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FOREWORD

The landlocked and largely semi-arid nation of Zimbabwe is vulnerable to the impacts of climate change and variability. There are now more hot days and fewer cold days than in the past and extreme weather events such as droughts, floods, tropical cyclones and hailstorms, are becoming increasingly more intense and frequent. Climate trends in the last 30 years have shown a trend towards reduced rainfall, violent storms, and heavy downpours and prolonged mid-season dry spells occurring back to back in the same season. This trend was clearly evidenced in the 2018/2019 agricultural season when the country was hit by a drought during the start of the season, with a Tropical Cyclone Idai later ravaging the country. Cyclone Idai is regarded as one of the worst tropical storms to ever affect Africa and the southern hemisphere. These impacts of climate change are now visible throughout all socio-economic sectors, impacting on water supplies, food security and health, slowing down the country's social and economic progress.

Given the large impact of climate change on the country's prospects of attaining sustainable development, the Government of Zimbabwe actively engages in global efforts to address climate change and environmental issues. In 2010, the developing countries party to the United Nations Framework Convention on Climate Change (UNFCCC) were encouraged to develop National Adaptation Plans (NAP) to scale up climate adaptation action in their countries. NAPs provide an opportunity for countries to prioritize their adaptation options and leverage financing through various climate financing mechanisms. The NAP development process was therefore established under the Cancun Adaptation Framework as part of the COP-16 Cancun Agreements. At COP-17 in Durban parties established the NAP objectives, namely to reduce vulnerability to the impacts of climate change by building adaptive capacity and resilience; and to facilitate the integration of climate change adaptation in a coherent manner into new and existing policies, programmes and activities.

In 2014, Zimbabwe crafted a National Climate Change Response Strategy and completed the National Climate Policy in 2017 in which climate change adaptation is treated as a national priority. The National Climate Policy provides a framework for integrating climate change adaptation into climate-sensitive economic sectors, including water, agriculture, health and energy sectors. Although it identifies actions needed to reduce climate vulnerability and integrate climate change adaptation into sustainable development planning, barriers to implementation still exist, and these among others include limited institutional and technical capacity at national and subnational level to advance the NAP process. The Mainstreaming Climate Change Adaptation Training manual therefore seeks to increase stakeholder capacity to mainstream climate change adaptation into national and sub-national planning.

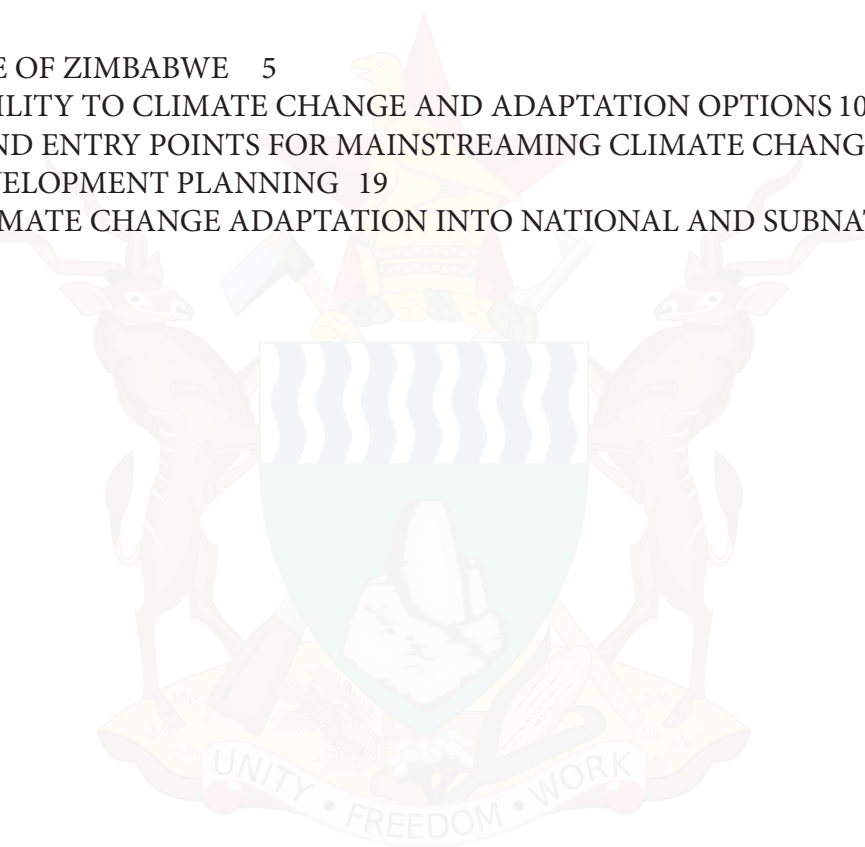
The NAP process is underpinned by National Development Strategy and the Devolution Agenda. The first five-year National Development Strategy (2021-2025) is in line with the country's Vision 2030, while the devolution agenda is largely founded on the principle of empowering provincial and district government councils to spearhead economic and social development projects in their areas by leveraging on local resources. This training manual has been prepared to serve as a guide for policymakers and practitioners in mainstreaming climate change adaptation into overall planning and sectoral budgeting. It also draws on selected experiences and lessons learnt from other programmes and initiatives in the country to bring trainees a simplified version of the best of current practices and information. These include preparation of National Communications to the UNFCCC, National Climate Change Response Strategy, National Climate Policy and the Climate Change Adaptation Manual.

