



UNITED REPUBLIC OF TANZANIA

VICE PRESIDENT' S OFFICE

**GUIDELINES FOR THE PREPARATION OF
ENVIRONMENTAL ACTION PLANS FOR SECTOR
MINISTRIES AND LOCAL GOVERNMENT
AUTHORITIES**

PREFACE

We need to recognize that environmental problems facing our country demands collective efforts and commitment by everyone. The challenge is to mainstream environmental issues into development plans and strategies particularly where majority of the population depend on the environment and natural resources for their livelihood. Environmental mainstreaming involves integrating activities that protect the environment and natural resources, ensure sustainable livelihoods and economic development. The preparation of National Environmental Action Plan (NEAP) is one of the mainstreaming processes which sets out priority actions to address identified environmental challenges.

The Environmental Management Act Cap 191 of the laws of Tanzania provides for preparation of the National Environmental Action Plan (NEAP), at an interval of five years, taking into account Action Plans prepared by Sector Ministries and Local Government Authorities. The purpose of these Guidelines is to provide a toolkit for Sector Ministries and Local Government Authorities to help them conduct participatory processes for developing the Action Plans to address relevant environmental challenges within their functional mandates or their areas of jurisdiction. The Guidelines are also meant to enhance quality and uniformity.

I need not emphasize on the importance of a participatory approach in environmental planning including the preparation of Action Plans as measure to create sense of commitment of ownership to facilitate its smooth implementation of the same.

The challenges on Environmental Action Plans do not lie in their preparations but; rather, a challenge that lies in their implementation. This is a critical step that we ought to strive for. We need to walk and take concrete actions for the benefit of the present and future generations.



Hon. Batilda S. Buriani, MP
Minister of State - Environment
Vice President's Office

CONTENTS

PREFACE	ii
ABBREVIATIONS AND ACRONYMS	iv
CHAPTER ONE: INTRODUCTION	1
1.1 Background	1
1.2 Purpose of the Guidelines	1
1.3 Justification of the Guidelines	2
1.4 Scope of the Guidelines	2
CHAPTER TWO: GENERIC APPROACH IN THE PREPARATION OF THE ENVIRONMENTAL ACTION PLAN	3
2.1 Preamble	3
2.2 Identification of Environmental Issues and Setting Priorities	5
2.3 Preparation of Environmental Action Plan	6
2.4 Implementing Actions (On-Going).....	7
2.5 Monitoring and Evaluating Results (On-Going).....	8
CHAPTER THREE: GENERAL GUIDELINES FOR THE SECTOR ENVIRONMENTAL ACTION PLAN (SEAP)	10
CHAPTER FOUR: GENERAL GUIDELINES FOR THE LOCAL GOVERNMENT ENVIRONMENTAL ACTION PLAN (LEAP)	15
APPENDICES	23
APPENDIX I: A CHECKLIST OF COMMON ENVIRONMENTAL ISSUES AND IMPACTS.....	24
APPENDIX II: LIST OF RELEVANT POLICIES, STRATEGIES, PLANS AND LEGISLATION	30
APPENDIX III: LIST OF MULTILATERAL ENVIRONMENTAL AGREEMENTS (MEAs) TO WHICH TANZANIA IS PARTY ...	33
APPENDIX IV: MILLENNIUM DEVELOPMENT GOALS (MDGs)	34

ABBREVIATIONS AND ACRONYMS

CBO	Community Based Organization
CDM	Clean Development Mechanism
EAP	Environmental Action Plan
EMA	Environmental Management Act
EPM	Environmental Planning and Management
GDP	Gross Domestic Product
GMOs	Genetically Modified Organisms
LEAP	Local Government Environmental Action Plan
LGA	Local Government Authority
MARPOL	International Convention for the Prevention of Marine Pollution from Ships
MDA	Government Ministries, Departments and Agencies
MDGs	Millennium Development Goals
MEAs	Multilateral Environmental Agreements
MKUKUTA	<i>Mkakati wa Kukuza Uchumi na Kupunguza Umaskini Tanzania</i>
NAP	National Action Plan to Combat Desertification
NAPA	National Adaptation Plan of Action for Climate Change
NBF	National Biosafety Framework
NEAP	National Environmental Action Plan
NGO	Non-Governmental Organization
NSGRP	National Strategy for Growth and Reduction of Poverty
OPRC	International Convention on Oil Pollution Preparedness, Response and Co-operation
O &OD	Opportunities and Obstacles to Development Planning
PFM	Participatory Forest Management
POPs	Persistent Organic Pollutants
PPP	Public Private Partnership
SAICM	Strategic Approach for International Chemicals Management
SIDP	Sustainable Industrial Development Policy
SEAP	Sector Environmental Action Plan
SIMMORS	Sustainable and Integrated Management of the Malagarasi-Muyovozi Ramsar Site Project
SWOT	Strength, Weakness, Opportunity and Threat
TAC	Technical Advisory Committee
TAS	Tanzania Assistance Strategy
TF	Task Force
TFAP	Tanzania Forestry Action Plan
TIP	Traditional Irrigation Programmes
UNCCD	United Nations Convention to Combat Desertification
UNCLOS	United Nations Convention on the Law of the Sea
UNFCCC	United Nations Framework Convention on Climate Change
URT	United Republic of Tanzania
WMA	Wildlife Management Areas

CHAPTER ONE: INTRODUCTION

1.1 Background

Mainstreaming environmental concerns remains to be a very important challenge for many countries. One of the initial mainstreaming processes includes preparation of National Environmental Action Plans (NEAPs). NEAP addresses the challenging environmental issues and sets out priority actions for implementation.

The initial NEAP was prepared in 1994 in response to Rio Declaration on Environment and Development. It was an output of the Earth Summit on Environment and Development that was held in 1992 in Rio de Janeiro, Brazil. The implementation of the first NEAP has been guiding environmental management in Sectors and LGAs. In line with this, other developments include adoption of the National Environmental Policy (1997) and the Environmental Management Act (Cap 191) of 2004. In 2005, environmental management in the country was fortified by mainstreaming environment into the National Strategy for Growth and Reduction of Poverty (NSGRP), popularly known as MKUKUTA in its Kiswahili acronym, hence providing opportunity for all sectors which are implementing MKUKUTA to implement the relevant environmental interventions.

Tanzania has intensified regional and international cooperation in environmental management through ratification and implementation of Multilateral Environmental Agreements (MEAs). In so doing, various Action Plans and Strategies have been prepared and are at different stages of implementation. These include National Biodiversity Strategy and Action Plan (2001); National Adaptation Plan of Action for Climate Change (NAPA) (2008); National Action Plan for Combating Desertification (NAP) (2004); National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants (POPs) (2005); National Action Plan for the Rotterdam Convention on Prior Informed Consent of Pesticides and Certain Hazardous Chemicals in International Trade (2008); and Wetland Strategy.

Since the preparation of NEAP, (1994) many environmental challenges emerged necessitating its review. Some of them include climate change; Genetically Modified Organisms (GMOs); ozone layer depletion; rapid urbanization; Persistent Organic Pollutants (POPs) and heavy metal pollution. The second NEAP was prepared in 2006 as a response to these emerging challenges and other environmental problems and is expected to be implemented within the span of five years.

1.2 Purpose of the Guidelines

The purpose of these Guidelines is to assist Sector Ministries and Local Government Authorities to prepare their Environmental Action Plans in a standard format so as to

ensure consistency with the existing national policies, legislation and MEAs to which Tanzania is a Party. This will enable the country to deal with environmental challenges more comprehensively.

The Guidelines have been developed to meet the requirements of the Environmental Management Act (Cap 191) of 2004. They are not exhaustive, but they provide guidance on key information that need to be included in the Environmental Action Plan (EAP). They provide framework on the process to be followed and indicate key issues that should be addressed.

1.3 Justification of the Guidelines

The Environmental Management Act (Cap 191) under Section 44(1) provides for preparation of the National Environmental Action Plan (NEAP) at an interval of every five years. The NEAP will, among other concerns, take into account Action Plans prepared under the auspices of Sector Ministries and Local Government Authorities. In the same vein, Sector Ministries and Local Government Authorities are required under Section 42(1) and 43(3) to prepare the Environmental Action Plans (EAP) which shall be in conformity with the NEAP. The EAPs prepared by Sector Ministries and LGAs with wider public participation shall identify environmental problems prevalent in their areas and recommend mitigation measures.

In line with this obligation, Section 13 of the Act empowers the Minister responsible for Environment to issue general guidelines to Sectors and LGAs for articulation of policy guidelines necessary for the promotion, protection and sustainable management of environment.

