulate more coordinated actions of actors and

broaden participation of various actors in addressing climate change. At local level there are Regional, District, Town, Ward, Village, *Kitongoji*, and *Mtaa* environmental committee which addresses climate change issues.

c) National Environment Management Council (NEMC)

The functions of NEMC, among others, include undertaking programmes and projects which address climate change such as climate change Adaptation, Mainstreaming climate change into policies, plans and programmes. It is also involved in preparation of climate change adaptation awareness programmes. NEMC is carrying out environmental audits, surveys and research; review and recommend for Environmental Impact Assessment approval; enforce compliance of the National Environmental Quality Standards; initiate procedure for the prevention of accidents which may cause environmental degradation; undertake programmes to enhance environmental education; publish and disseminate manuals relating to environmental management; render advise and technical support to entities engaged in natural resources and environmental management; and perform any other functions assigned to it by the Minister responsible for environment.

d) Sector Ministries

The functions of sector ministries, among others, are to ensure climate change concerns are integrated into sector functions. Each sector ministry carries out its functions and duties according to EMA and any other law, provided that it does not conflict with EMA. Involvement of Sector Ministries in environmental management and Climate Change Adaptation is through a Sector Environment Section (SES) established in each ministry to ensure EMA compliance.

e) Regional Secretariat

The Regional Secretariat is composed of a Regional Environmental Management Expert (REME) with the responsibility of advising the Local Government Authorities of that particular region on matters relating to implementation and enforcement of EMA. The REME links the region with the Director of Environment.

f) Local Government Authorities

Linked to the above institutional arrangements, EMA has vested to the Local Government Authorities the function of environmental management. It has created officers and has also designated to some committees certain environmental functions. These officers and committees are mentioned here below:

i) Environmental Management Officers

The law has created four categories of officers. These officers include City Environmental Management officer (CEMO), Municipal Environmental Management Officer (MEMO), District Environmental Management Officer (DEMO) and Town Environmental Management Officer (TEMO). These officers among others duties are responsible for CCA issues in their area of jurisdiction.

ii) Environmental Committees

EMA takes cognizant of Standing Committees on Urban Planning and Standing Committees on Economic Affairs, Works and Environment as designated by the Local Government (Urban Authorities) Act, 1982 and Local Government (District Authorities) Act, 1982 and empowers them to be the City, Municipal and District Environmental Management Committees.

This institutional framework is key for the M&E of climate change adaptation initiatives in Tanzania.