We hope that the rich experiences and lessons showcased in this manual will provide guidelines for development practitioners and planners at national and sub national level on how to mainstream climate change adaptation into development planning.



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ACRONYMS

AFOLU	Agriculture, Forestry and Other Land Use
CCMD	Climate Change Management Department
FAO	Food Agriculture Organization
IPCC	Intergovernmental Panel on Climate Change
M&E	Monitoring and Evaluation
NAP	National Adaptation Plan
NCCRS	National Climate Change Response Strategy
OECD	Organisation for Economic Co-operation and Development
SMART	Specific, Measurable, Achievable, Relevant, Time bound
UNFCCC	United Nations Framework Convention on Climate Change
WMO	World Meteorological Organization



GLOSSARY

Adaptation Mainstreaming: The iterative process of integrating adaptation considerations into policy-making, budgeting, implementation and monitoring processes at national, sector and subnational levels. It is a multi-year, multi-stakeholder effort that entails working with government actors (head of state's office, environment, finance and planning bodies, sector and subnational bodies, political parties and parliament, national statistics office and judicial system), non-governmental actors (civil society, academia, business and industry, general public and communities, and the media) and development actors (UNDP-UNEP 2011).

Adaptation: Adaptation The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects (IPCC 2014).

Adaptive Capacity: The ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences (IPCC 2014).

Carbon Tax: A levy on the carbon content of fossil fuels. Because virtually all of the carbon in fossil fuels is ultimately emitted as carbon dioxide (CO₂), a carbon tax is equivalent to an emission tax on CO₂ emissions (IPCC 2014).

Climate change mainstreaming: It involves the integration of policies and measures to address climate change into ongoing sector and development planning and decision-making, so as to ensure the long-term sustainability of investments as well as reduce the sensitivity of development activities to both today's and tomorrow's climate' (Klein and others 2005).

Weather: Weather refers to the current state of atmospheric conditions at a specific time and place.

Climate: Climate is a composite measure of the average pattern of variation in temperature, humidity, precipitation, wind, atmospheric pressure, sunshine, atmospheric particle count and other meteorological variables in a region over a long period of time (usually 30 years) (Ministry of Environment, Water and Climate 2014).

Climate Change: Climate change refers to a change in the state of the climate that can be identified by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forces such as modulations of the solar cycles, volcanic eruptions and persistent anthropogenic changes in the composition of the atmosphere or in land use. Climate change is also defined as change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods' (IPCC 2014).

Climate resilience: Is the ability to anticipate, prepare for, and respond to hazardous events, trends, or disturbances related to climate. Improving climate resilience involves assessing how climate change will create new, or alter current, climate-related risks, and taking steps to better cope with these risks (Centre for Climate

and Energy Solutions 2020).

Climate Variability: Variations in the mean state and other statistics (standard deviations, statistics of extremes, etc.) of the climate on all temporal and spatial scales beyond that of individual weather events. Variability may be due to natural internal processes within the climate system (internal variability), or to variations in natural or anthropogenic external forcing (external variability) (IPCC 2014).

Climate-Proof: Ensuring the sustainability of development investments over their entire lifetime by taking explicit account of a changing climate.

Climatic hazard: It refers to any event or change in climate, such as a single extreme event that exceeds a critical temperature threshold or a complex combination of changes involving variables and/or resulting in multiple impacts. It is an extreme climatic/weather event causing harm and damage to people, property, infrastructure and land-uses. It includes not only the direct impacts of the climate/weather event itself but also other indirect hazards triggered by that event. A climatic hazard may be slow (like sea level rise) instead of sudden and severe or may be benign in today's world and become hazardous in a new, different climate regime (Ministry of Environment, Water and Climate (2014)).