In this context, and with the understanding that a coordinated response to increasing environmental degradation is urgently needed, the Guidelines will facilitate coordination and planning in environmental management in the country. This is necessary, since sustainable environmental management can only be achieved by integrating environmental issues into planning and budgeting process in Sectors and LGAs.

1.4 Scope of the Guidelines

The Guidelines takes into account the requirements of the relevant national policies, EMA, NEAP, MKUKUTA and MEAs. It provides guidance for identifying environmental challenges prevalent in Sectors and LGAs and set measures to address such challenges. It includes a generic format for preparing EAP that indicates key environmental issues, priority actions, performance indicators, timeframe, required resources, responsible actors and possible sources of funding.

CHAPTER TWO: GENERIC APPROACH IN THE PREPARATION OF THE ENVIRONMENTAL ACTION PLAN

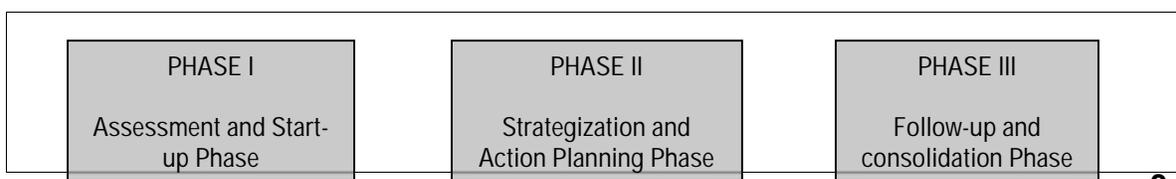
2.1 Preamble

The preparation of EAP can be divided into three phases as presented in Figure 1. Preparation of the EAP should be participatory involving stakeholders in identifying the environmental challenges facing Sectors or LGAs. The stakeholders will also get the opportunity to identify interventions and provide inputs. Key questions which should be answered in identifying stakeholders are:-

- i) Who are the key people to get involved in EAP?
- ii) Who are the people, organizations, businesses, and public agencies that might have a direct interest in environmental protection?
- iii) Who are the principal stakeholders or people/ groups with a vested interest in the work?
- iv) What institutions will be expected to make specific environmental investments?

Some of the key stakeholders includes, but not limited to the following:

- i) Local government authorities who have direct responsibilities for implementing most of the actions that evolves from the EAP planning process;
- ii) Environmental and civic organizations including environmental NGOs/CBOs;
- iii) Businesses and industries;
- iv) Public or private utility companies ;
- v) Environmental professionals;
- vi) Colleges, universities and schools especially departments in environmental studies (biology, ecology, geology, and other natural sciences as well as economics, urban planning, public policy, and other social sciences);
- vii) People who will be directly affected by environmental problems, such as individuals living adjacent to a dump site;
- viii) Religious and ethnic groups;
- ix) Labor unions and other workers' organizations;
- x) Development partners;
- xi) Vulnerable groups including elders, disabled and children;
- xii) Politicians; and
- xiii) Media - local newspapers, radio and television.



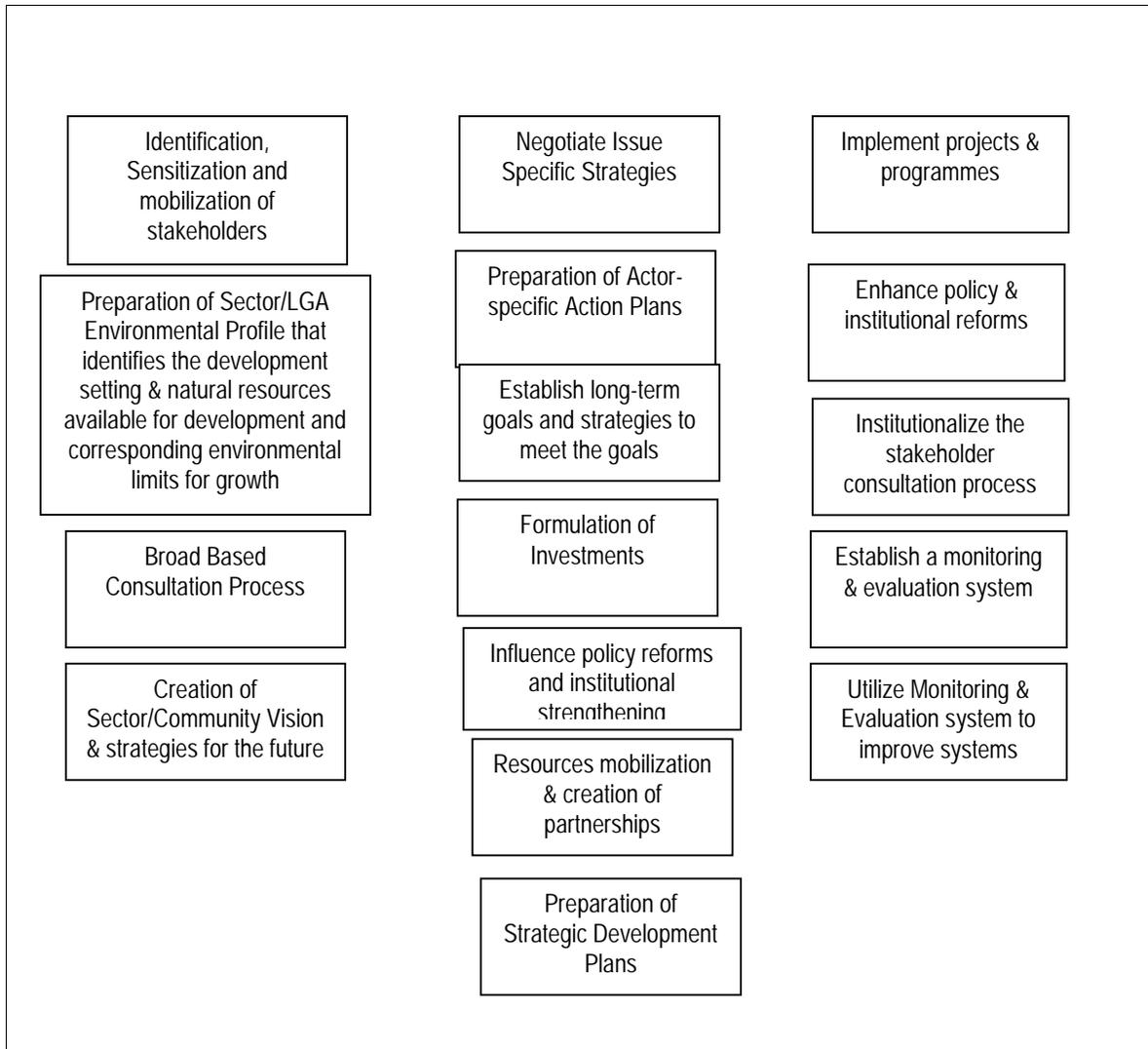


Figure 1: Schematic framework for developing Environmental Action Plan for Sectors and Local Government Authorities

The involvement of different institutions and affected individuals is usually manifested through the formation of multi-stakeholder working groups established around each prioritized issue. They should comprise of a mix of people of appropriate skills and competences to address the thematic issues. They also have the responsibility for reaching out to the rest of the stakeholders, soliciting their views on environmental priorities and solutions, educating them on the problems facing the Sector/LGA, and actively involving them in improving the situation.

At the local government level, the Opportunities and Obstacles to Development Planning (O&OD) methodology is appropriate since it empowers the *Vitongoji/ Mtaa* to participate effectively in planning for the environmental management.

At the sectoral level, consultative stakeholder meetings should be one of the good sources of information as it gives room for preparation of comprehensive plan. To enable this undertaking, awareness raising to all stakeholders on environmental challenges and their roles in addressing them is important.

2.2 Identification of Environmental Issues and Setting Priorities

The identification of Environmental issues will be done through stakeholders' consultative meeting, where they will identify environmental problems facing their locality. Research reports, literatures and observations can be used to identify environmental problems. Environmental issue assessments and priority setting are one of the most critical components of EAP which will culminate into the State of Environment. The environmental assessment will describe the impacts of the environmental problems in terms of the threats or risks they pose to human health, ecological health, and the quality of life.

Generally, environmental issue assessments fall into two broad categories: participatory and scientific assessments. Participatory assessments rely primarily on people to collect data and information on environmental problems in the community, while scientific assessments are more formalized methodologies that technically and statistically evaluate and document environmental conditions. Often, these two approaches are blended to develop issue assessments that are based on both scientific data and broad public input.

Many stakeholder groups establish Technical Advisory Committees (TAC), Environmental Committee /Task Forces to develop reliable information about environmental problems in the Sector/LGA. Their primary responsibilities include identifying environmental issues, reviewing and collecting existing sources of data, determining how best critical can be filled as well as they analysis of scientific data analyzing scientific data. Once the Technical Advisory Committee, Environmental Committee/Task Force completes its assessment, it presents to the broad stakeholder groups in the form of a State of the Environment for relevant decisions such as setting environmental priorities and respective interventions.