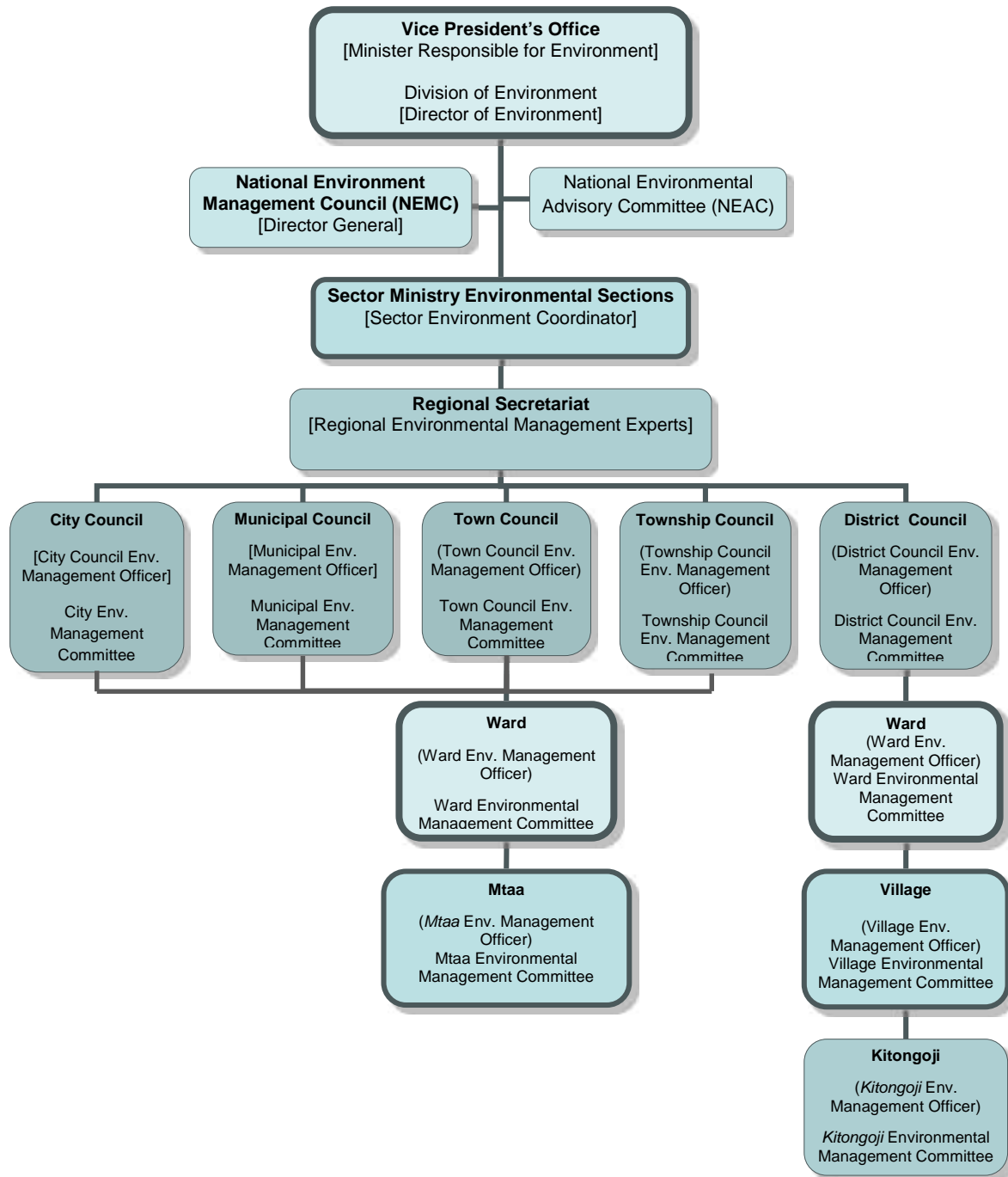


Figure 1: The institutional framework for environmental management in Tanzania. It is also used for climate change management

CHAPTER THREE

THE MONITORING AND EVALUATION (M&E) FRAMEWORK

3.1 Elements of Monitoring and Evaluation Framework

Tracking of progress of climate change adaptation in Tanzania is paramount for enhancing adaptive capacity at all levels. Various M&E frameworks are being adopted for different purposes in Tanzania. For the purpose of monitoring and evaluating adaptation to climate change in Tanzania, the following are the key elements in the Framework: performance indicators; performance reports; performance review; evaluation; and data management system.

3.1.1 Performance Indicators

Performance indicators are quantifiable measurements that reflect the implementation achievements of an activity, project or programme. Performance indicators show results relative to what was planned at each level of the results chain as follows:

- i) *Process indicators*: These indicators describe the important processes that contribute to the achievement of outcomes. Examples of process indicators are the quality of training, assessment and needs assessment. They highlight things that are expected to lead to desirable outcomes and which can be observed and described.
- ii) *Output indicators*: These indicators establish the terms of reference for the project. If a project team or contractor is responsible for all the Outputs, then these indicators define the deliverables for which the contractor is accountable.
- iii) *Outcome indicators*: These refer to the overall impact(s) or achievements of an activity, project or programme. Outcome may include change in behavior of

beneficiaries, or the changes in the way institutions function as a result of the programme/project's outputs.

Performance indicators, where not available, will need to be developed to assist in monitoring and evaluating climate change adaptation activities at all levels.