One of the most critical and time consuming stages of the environmental assessment process is identifying appropriate data and information sources, collecting data and putting them in a usable form. The Technical Advisory Committee/Environmental Committee/Task Force can save itself considerable time and resources by carefully identifying what kind of data is required prior to embarking on a data collection exercise.

The issues of characterizations provide a useful starting point in targeting data collection efforts. For example, the Technical Advisory Committee/Environmental Committee/Task Force might characterize one problem as “the poor management of solid waste that has a negative impact on human health and flooding.” This characterization will help identification of sources of information for the impacts of unmanaged solid waste in the Sector/LGA.

As such, the Technical Advisory Committee/Environmental Committee/Task Force should strive to collect enough data to provide a description of the threats to human health, natural environment, and other impacts associated with each problem. In reality, data is often incomplete, inaccurate, out-of-date, tangential, or in a form that is difficult to use. Thus, the Technical Advisory Committee/ Environmental Committee/Task Force will find itself constantly balancing the need to collect enough data to prepare meaningful Issue Assessments with the need to keep its data collection efforts both manageable and completed within the agreed timeframe. It is important to remember that no matter how much data is collected, the assessment will always be a blend of data and judgment.

The Technical Advisory Committee/Environmental Committee/Task Force should allocate sufficient time for collecting data. How much time they really need depends largely on the geographic size of the assessment area, the number of issues being assessed, the technical nature of the assessment and the degree of coordination among organizations managing different types of information. Data collection can be very time consuming, particularly if multiple organizations have overlapping responsibilities.

The stakeholder group, with facilitation from the Sector/Local Authority will need to establish a time frame for data collecting and then make sure the Technical Advisory Committee/Environmental Committee/ Task Force adheres to the schedule to the greatest degree possible. In some cases, government agencies and private organizations may charge a fee for copying of documents and other related costs for obtaining relevant information.

The following questions will help to guide the information gathering efforts:

- a) What steps can be taken when there is lack of data?
- b) How reliable and accurate is the information?
- c) What are some key information sources?

Having assessed the identified environmental problems, priority setting will follow. Priority setting will be done through a consultative meeting by picking the priorities from the list of many critical problems identified from assessment process. Priority setting helps target environmental improvements towards the most critical problems and can help ensure that the Sector or community achieves the greatest public health and environmental benefits for its money. A successful priority setting process will require the support and cooperation of all stakeholders.

2.3 Preparation of Environmental Action Plan

The Environmental Action Plan (EAP) is prepared to address the significant environmental problems identified during the priority setting phase. The preparation of the EAP begins with establishing priority actions, environmental goals/expected output, targets, indicators, timeframe and responsible entities.

Priority actions are meant to address the identified environmental problems taking into account the capacity of the Sector or LGA. These should be categorized into short-, medium- and long-term to facilitate their implementation.

Environmental goals provide an opportunity to build consensus among the implementing stakeholders on what it hopes to accomplish over a set period of 5 years.

Targets are measurable commitments to be realized within a specified time frame and are used in evaluating and measuring progress in implementing the EAP, while indicators measure whether environmental goals and targets have been achieved.

The next step in the preparation of the EAP involves reviewing existing environmental practices. This process can include examining the Sector/LGA's capabilities to address environmental problems, as well as external factors that may either assist or hinder the community. The implementing stakeholders then identify a set of actions to help achieve the goals and targets. These actions include educational activities, economic incentives, technological measures, community programs and regulatory actions to address various problems.

After identifying a range of possible actions, it is important that the implementing stakeholders choose monitoring and evaluation criteria that serve as the basis for selecting their preferred actions. They will probably need to undertake specific economic, engineering and/or environmental analyses to ensure that the selection of actions is based upon sound information. In order to maximize the effectiveness and usefulness of the EAP, it is critical to link the EAP with statutory planning processes at the local, regional and sectoral levels. A sample checklist of common environmental challenges, their impacts and proposed interventions is presented in Appendix I.

The draft EAP should be submitted to consultative stakeholder meetings and ultimately adopted by the Sector management or LGA Council. This EAP then serves as a long-term guide for environmental actions in the Sector or LGA. The EAP will need to be revised periodically; ideally every 5 years so as to reflect new information, technological advances and new environmental requirements.

2.4 Implementing Actions (On-Going)

All the planning efforts of the implementing stakeholder groups participate on developing a vision, assessing issues, establishing priorities, and developing an Action Plan for implementation. The environmental planning process helps ensure that the Sector or LGA is targeting the serious problems, as well as opportunities where environmental improvements can be readily achieved.

As the primary institution responsible for implementing recommendations from the EAP, it is absolutely critical that the Sector or LGA takes full "ownership" of the recommendations. This ownership can be manifested by integrating specific recommendations from the EAP into statutory planning processes of the Sector or LGA,

such as the preparation of a land-use plan or Sector/ LGA budget. The first step in project implementation is identifying all agencies and institutions with potential responsibilities for project implementation, including local, regional, and national governments, the private sector, and NGOs. The private sector offers one effective option for project implementation.

Experiences worldwide confirm that private companies through Public Private Partnership (PPP) can play a valuable role in implementing a range of environmental programmes such as in collection of solid waste to operating wastewater treatment plants. NGOs also offer enormous promise for implementing specific actions. Any implementation involving multiple institutions and private companies will require an appropriate organizational structure to ensure effective implementation either by modifying an existing structure or creating a new one. Once the proper organizational structure is established, the participation of these institutions can be secured through appropriate written agreements.

After securing the participation of all implementing institutions, the next step is to prepare an Implementation Plan. The Implementation Plan integrates each of the different actions into one overall, comprehensive programme. It helps ensure that each of the different actions work synergistically towards a common set of goals and targets. One of the biggest implementation challenges is project financing. A “Project Financing Plan” can help ensure that Sector or LGA has addressed all major issues related to securing adequate funding.

2.5 Monitoring and Evaluating Results (On-Going)

Once implementation has begun, it is important to monitor and evaluate results. An effective monitoring and evaluation system provides an opportunity to:

- a) Compare implementation efforts with original goals and targets;
- b) Determine whether sufficient progress is being made towards achieving expected results and mitigate gaps if any; and,
- c) Determine whether project timing is adhered to.

The first step in preparing a monitoring and evaluation plan is to review the environmental targets and indicators developed in the EAP to make sure they are still current and reflect the latest information. Next, it is important to establish a reporting system that will record the performance of all institutions with implementation responsibilities. This reporting system provides a system of accountability for all responsible parties on how well they are achieving the goals and targets established in the EAP. As such the use of common sources and formats for data and information management is critical.

Once the targets and indicators are finalized, the reporting system established, and data collected, it is time to conduct the evaluation. The evaluation process involves comparing actual results to the targets identified in the EAP. One of the most important aspects of an

evaluation process is that it actually provides usable results to project implementers; information that can be utilized by project managers and staff to improve results. The evaluation also provides valuable “lessons learned” that can be incorporated into future implementation activities. Finally, it is important to communicate the results of the evaluation process with Sector stakeholder or community members and report their responses to Sector Management or Council and obtain their feedback for improvement of the EAP.

CHAPTER THREE: GENERAL GUIDELINES FOR THE SECTOR ENVIRONMENTAL ACTION PLAN (SEAP)

Outline of the SEAP

Executive summary

Chapter 1: Introduction

- 1.1 Objective of the SEAP
- 1.2 Methodology
- 1.3 Sector Social economic

Chapter 2: Institutional and Legal Framework

- 2.1 Institutional Structure in Relation to Environmental Management
- 2.2 Implementation of National Policies, Legislation and Multilateral Environmental Agreements
- 2.3 Involvement of Other Stakeholders

Chapter 3: Sector State of the Environment

Chapter 4: Environmental Action Plan

- 4.1 SWOT Analysis of institution capacity
- 4.2 Strategic objective and activities
- 4.3 Detailed Action Plan
- 4.4 Funding source/arrangement
- 4.5 Reference/Bibliography

Executive Summary

The Executive Summary should include a brief outline of the Sector Profile and each chapter of the Environmental Action Plan, allowing the reader to obtain a clear understanding of the state of the environment in the Sector, its environmental implications and management of the key environmental problems in a short, medium and long term. The Executive Summary should be written as a stand-alone document, able to be reproduced on request by interested parties who may not wish to read the EAP as a whole.

CHAPTER 1: INTRODUCTION

Notes

The Introduction Chapter aims to provide a general synopsis of the Sector, its general socio-economic development profile in particular with key focus to national policies, legislation, plans, MEAs and strategies link to environment. It will provide the purpose of the EAP and how the Sectors intend to use it for its own development agenda and how other stakeholders may use the same.

1.1 Objectives of EAP

State Aims/ purpose/ objectives of EAP: identify target users of EAP.

1.2 Methodology used to compile the EAP

Briefly explain methodology used to compile the EAP (e.g. primary filed research, questionnaire, group discussion etc), indicating key participants such as industries, NGOs and other key stakeholders.

1.3 Sector Socio-economic development

Provide information on related economic activities (formal and informal); contribution to GDP; future economic plans

CHAPTER 2: INSTITUTIONAL AND LEGAL FRAMEWORK

Notes:

This Chapter is aimed at providing an overview of the Sector institutional structure, implementation status of national policies, strategies, plans, legislation and Multilateral Environmental Agreements (MEAs) and their adequacy in facilitating the mandate of Sector in environmental management in general. It will also highlight involvement of other stakeholders.

2.1 Institutional Structure in Relation to Environmental Management

Provide overview on administration, roles and responsibilities, existence of Sector Environment Section/Unit. A sector organization chart (organogram) should be included.

2.2 Implementation of National Policies, Legislation and Multilateral Environmental Agreements

Provide information on implementation of national policies, EMA and related environment legislation and MEAs, if applicable (refer Appendices II, III and IV for a list of relevant policies, strategies, plans, legislation, MEAs and MDGs).

Highlight on the formulation and implementation of sector legislation relevant to environmental management (e.g. forest, fisheries, tourism, transportation, industrial, water etc) referring to relevant articles.

Discuss their adequacy to environmental management within the Sector.

2.3 Involvement of Other Stakeholders

Highlight on the involvement of other stakeholders (private sector, NGOs/CBOs, faith based organizations, schools, international/regional organizations, sister cities) in environmental management.

CHAPTER 3: SECTOR STATE OF THE ENVIRONMENT

Notes:

This Chapter provides a synopsis of the state of the environment of the Sector. It highlights environmental resources, key environmental challenges and their impacts as well as initiatives to addresses these challenges.

Provide information on:

- sector resources and services (e.g. water, minerals, livestock, industry, energy, forest, wildlife, land, transport, health and education);
- sector activities and how they are undertaken (e.g. irrigation, fishing, mining, grazing, manufacturing, power generation and use, logging, tourism, housing, agriculture, road construction, transportation, healthcare waste management)
- key environmental challenges posed by sectoral activities such as water pollution, soil pollution, land degradation, air pollution, desertification and deforestation;
- impacts of global environmental concerns to the sector such as
 - climate change - droughts, floods, sea level rise, reduce crop yield, melting of ice, decrease of wildlife, spread of climate related diseases, increase water level;
 - GMOs – loss of indigenous crop varieties,
 - ozone layer depletion – skin cancer, immunity suppression, eye cataract
- impacts of environmental disasters (earthquakes, landslides, and volcanic eruptions) to the sector
- initiatives to addresses these environmental challenges.

CHAPTER 4: ENVIRONMENTAL ACTION PLAN

Notes:

The aim of this Chapter is to identify gaps to be filled so that environmental management can be achieved without compromising human health and environmental integrity. It is expected that Sectors will give a thorough thought on the identified gaps, strategies to fill these gaps and develop plans for their implementation.

4.1 SWOT Analysis of Institutional Capacity

Provide information on Strength, Weakness, Opportunity and Threat (SWOT) analysis in terms of human resources, finance, institutional arrangement/organization, legislation and awareness

4.2 Strategic Objective and activities

Provide strategic objectives to fill the identified gaps, identify key activities that be implemented in order to achieve that planed objective

4.3 Detailed Action Plan

Provide action plan to address the gaps and constraints discussed in different chapters (specify short, medium and long term strategies/activities, identify responsibilities, indicators of progress, resources needed both human and financial resources) and source of funds.

Environmental issues/challenge	Priority actions	Targets	Expected output	Indicator	Time frame	cost	Implementers
1. Environmental challenges posed by sector 1.1 Water pollution 1.2 Soil pollution 1.3 Land degradationetc							
2. Impacts of global environmental concerns affecting the sector 2.1 Climate change 2.2 Ozone layer depletion 2.3 Introduction of GMOsetc							
3. Impacts of environmental disasters on the sector 3.1 Earthquakes 3.2 Landslides							

Environmental issues/challenge	Priority actions	Targets	Expected output	Indicator	Time frame	cost	Implementers
3.3 Volcanic eruptionsetc							

4.4 Funding sources / arrangement

Provide information on mechanism for resource mobilization to implement the EAP; potential sources of funding such as government resources, development partners and private sector, and on-going environment related projects.

References/ Bibliography

Provide a list of key references/bibliography that were source of information for developing EAP.

CHAPTER FOUR: GENERAL GUIDELINES FOR THE LOCAL GOVERNMENT ENVIRONMENTAL ACTION PLAN (LEAP)

Outline of the LEAP

Executive Summary

Chapter 1: Introduction

- 1.1 Objective of EAP
- 1.2 Methodology used to compile the EAP
- 1.3 Geographical location, Physical Features and Climate
- 1.4 Demography and Socio Economic characteristic
- 1.5 Physical Infrastructure and Social services

Chapter 2: Institutional and legal Framework

- 2.1 Institutional Structures in relation to Environmental Management
- 2.2 Implementation of national Policies, Legislation and By- laws
- 2.3 Involvement of other Stakeholders

Chapter 3: State of the Environment

- 3.1 Land, land use and management
- 3.2 Forests and Woodlands
- 3.3 Water Resources
- 3.4 Biodiversity
- 3.5 Urban and Rural Environment
- 3.6 Energy Resources and usage
- 3.7 Climate Change and ozone Layer Depletion impacts
- 3.8 Environmental Disasters
- 3.9 Marine and Coastal Environment

Chapter 4: Environmental Action Plan

- 4.1 SWOT Analysis of Institution
- 4.2 Strategic objective and Activities
- 4.3 Detailed Action Plan
- 4.4 Funding Source/Arrangement
- 4.5 Funding mechanism and Arrangement
- 4.6 Reference/ Bibliography

Executive Summary

The Executive Summary should include a brief outline of the Sector/LGA Profile and each chapter of the Environmental Action Plan, allowing the reader to obtain a clear understanding of the state of the environment in the Sector/LGA, its environmental implications and management of the key environmental problems in a short, medium and long term. The Executive Summary should be written as a stand-alone document, able to be reproduced on request by interested parties who may not wish to read the EAP as a whole.

CHAPTER 1: INTRODUCTION

Notes

The Introduction Chapter aims to provide a general synopsis of the Local Government Authority, its general socio-economic development profile in particular with key focus to national policies and strategies with link to environment. It will provide the purpose of the EAP and how the LGAs intend to use it for its own development agenda and how other stakeholders may use the same.

1.1 Objectives of EAP

State Aims/ purpose/ objectives/goal/output of EAP: identify target users of EAP

1.2 Methodology used to compile the EAP

Briefly explain methodology used to compile the EAP (e.g. primary field research, questionnaire, group discussion etc), indicating key participants (e.g. O & OD, EPM process, industries, NGOs, other key stakeholders)

1.3 Geographical location, Physical Features and Climate

Provide information on geographical location including a map; physical features including topography, soils, natural vegetation and hydrology; and climate characteristics including rainfall, temperature, humidity and wind.

1.4 Demography and Socio-economic characteristics

Provide information on demography (population size, growth, density), groups (sex, age), distribution, mobility, dependent ratio and labour power); economic activities (farming, animals' husbandry, hunting, fishing, industrial activities etc); contribution to GDP; and poverty status.

1.5 Physical Infrastructure and Social Services

Provision of information on social services such as piped water supply, sewage disposal facility, storm water drainage system, religious services, cultural activities, liquid and solid waste management system and disposal system, electricity, road networks, telecommunication, health care services and education provision.

CHAPTER 2: INSTITUTIONAL AND LEGAL FRAMEWORK

Notes:

This Chapter is aimed at providing an overview of the LGAs institutional structure, implementation status of national policies, legislation and by-laws at local level and their adequacy in facilitating the mandate of LGAs in environmental management in general. It will highlight involvement of other stakeholders.

2.1 Institutional Structure in Relation to Environmental Management

LGAs will need to provide an overview on administration, jurisdiction, roles and responsibilities, existence of environmental committee and its composition, with particular focus to environmental management in general. An organization chart (organogram) should be included.

2.2 Implementation of National Policies, Legislation and By-laws

It will also be necessary for LGAs to provide information on implementation of national policies, EMA and other related environment legislation at local level (refer Appendices II, III and IV for a list of relevant policies, strategies, plans, legislation, MEAs and MDGs).