3.1.2 Performance reports

Reporting on programme/projects performance is a vital communication need of stakeholders/beneficiaries so as to inform them on progress and resources used in accomplishing the project objectives. Therefore, performance reports are to be prepared at different intervals to facilitate tracking progress of an activity, project or programme. These will include quarterly, semi-annually and annually reporting. Such performance reports are prudent in ensuring adaptation activities are well pronounced in various plans, projects and programmes.

3.1.3 Performance review

Performance review refers to a process involving reviewing progress and performance drawing upon performance information of an activity, project or programme. The main purpose of performance review is to serve both as reflective assessment and forward-looking evidence-based planning to strengthen capacity to effect improvements. Performance review can be carried out through meetings and rapid appraisal. Stakeholders will need to undertake performance review to all plans, projects and programmes geared to address climate change at various levels.

3.1.4 Evaluation

Evaluation is a process which supports a project, by measuring the extent to which the objectives are met; identifies achievements and areas for improvement; and

encourages decisions to be taken, including changes to objectives and the project methodology. The types of project evaluation to be carried out are: ex-ante evaluation, on-going evaluation and terminal evaluation/ex-post evaluation. This process is fundamental for climate change adaptation initiatives in the country.

3.1.5 Information and Data management system

The system involves provision of information and data to any beneficiary or interested party by enabling access to information relevant to the programme / project regardless of the location of each user or the information and regardless of what tool was used to create the information. The system makes the access, integration and monitoring of information between a distributed project team manageable and reduces the manual effort and time spent accessing information, determining the relationship between different items of information, and avoiding inconsistencies between different pieces of information. The system will help to create reliable and robust data and information for informed decision making.

3.2 Monitoring and Evaluation Tools

A number of tools exist for undertaking M&E that assures results measurement and evaluation systems. Such tools include the logical framework (Logframe); the Monitoring and Evaluation Plan; Indicator Tracking Matrix; Activity Tracking Matrix; and budget and expenditure tracking.

3.2.1 The Logical Framework (logframe)

The Logical Framework is an instrument used to identify project goal, purpose and outputs, and to plan and describe the necessary activities and outputs. It provides the basis for the preparation of action plans and the development of a monitoring system, and a framework for evaluation. It is a key management tool during implementation and evaluation of projects or programmes.

Table 1 provides the standard format of a Logical Framework Matrix which describes a summary of project goals, objectives, outputs, indicators and sources of information by which progress will be measured, and the key risks and assumptions which may affect achievement of objectives. Each CCA programme, project or activities needs to have a log frame.

3.2.2 Monitoring and Evaluation Plan

A Monitoring and Evaluation Plan consists of indicators with baselines and targets; means for tracking critical assumptions; plans for managing the data collection process; and regular collection of data. During implementation of an activity, project or programme, a well-designed M&E Plan helps the implementer to keep track of progress and make adjustments if necessary. It is also a valuable tool for demonstrating the effectiveness and impact of a project or program, that contributes to learning, improved performance, and accountability.

Table 2 presents a format of M&E Plan that includes indicator, data source, data collection method and frequency and responsible stakeholder.

3.2.3 Indicator Tracking Matrix

The Indicator Tracking Matrix helps to track progress of indicators included in M&E Plan to inform project/programme implementation status and management. It measures how the project is performing against the Logframe on a periodic basis, and allows monitoring progress towards specific targets.

Table 3 presents an Indicator Tracking Matrix comprising of indicator, baseline, target and achievement.

3.2.4 Activity Tracking Matrix

This involves monitoring of project activities including budget over a period of time. This helps to track progress as well as giving early warning of possible problems and difficulties.

Table 4 presents an Activity Tracking Matrix consisting of activity, responsible stakeholder, budget and timeline.

3.2.5 Budget monitoring and expenditure tracking

Budget monitoring and expenditure tracking ascertains actual expenditures against the planned budget and ensures that expenditures are tied up to project activity as expected. Budget variances, if any, must be explained and appropriate remedial actions taken.