They (LGAs) should give a highlight on the formulation and implementation of By-Laws relevant to environmental management (e.g. waste-water discharge, solid waste disposal, noise pollution control) referring to relevant articles.

If necessary they (LGAs) should explain their adequacy to manage environmental pollution and natural resources management.

2.3 Involvement of Other Stakeholders

They should give a highlight on the involvement of other stakeholders (private sector, NGOs/CBOs, faith based organizations, schools, international/regional organizations, sister cities) in environmental management.

CHAPTER 3: STATE OF THE ENVIRONMENT

Notes:

This Chapter provides synopsis of the state of the environment of the LGA. It highlights environmental resources, key environmental challenges their linkage to different sectors their impacts as well as initiatives to addresses them.

3.1 Land, Land Use and Management

They (LGAs) will provide information on the existing land resources, land use planning, land degradation and land management including soil conservation

3.2 Forests and Woodlands

It will also provide information on forest resources; environmental challenges such as deforestation, wildfires, illegal logging; conservation that involvement but not limited to initiatives including forest conservation, afforestation and other forest management practices in general

3.3 Water Resources

LGAs will need to provide information on water availability, water supply and demand, water use, water quality; environmental challenges on water resources such as water pollution, water scarcity, encroachment of water catchment areas; and the initiatives on their conservation, rainwater harvesting and drilling of wells, regulation and control of point sources of pollution, removal of unwanted tree species in water catchment areas.

3.4 Biodiversity

The LGAs should provide information on ecosystem diversity, species diversity, genetic diversity, specie endemism, endangered species; environmental challenges including invasive species, poaching, loss of biodiversity including extinction of species, destruction of habitats, human-wildlife conflict; and initiatives such as wildlife conservation, control of invasive species, and conservation of habitats.

3.5 Urban and Rural Environment

The LGAs should also provide information on human settlement development and management, urban/rural waste water, liquid waste and solid waste management; environmental challenges including environmental pollution (air, water, land/soil, noise), land degradation from mining activities (sand, gravels, maram), waste collection and disposal, proliferation of unplanned settlements; and initiatives such as plot survey and allocation, waste recycling, environmental cleaning campaigns, sister cities cooperation, and public-private partnership in service provision.

3.6 Energy Resources and Usage

The LGAs should provide information on biomass energy, hydropower, coal, petroleum, natural gas, solar energy, biogas, and implications of current energy usage trends; environmental challenges including deforestation, frequent droughts, encroachment of water catchment areas; and initiatives such as promotion of efficient cook stoves, afforestation, co-generation of electricity, promotion of renewable energy such as photovoltaic, and fuel switching from fossil fuel to natural gas.

3.7 Climate Change and Ozone Layer Depletion Impacts

They should provide information on impacts of climate change and variability such as droughts, floods, climate related diseases (such as malaria, schistosomiasis, cholera, dengue fever (*'malale'*), rift valley fever, east coast fever, anthrax), sea level rise, submergence of islands, intrusion of salt water into water wells, decrease of wildlife and habitats; ozone layer depletion impacts such as eye cataracts, immunity suppression and skin cancer. Also provide information on adaptation to climate change such as drought resistance crops, and mitigation initiatives such as CDM projects, fuel switching to natural gas by industries, use of renewable energy (wind, solar and hydropower).

3.8 Environmental Disasters

They should provide information on environmental disasters including earthquakes, landslides, and volcanic eruptions; and initiatives including re-settlement of the vulnerable population and early warning system.

3.9 Marine and Coastal Environment

It is also necessary to provide information on currents and tidal regime, salinity, mangrove forests, fish resources, coral reefs, sea turtles, marine mammals, sea grass

CHAPTER 4: ENVIRONMENTAL ACTION PLAN

Notes:

This Chapter aims to identify gaps in the environmental management for the purpose of ensuring that gaps are filled so that environmental management can be achieved without compromising human health and integrity of the environment. It is expected that LGAs will give a thorough thought in identifying strategies to fill the gaps and developing plans to implement the strategies

4.1 SWOT Analysis of Institutional Capacity

LGAs will need to provide information on Strength, Weakness, Opportunity and Threat (SWOT) analysis in terms of human resources, finance, institutional arrangement/organization, laws and by-laws, and awareness

4.2 Strategic Objective and activities

The LGAs should identify the strategic objectives to in order to fill the identified gap, for each strategic objective identifies key activities that need to be done to address the strategic objective.

4.3 Detailed Action Plan

They should provide an action plan to address the gaps and constraints discussed in different chapters (specify short, medium and long term strategies/activities, identify responsibilities, indicators of progress, resources needed (both human and financial resources) and source of funds.

Environmental issues/challenge	Priority actions	Targets	Expected output	Indicator	Time frame	cost	Link sectors	Implementers
1. Land Degradation								
2. Water Supply and Water Pollution								
3. Aquatic Resources Management								
4. Loss of Wildlife Habitats and Biodiversity								

5. Deforestation								
6. Management of Built Environment – Urban Pollution								

4.4 Funding sources / arrangement

They should give information on mechanism for resource mobilization to implement the EAP; potential sources of funding such as government resources, development partners, CBO and private sector, and on-going environment related strategies and projects.

4.5 Funding Mechanism and arrangement

They should explain the management and arrangement of the fund to the council

4.6 References/ Bibliography

They should provide list of key references/bibliography that information was obtained for developing EAP.

APPENDICES

APPENDIX I: A CHECKLIST OF COMMON ENVIRONMENTAL ISSUES AND IMPACTS

ENVIRONMENT AND NATURAL RESOURCE ISSUES	NEGATIVE ENVIRONMENTAL IMPACT	PROPOSED REMEDIAL ACTIONS
<p>LAND-BASED ISSUES/ ACTIVITIES Land use pattern and methods of acquisition, tenure or access issues; gender biases in customary laws</p>	<ul style="list-style-type: none"> • Loss of agricultural/ grazing land • Conflicts over land use – farmers, pastoralists, miners, damming, settlements • Loss of wetlands, water catchments, game/forest reserves (e.g. Ihefu and Kilombero, mountain slopes of Livingstone, Kipengere, Udzungwa, Uluguru, Kilimanjaro; main water sources for Nyasa, Ruaha, Kilombero, Rufiji, Ruaha, Pangani Basins 	<ul style="list-style-type: none"> • Access to appropriate inputs and information and strategies against degradation • Governance issues related to land rights by use, gender • Resettlement plans/ Compensation plan • Adapt / incorporate land management plan in sector
<p>Agriculture Improper farming methods – slash-and-burn, parallel vs. contour ridging, improper use of chemical inputs;</p>	<ul style="list-style-type: none"> • Declining quality and fertility of soil, hence falling productivity and food security • Landscape degradation; slope tilting and faster run-off • Soil and water pollution and siltation downstream (wetlands, lakes, oceans) • Loss of biodiversity 	<ul style="list-style-type: none"> ▪ Disseminate through extension technologies that increase productivity of land; Techniques of irrigation (sprinkle, seepage, canal) - Traditional Irrigation Programmes (TIP) ▪ Set by-laws against improper farming methods e.g. farming on the steep slopes, misuse of chemical inputs, farming on slopes without terracing, slash and burn farming practices, encroachment of forest reserves etc. ▪ Awareness raising on proper farming methods ▪ providing farming extension services ▪ Pest management interventions ▪ Management of runoff
<p>Livestock - livelihood as source of food, biomass energy, incomes Over-grazing / overstocking</p>	<ul style="list-style-type: none"> • Erosion - exposure to wind and water run-off • Encroachment to farming lands and forest reserves • Falling incomes and food security Desertification through overstocking 	<ul style="list-style-type: none"> ▪ Better animal husbandry and crop farming ▪ Practise proper land use planning ▪ De-stocking (keeping the number of livestock that can be sustained by the available pasture land) and modern livestock keeping (commercialised).
<p>Forest resources As source of energy, building materials, beekeeping, wild fruits, exotic and medicinal plants; soil cover from erosion – concerns including over-exploitation, encroachment of forest land for agriculture, human settlement; bush fires, roads construction</p>	<ul style="list-style-type: none"> • Loss of forest / vegetation cover • Loss of fuel wood, charcoal, non-timber products, medicinal and exotic plants • Soil erosion on bare lands: - desertification • Loss of biodiversity 	<ul style="list-style-type: none"> ▪ Develop energy efficiency programmes and alternative energy sources - energy efficient stoves or other sources (e.g. photovoltaic systems, solar, wind, etc) ▪ Incorporate better forest management practice. ▪ Promote agro-forestry or afforestation campaigns. ▪ Natural Woodlands Management (Participatory Forest Management (PFM); the Udzungwa Mountains Forest Management and Biodiversity Conservation Project, Tanzania Forestry Action Plan (TFAP)) ▪ Establish woodlots by large consumers of trees including education institutes, armed forces and industries (URT 2006b)