Table 5 presents a basic template for tracking budget and expenditure of activities, projects or programmes.

Table 1: Logical Framework (Logframe)

Project Title: <i>(insert Project Name)</i>		Programme Name: <i>(Insert Programme name if applicable)</i>		
MDA/Region/LGA: <i>(Insert appropriate name of MDA/Region/LGA)</i>		FY Budget: <i>(Indicate the FY Budget)</i>	Start date: <i>(Insert start date of the project)</i>	End date: <i>(Insert end date of the Project)</i>
Intervention logic	Description	Indicators	Means of Verification	Assumptions
Project Goal	Provide information on the Project Goal as defined in the Project document			Describe assumption as detailed in the project document
Objectives	State the objectives of the Project as illustrated in the Project document			Describe assumption as detailed in the project document
Outcome 1	State the outcome of the Project as illustrated in the Project document	Provide indicators at outcome level as defined in the Project document	State means of verification at the outcome level	Describe assumptions at Outcome level as detailed in the project document
Outcome 2	Do the same as in Outcome 1 above if there is another Project outcome	Do the same as in Outcome 1	Do the same as in outcome 1 for outcome 2	Do the same as in outcome 1 for Outcome 2
Output 1.1	Provide information on outputs in correspondence with the relevant Outcome as detailed in the Project document	Provide indicators at output level as defined in the Project document	Provide means of verification at output level	Provide information on assumptions at output level
Output 1.2	Provide information on output 2 as in output 1 (if applicable) in relation to Outcome 1 above	Provide indicators at output level as defined in the Project document	Provide means of verification at output level	Provide information on assumptions at output level

Project Title: <i>(insert Project Name)</i>		Programme Name: <i>(Insert Programme name if applicable)</i>		
MDA/Region/LGA: <i>(Insert appropriate name of MDA/Region/LGA)</i>		FY Budget: <i>(Indicate the FY Budget)</i>	Start date: <i>(Insert start date of the project)</i>	End date: <i>(Insert end date of the Project)</i>
Intervention logic	Description	Indicators	Means of Verification	Assumptions
output 2.1	Provide information on output 2 as in output 1 (if applicable) in relation to Outcome 2 above Note: With more outcomes continue filling the information as shown above for subsequent outcomes and outputs)	Provide indicators at output level as defined in the Project document	Provide means of verification at output level	Provide information on assumptions at output level
Activity 1.1.1	Provide summary of each activity for output 1 as elaborated in the Project document			
Activity 1.1.2	Provide summary of each activity for output 1 as elaborated in the Project document			
Activity 1.1.3	Provide summary of each activity for output 1 as elaborated above			
Activity 2.1.1	Provide summary of each activity as for Output 2 as elaborated in the Project document Note: With more outputs continue providing summary of each activity corresponding to each output)			
Activity 2.1.2				
Activity 2.1.3				

Table 2: Monitoring and Evaluation (M&E) Plan

Project Title: <i>(insert Project name)</i>			Programme Name: <i>(Insert Programme name if applicable)</i>			
MDA/Region/LGA: <i>(Insert appropriate name of MDA/Region/LGA)</i>		FY Budget: <i>(Indicate the FY Budget)</i>	Start date: <i>(Insert start date of the project)</i>		End date: <i>(Insert end date of the Project)</i>	
Intervention logic	Indicator	Indicator Definition	Data Source	Data Collection Methodology	Frequency of Data Collection	Who is Responsible?
Project Goal			Provide information on the sources of data	Describe data collection methodology	Provide information on the frequency of data collection	Indicate responsible personnel
Objectives			Provide information on the sources of data	Describe data collection methodology	Provide information on the frequency of data collection	Indicate responsible personnel
Outcome 1	Provide indicators at outcome level as defined in the Project document	Provide indicator definition as elaborated in the Project document/proposal at outcome 1	Provide information on the sources of data at outcome 1	Describe data collection methodology for outcome 1	Provide information on the frequency of data collection for outcome 1	Indicate responsible personnel at this level
Outcome 2	Provide indicators at outcome level 2 as defined in the Project document	Provide indicator definition as elaborated in project document/proposal at outcome 2	Provide information on the sources of data at outcome 2	Describe data collection methodology for outcome 2	Provide information on the frequency of data collection for outcome 2	Indicate responsible personnel at this level