ENVIRONMENT AND NATURAL RESOURCE ISSUES	NEGATIVE ENVIRONMENTAL IMPACT	PROPOSED REMEDIAL ACTIONS
<p>Wildlife <i>Source of food and income; tourism , employment and national income -</i> Over- hunting; destruction of wildlife habitats; killing of wildlife due to roads through game reserves / national parks</p>	<ul style="list-style-type: none"> • Loss of food (game meat), employment and incomes from less tourism • Loss of wildlife habitats leading into animals migration into human settlement, damage to crops and loss of human life 	<ul style="list-style-type: none"> ▪ Incorporate better wildlife management practice in collaboration with local communities ▪ Wildlife Management Areas (WMAs) ▪ Joint forest management
<p>Desertification Removal of vegetation cover due to overgrazing, bad farming practices e.g. slash and burn,, farming on steep slopes without across-terraces etc.</p>	<ul style="list-style-type: none"> • Migration of people and animals leading to land use conflicts • Drying of rivers • Loss of biodiversity • Gullies erosion resulting from torrential rainfall 	<ul style="list-style-type: none"> ▪ Introduce communal forest management ▪ Tree planting and protection of forests ▪ Use modern farming practices ▪ Use energy serving stoves ▪ Control bush/forest fires ▪ De-stocking/ modern livestock keeping practices
<p>WATER RESOURCES Access to safe water for human consumption and for use in production (agriculture, fisheries, livestock, power generation, manufacturing). Increased human settlements Activities around water sources upstream / catchments leading to water pollution; alteration of water flows / drainage pattern</p>	<ul style="list-style-type: none"> • Loss of access to quality water • Increased cost of water for human consumption and industrial use • Increased prevalence of water-related and water-borne diseases • Damage to crop lands and houses by floods • loss of income due to declined fish catch • Biodiversity/habitat loss • Siltation and pollution due to agricultural and industrial activities • Increased costs due to lack of water like time and distance for rural areas, the drudgery and cost to women and girls' time off education; • Loss of productivity due to ill-health); • Power load shading (hydropower); • Water use conflicts 	<ul style="list-style-type: none"> ▪ Include water management component into sector plans ▪ Preserving water sources against pollution of surface and ground water ▪ Rain water-harvesting techniques ▪ Land-use planning and human settlements plans ▪ Emphasise communal management of water resources ▪ Solid waste management/ sanitation in rural areas ▪ Management of industrial effluent to rivers, lakes, oceans ▪ Rural water supply systems and management ▪ Implement Strategy on Urgent Actions on Land Degradation and Water Catchments (2006) ▪ Enforce existing legislation, regulations and by-laws
<p>Fisheries: lakes, rivers, sea sources of food, incomes Improper fishing methods (over fishing, use of small mesh/nets, poison, dynamite); extent and possible causes of loss of fish; pollution from industrial effluent and municipal solid waste, wash-down of farm chemical inputs or inorganic fertilisers; wrong</p>	<ul style="list-style-type: none"> • Destruction of fish breeding sites • Loss of fish stocks, fish-species • Contaminated foods • Threat to sustainable incomes • Possible conflicts over territorial waters 	<ul style="list-style-type: none"> ▪ Catch monitoring: landing site inspection; shore side surveillance; ▪ Use by-laws; where not available, set by-laws against unsustainable fishing such as use of dynamites, poisons, use of harsh fish catching gears (e.g. Small mesh/nets) etc. ▪ Emphasise communal management of fishing grounds ▪ Undertake research on fish stocks and size and type in order to determine the proper fishing gears to be used. ▪ Sensitization and awareness-raising on proper fishing technology and impact of unsustainable human activities on such natural resource.

ENVIRONMENT AND NATURAL RESOURCE ISSUES	NEGATIVE ENVIRONMENTAL IMPACT	PROPOSED REMEDIAL ACTIONS
fishing methods/ over-fishing; invasion of territorial fishing areas.		<ul style="list-style-type: none"> ▪ Restricting access to controlled waters Community-based system of managing fish resources ▪ Treatment of industrial effluent to meet national water quality standards; ▪ Promote safe use of agrochemicals in areas surrounding water bodies; ▪ Proper solid waste management
<p>Wetlands: Dominant wetland types:</p> <ul style="list-style-type: none"> - Tidal/coastal flood plain (salt water) - Coastal river plain (brackish estuary) - Inland tidal river plain - River flood plain (influenced by rainfall and river discharge) - Inland depression (regime determined by rainfall, local runoff, and evaporation) and - Small inland valleys (upper valley reaches <p>As source of livelihood but are fragile ecosystems, prone to destruction due to activities upstream (e.g. farming, deforestation, grazing, construction, mining)</p>	<ul style="list-style-type: none"> • Food poisoning and water pollution • Loss of cultivable wetland areas • Wetland pollution • Damage to recharge zone of wetland areas; • Loss of biodiversity • Loss of fish catch and other resources 	<ul style="list-style-type: none"> ▪ Incorporate better wetland management practice in collaboration with local communities ▪ Empower local communities as resource managers ▪ Recognize the role of women ▪ Policies safeguard and strengthen wetlands biodiversity and local livelihoods ▪ Involving people in planning processes Network of wetland conservation organisations E.g. the Sustainable and Integrated Management of the Malagarasi-Muyovozi Ramsar Site Project (SIMMORS) and Sustainable Wetlands Management
<p>Marine and coastal areas Fishing (see Fisheries) Marine Farming Ocean going-vessels</p> <ul style="list-style-type: none"> • Tourism; municipal solid waste; [scuba diving]; dumping of hazardous waste under false classification as “fertilizer,” “fuel”, “raw materials”; gas and petroleum exploration; bad methods of fishing; lime making; Boats/ships dumping wastes, effluents, emissions 	<ul style="list-style-type: none"> • Depleting stocks or destroying marine biodiversity • Destruction of coastal shelf • Destruction of marine biodiversity and marine relief (coral structures) • Marine and coastal water pollution; • Loss of biodiversity • Beach erosion • Loss of tourism • Food [chain] contamination 	<ul style="list-style-type: none"> ▪ Education, enforcement of appropriate fishing methods ▪ Waste management – especially of tipping sites to contain odour, rodents, insects and related health problems; proper equipment costly ▪ Fair fees agreed by stakeholders (ship operators) ▪ Information and capacity building in detection, monitoring of hazardous waste (Basel Convention on the Control of Transboundary Movements of hazardous Waste and their Disposal) ▪ Use alternative materials for lime making ▪ Construct beach wall fence; ▪ Enforce legislation, regulations and by-laws on conservation of coastal areas

ENVIRONMENT AND NATURAL RESOURCE ISSUES	NEGATIVE ENVIRONMENTAL IMPACT	PROPOSED REMEDIAL ACTIONS
<p>AIR QUALITY Poor air quality (indoor and ambient) due to land-based activities such as slash-and-burn, forest fires, industrial, traffic and domestic gaseous emissions (use of fuel wood); dust due to wind in dry lands; open burning of municipal solid waste;</p>	<ul style="list-style-type: none"> • Smog (heavily polluted air) leading to health hazards (e.g. respiratory diseases, lung cancer, stillbirths); • Reduced visibility problems to traffic (smog esp. in urban areas) • Loss of ability to work and generate income 	<ul style="list-style-type: none"> ▪ Promote the use of cleaner technologies, especially in urban areas ▪ Improve farming practices ▪ Introduce/enforce by-laws to control setting of forest fires/bush fires ▪ Establish/encourage joint/communal forest management ▪ Afforestation and protection of forest reserves ▪ Cleaner production; ▪ Introduce polluter pays ▪ Traffic licensing and management (e.g. public transport system, fuel and vehicle standards, road pricing charges; differentiated vehicle taxes ▪ Enforce guideline on use of / or ban harmful chemicals
<p>Urban (air, land, water) pollution</p> <ul style="list-style-type: none"> • Manufacturing activity versus population settlements; • Farming in urban and animal husbandry in urban and peri-urban areas; Improper industrial (manufacturing, garages, entertainment, petrol stations) location; • Improper disposal of solid waste; • Use and disposal of plastic packaging material; scrap metal; electronic waste; • Petty/informal commercial activities; • Consumption of biomass energy sources ;Sources of water supply; unplanned settlements; 	<ul style="list-style-type: none"> • Improper disposal of effluent and gaseous emission leading to pollution in settlement areas • Health problems – hazardous pollutants from cast away plastics such as toxic gases (“dioxins”) leading to reproductive abnormalities, cancer etc. • Noise pollution • Incidences of fire (due to petrol stations) resulting into loss of life, destruction of property 	<ul style="list-style-type: none"> ▪ Improve land-use planning ▪ Upgrading of unplanned settlements ▪ Implement / enforce EMA 2004 and Land Act 1999 ▪ Improve liquid and solid-waste management ▪ Storm water drainage and erosion protection ▪ Urban Greening and Management of Open Spaces ▪ Improve urban transport infrastructure ▪ Introduce measures to permit and/or control air pollution from transport including introduction of effective and efficient public transport system, fuel and vehicle standards, road pricing charges, differentiated vehicle taxes, Improved urban transport infrastructure. ▪ International agreements e.g. voluntary agreements for toxic emissions: global ozone policy and new technology ▪ Urban water supply system and management ▪ Urban Environmental Management ▪ Tanzania’s “Sustainable Cities Programme”, ▪ Management of industrial pollution and Cleaner Production Technologies ▪ Support strategies to recycle plastics, scrap metal and other wastes ▪ Managing extraction of building materials ▪ Managing petty/informal trading, enforcement of laws/ by-laws ▪ Consumption of alternative energy sources ▪ Proper management of scrap metal and electronic waste
<p>Chemical pollution Improper use of chemicals (mining, industrial and energy equipment) leading to pollution of the environment, leakage and spillage of oils in garages; use of hazardous</p>	<ul style="list-style-type: none"> • Loss of biodiversity • Contamination of water resources • Loss of soil fertility • Increase in diseases associated with pollution or intoxication 	<ul style="list-style-type: none"> ▪ Promote safe use of chemicals ▪ Encourage use of protective gears ▪ Strengthen policies and legal provisions related to chemicals and hazardous waste, ▪ Educational programmes on hazards of chemicals and safe handling procedures ▪ Implement regional and international agreement on chemicals and other

ENVIRONMENT AND NATURAL RESOURCE ISSUES	NEGATIVE ENVIRONMENTAL IMPACT	PROPOSED REMEDIAL ACTIONS
<p>chemical and poor management of hazardous wastes poses risks to health and the environment</p>		<p>international processes on chemicals such as Stockholm, Rotterdam, Basel and Bamako conventions; the Strategic approach for International Chemicals Management (SAICM), Globally Harmonized system for labelling and Chemical Hazard Communication</p> <ul style="list-style-type: none"> ▪ Strengthen requirements on chemical labelling e.g. all important information should be as stated on the label ▪ Undertake risk assessment and management of chemicals ▪ Prohibit use of toxic and hazardous chemicals ▪ Regular training of inspectorate services of key sectors such as Agriculture, labour Environment and Health ▪ Provide working tools ▪ Develop guidelines on management chemicals and hazardous waste ▪ Introduce a scheme to screen imported technologies and products that contain heavy metals ▪ Introduce effective by laws to control/ prevent pollution. ▪ Introduce emission and discharge permit based on levels of pollutants and pollution loading
<p>CLIMATIC CHANGE AND ADAPTATION Extreme weather - drought, floods, storms; change of patterns of productive activities; Global warming resulting from greenhouse gases emissions primarily from combustion of fossil fuel; ozone layer thinning</p>	<ul style="list-style-type: none"> • Increase of temperature • Increase in frequency and scale of extreme weather – drought, floods, storms/ cyclones, desertification • Sea level rising, coastal erosion, decrease in volumes of rivers affecting hydropower; • Decreased water supply; • Worsening existing vulnerabilities – low harvests, food insecurity; • Loss of biodiversity; • human health risks including spread of disease vectors; • Coastal zone degradation 	<ul style="list-style-type: none"> ▪ Integrate responses to climate change and adaptation measures ; ▪ Early warning, integrate impacts into macroeconomic projections for disaster relief, recovery efforts ▪ Reduce dependency on rain-fed agriculture; do rain-water harvesting ▪ Reducing emissions ▪ Removal of carbon from atmosphere through enhanced fixation in forests (afforestation) or in the sea ▪ CO₂ separation, sequestration, and storage. ▪ Search for renewable energy and energy-saving technologies (energy) ▪ Promote energy efficiency ;
<p>BIOSAFETY AND ANY OTHER RELEVANT ENVIRONMENTAL AND NATURAL RESOURCES ISSUE</p> <ul style="list-style-type: none"> • Extent/ causes of loss of animal habitat / loss of plants and rare plant species, 	<ul style="list-style-type: none"> • Risks to human and animal health, biodiversity and environment, raising socio-economic and ethical concerns • Loss of balance of ecosystems 	<ul style="list-style-type: none"> ▪ Enforce National Biosafety Framework (NBF) as a set of policy, legal and administrative and technical instruments ▪ Establish risk assessment and risk management ▪ Public awareness on the NBF ▪ Establish nature protected areas ▪ Provision of information to public (e.g. mandatory labelling and accurate disclosure of content, labelling, and certification by bureau of standards ▪ Eco-labelling

ENVIRONMENT AND NATURAL RESOURCE ISSUES	NEGATIVE ENVIRONMENTAL IMPACT	PROPOSED REMEDIAL ACTIONS
<p>poaching, population pressure, expansion of agricultural activities at expense of forests, development of human settlement.</p> <ul style="list-style-type: none"> • Risk to environment and to human and animal health as a result of Genetically Modified Organisms (GMOs). 		<ul style="list-style-type: none"> ▪ Explore and use opportunities available as a result of our country being a part to certain multilateral environmental agreements

APPENDIX II: LIST OF RELEVANT POLICIES, STRATEGIES, PLANS AND LEGISLATION

A. Policies

1. Agriculture and Livestock Policy (1997)
2. The National Employment Policy (year ?)
3. Community Development Policy (1996)
4. The Mineral Policy of Tanzania (1997)
5. National Environmental Policy (1997)
6. National Higher Education Policy (1999)
7. National Beekeeping Policy (1998)
8. Education and Training Policy (1995)
9. National Forest Policy (1998)
10. Cultural Policy (1997)
11. The Food and Nutrition Policy for Tanzania (1992)
12. National Tourism Policy (1998)
13. National Health Policy (1990)
14. The Wildlife Policy of Tanzania (1998)
15. National Human Settlements Development Policy (2000)
16. Sustainable Industrial Development Policy SIDP (1996-2020)
17. The National Science and Technology Policy for Tanzania (1996)
18. National Youth Development Policy (1996)
19. The National Energy Policy (2003)
20. National Policy on HIV/AIDS (2000)
21. Policy on Women in Development in Tanzania
22. National Telecommunication Policy (1997)
23. The National Investment Promotion Policy (1996)
24. Cooperative Development Policy (1997)
25. National Micro-Finance Policy (2000)
26. National Transport Policy (2003)
27. Land Policy (1995)
28. National Population Policy (2006)
29. National Water Policy (2002)
30. National Informational and Communication Technology (ICT) Policy (2003)
31. National Trade Policy (2003)
32. National Livestock Policy (2006)
33. National Construction Industry Policy (2003)
- 34.

B. Programmes, Strategies and Plans

1. Rural Development Strategy
2. Water Sector development Strategy (2005)
3. Tanzania Development Vision 2025
4. Tanzania Assistance Strategy (TAS)
5. National Strategy for Growth and Reduction of Poverty (NSGRP) (2004)
6. Agricultural Sector Development Strategy (2001)
7. Agricultural Sector Development Programme
8. 10 years Transport Sector Investment Programme (2007)
9. Local Government Transport Programme (2008)
10. National Integrated Coastal management Strategy