Project Title: <i>(insert Project name)</i>				Programme Name: <i>(Insert Programme name if applicable)</i>		
MDA/Region/LGA: <i>(Insert appropriate name of MDA/Region/LGA)</i>		FY Budget: <i>(Indicate the FY Budget)</i>	Start date: <i>(Insert start date of the project)</i>		End date: <i>(Insert end date of the Project)</i>	
Intervention logic	Indicator	Indicator Definition	Data Source	Data Collection Methodology	Frequency of Data Collection	Who is Responsible?
Output 1.1	Provide information on indicators at output 1 level as defined in the project document	Provide indicator definition as elaborated in project document/proposal at output 1.1	Provide information on the sources of data at output 1.1	Describe data collection methodology for output 1.1	Provide information on the frequency of data collection for output 1.1	Indicate responsible personnel at this level
Output 1.2	Provide indicators at output level as defined in the Project document	Provide indicator definition as elaborated in project document/proposal for output 1.2	Provide information on the sources of data at output 1.2	Describe data collection methodology for output 1.2	Provide information on data collection frequency for output 1.2	Indicate responsible personnel at this level
Output 2.1	Provide indicators at output level 2 as defined in the Project document	Provide indicator definition as elaborated in project document/ proposal for output 2.1	Provide information on the sources of data at output 2.1	Describe data collection methodology at output 2.1	Provide information on the data collection frequency for output 2.1	Indicate responsible personnel at this level

Table 3: Indicator Tracking Matrix

Project Title: <i>(insert the Project Name)</i>						Programme Name: <i>(Insert the Programme name if applicable)</i>							
MDA/Region/LGA: <i>(Insert appropriate name of MDA/Region/LGA)</i>													
Intervention logic	Indicator	Baseline	2-month Target <i>(Set target as appropriate)</i>	2-month Achieved	FY Budget: <i>(Indicate the FY Budget)</i>			Start date: <i>(Insert start date of the project)</i>			End date: <i>(Insert end date of the Project)</i>		
Project Goal 1	Provide indicators as described in the Project document												
Project Goal 2	Provide indicators as described in the Project document												
Outcome 1	Provide indicators at outcome level as defined in the Project document												
Outcome 2	Do the same as in Outcome 1												
Output 1.1	Provide indicators at output level 1.1 as defined in the project document												
Output 1.2	Do the same as in output 1.1 for output 1.2												
Output 2.1	Do the same as above for output 2.1												

Table 4: Activity Tracking Matrix

Project Title: <i>(insert Project name)</i>					Programme Name: <i>(Insert Programme name, if applicable)</i>										
MDA/Region/LGA: <i>(Insert appropriate name of MDA/ Region/LGA)</i>		FY Budget: <i>(Indicate the FY Budget)</i>			Start date: <i>(Insert start date of the project)</i>					End date: <i>(Insert end date of the Project)</i>					
S/N	Activities	Staff Responsible	FY:	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Activity 1.1.1	Provide summary of each activity for output 1 as elaborated in the Project document	Indicate responsible person													
Activity 1.1.2	Do the same as above for the rest activities as elaborated in the project document/ proposal														
Activity 1.1.3															
Activity 2.1.1															
Activity 2.1.2															
Activity 2.1.3															

Table 5: Budget Monitoring and Expenditure Tracking Matrix

Activity	Description	Budget		Expenditure	Remarks
		unit cost	Total unit cost		
Activity 1.1.1	Provide information on each activity as described in the project document/proposal				
Activity 1.1.2					
Activity 1.1.3					
Activity 1.1.4					
Total cost					