11. Local Government Reform Programme (2002)
12. Power System Master Plan

C. Legislation

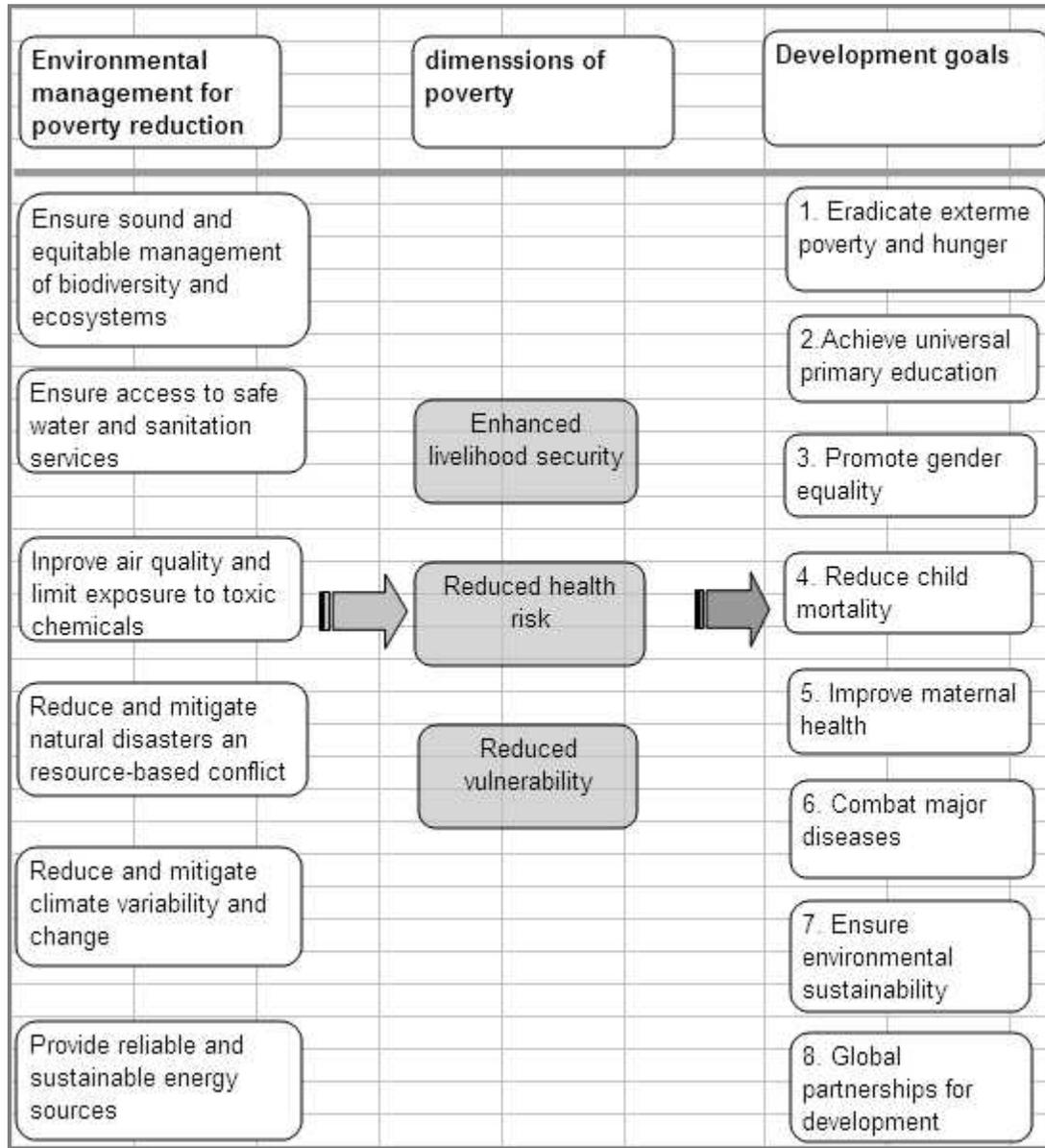
1. The Electricity Act, 2008 (Act No. 10/08)
2. The Hides, Skins and Leather Trade Act, 2008 - (Act No. 18/08)
3. The Tourism Act, 2008 (Act No. 29/08)
4. The Business Activities Registration Act, 2007 (Act No.14/07)
5. The Deep Sea Fishing Authority (Amendment) Act, 2007 (Act No. 17/07)
6. Special Economic Zones Act, 2006 (Act No. 2/06)
7. The Export Processing Zones (Amendments) Act, 2006 (Act No. 3/06)
8. The Meat Industry Act, 2006 - (Act No.10/06)
9. The Rural Energy Act, 2005 - (Act No. 8/2005)
10. The Dairy Industry Act, 2004- (Act No. 8/04)
11. The Ports Act, 2004 - (Act No. 17/04)
12. The Environmental Management Act, 2004 - (Act No. 20/04)
13. The Tanzania Food, Drugs and Cosmetics Act, 2003
14. The Tobacco Products (Regulation) Act, 2003
15. The Industrial and Consumer Chemicals (Management and Control) Act, 2003
16. The Gaming Act , 2003 (Act No. 4/03)
17. The Occupational Health and Safety Act, 2003
18. The Atomic Energy Act, 2003 - (Act No. 7/2003)
19. The Tanzania Civil Aviation Authority Act, 2003
20. The Tanzania Communications Regulatory Authority Act, 2003
21. The Veterinary Act, 2003 (Act No. 16/2003)
22. The Animal Diseases Act, 2003 (Act No. 17/2003)
23. The Seeds Act, 2003 (Act No. 18/2003)
24. The Merchant Shipping Act, 2003 - (Act No. 21/03)
25. The Fisheries Act, 2003 (Act No. 22/2003)
26. The Export Processing Zones Act, 2002 - (Act No.11)
27. The Forest Act, 2002 (Act No. 14)
28. The Beekeeping Act, 2002 - (Act No. 15)
29. The Protection of New Plant Varieties (Plant Breeders' Rights) Act, 2002 - (Act No. 22)
30. The Traditional and Alternative Medicines Act, 2002 - (Act No. 23)
31. The Non-Governmental Organizations Act, 2002 - (Act No.24)
32. The Public Procurement Act, 2001 - (Act No. 3)
33. The Surface and Marine Transport Regulatory Authority Act, 2001 (Act No. 9)
34. The Energy and Water Utilities Authority Act, 2001 - (Act No.11)
35. The Land Act, 1999
36. The Village Land Act, 1999
37. The Deep Sea Fishing Authority Act, 1998
38. The Mining Act, 1998
39. The Water Utilization (Miscellaneous Amendments) Act, 1997
40. The Plant Protection (Act No. 13-1997) Act, 1997
41. The Fair Trade Practices Act, 1994 - (Act No. 4/94)
42. The Marine Parks and Reserves Act, 1994 (Act No. 29/94)
43. The Food Security Act, 1991 (Act No. 10/91)
44. The Disaster Relief Coordination Act, 1990 - (Act No.9/90)
45. The National Investment (Promotion and Protection) Act, 1990 - (Act No. 10/90)
46. The Patents Act, 1987 - (Act No. 1/87)
47. The Tanzania Commission for Science and Technology Act, 1986 - (Act No. 7/86)
48. The Fire and Rescue Services Act, 1985 - (Act No. 3/85)
49. The National Land Use Planning Commission Act, 1984 - (Act No. 3/84)

50. The Local Government (District Authorities) Act, 1982 - (Act No. 7/82)
51. The Local Government (Urban Authorities) Act, 1982 - (Act No. 8/82)
52. The Water Utilization (Control and Regulation) (Amendment) Act, 1981 - (Act No. 10/81)
53. The Petroleum (Conservation) Act, 1981 - (Act No. 18/81)
54. The Petroleum (Exploration and Production) Act, 1980 - (Act No. 27/80)
55. The Standards Act, 1975 - (Act No. 3/75)
56. The Water Utilization (Control and Regulation) Act, 1974 (Act No. 42/74)
57. Roads Act No. 13 of 2007
58. The Urban Planning Act 2007
59. Public Health Act 2009
60. Land use Act 2007
61. Unit Titles Act 2008

APPENDIX III: LIST OF MULTILATERAL ENVIRONMENTAL AGREEMENTS (MEAs) TO WHICH TANZANIA IS PARTY

1. Convention on Biological Diversity (CBD)
2. The Cartagena Protocol on Biosafety to the Convention on Biological Diversity
3. Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region and Related Protocols
4. United Nations Convention to Combat Desertification (UNCCD)
5. The United Nations Framework Convention on Climate Change (UNFCCC)
6. Kyoto Protocol to the United Nations Framework Convention on Climate Change
7. The Vienna Convention on the Protection of Ozone Layer and Montreal Protocol on Substances that Deplete the Ozone Layer
8. The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal
9. Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movements of Hazardous Wastes Within Africa (Bamako Convention)
10. Stockholm Convention on Persistent Organic Pollutants (POPs)
11. Rotterdam Convention on Prior Informed Consent of Pesticides and Certain Hazardous Chemicals in International Trade
12. United Nations Convention on the Law of the Sea (UNCLOS)
13. International Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention) and its Protocol
14. International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC)
15. International Convention for the Prevention of Marine Pollution from Ships, 1973 as modified by the Protocol of 1978 relating thereto (MARPOL 73/78)
16. African Convention on the Conservation of Nature and Natural Resources (Algiers, Algeria)
17. Any other relevant Convention

APPENDIX IV: MILLENNIUM DEVELOPMENT GOALS (MDGs)



Notes:

MDG7- MDG 'Plus' (Targets on biodiversity, fishing, marine protected areas, harmful chemical substances, energy and sanitation) MDG 'Plus' Targets were adopted at the World Summit on Sustainable Development in Johannesburg in 2002