Climate Smart Agriculture: Refers to agriculture that sustainably increases productivity, enhances the resilience of livelihoods and ecosystems, reduces and/or removes greenhouse gases (GHGs) and enhances the achievement of national food security and development goals. It includes proven practical techniques such as mulching, intercropping, conservation agriculture, crop rotation, integrated crop-livestock management, agroforestry, improved grazing and improved water management. It also involves the introduction of innovative practices such as more dependable weather forecasting, early-warning systems and climate-risk insurance (Climate Technology Centre and Network 2017).

Devolution: The most extensive form of decentralization that diffuses substantial governmental powers, authority, responsibilities and resources to subnational or local units. Such units exercise a measure of autonomy. Decisions and choices are made at the local level (Chigwata 2019).

Disaster: A serious disruption of the functioning of a community or a society, causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources. A disaster is a function of the risk process. It results from the combination of hazards, conditions of vulnerability and insufficient capacity or measures to reduce the potential negative consequences of risk (Ministry of Local Government, Zimbabwe 2009).

Disaster Risk Management: The systematic process of using administrative decisions, organisation, operational skills and capacities to implement the policies, strategies and coping capacities of the society and communities to lessen the impacts of natural hazards and related environmental and technological disasters. This comprises all forms of activity, including structural and non-structural measures to avoid (prevention) or to limit (mitigation and preparedness) the adverse effects of hazards (UNISDR 2009).

Disaster Risk Reduction: The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events (UNISDR 2009).

Early Warning: The provision of timely and effective information, through identified institutions, that allows individuals exposed to a hazard to take action to avoid or reduce their risk and prepare for effective response (Ministry of Local Government, Zimbabwe 2009).

Exposure to climate hazards: The degree to which an individual, household, community or system experiences climate hazards. This relates to when, how often and where climate hazards are experienced. For example, communities in agro-ecological regions 4 and 5 will have higher exposure to droughts as they will happen more often than elsewhere in the country, while communities in areas in the east of Zimbabwe may be more exposed to tropical cyclones (Ministry of Environment, Water and Climate 2014).

Greenhouse Gases: Greenhouse gases are those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of terrestrial radiation emitted by the Earth's surface, the atmosphere itself and by clouds. Water vapour (H₂O), carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄) and ozone (O₃) are the primary GHGs in the Earth's atmosphere (IPCC 2014).

Hazard: The potential occurrence of a natural or human-induced physical event or trend or physical impact that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems and environmental resources. In this report, the term hazard usually refers to climate-related physical events or trends or their physical impacts (IPCC 2014).

Mainstreaming climate change adaptation: It is the iterative process of integrating considerations of climate change adaptation into policy-making, budgeting, implementation and monitoring processes at national, sector and subnational levels (UNDP-UNEP 2011).

Mainstreaming: It is the informed integration of a relevant value, theme or concern into the decisions of institutions that drive national, local and sector development policy, rules, plans, investment and action. It can be seen as a long-term, iterative process aimed at transforming ideas and, even more importantly, transforming policies and practices – for the purpose of promoting desired developmental outcomes and supporting the identification and implementation of integrated solutions to human problems. Various themes can be mainstreamed in development policies including environment, climate change adaptation and mitigation, gender, governance and human rights (Klein and others 2005).

Mitigation: A human intervention to reduce emissions or enhance the sinks of greenhouse gases (IPCC 2014).

Preparedness: The knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions (UNISDR 2009).

Relief/Response: The provision of assistance or intervention during or immediately after a disaster to meet the life preservation and basic subsistence needs of those people affected. It can be of an immediate, short term, or protracted duration.

Rehabilitation: The actions taken in the aftermath of a disaster to enable basic services to resume functioning, assist victims' self-help efforts to repair dwellings

and community facilities, and facilitate the revival of economic activities (including agriculture)(UNDP 1992).

Reconstruction: Is the permanent construction or replacement of severely damaged physical structures, the full restoration of all services and local infrastructure, and the revitalization of the economy (including agriculture) (UNDP 1992).

Risk: The potential for adverse consequences where something of value is at stake and where the occurrence and degree of an outcome is uncertain. In the context of the assessment of climate impacts, the term risk is often used to refer to the potential for adverse consequences of a climate-related hazard, or of adaptation or mitigation responses to such a hazard, on lives, livelihoods, health and well-being, ecosystems and species, economic, social and cultural assets, services (including ecosystem services), and infrastructure. Risk results from the interaction of vulnerability (of the affected system), its exposure over time (to the hazard), as well as the (climate-related) hazard and the likelihood of its occurrence (IPCC 2014).

Sensitivity to Climate Hazards: The degree to which an individual, household, community or system is affected by a particular climatic hazard, either adversely or beneficially, by climate variability or change. For example, a community dependent on rain-fed agriculture is much more sensitive to changing rainfall patterns and droughts, than a community with access to irrigation facilities (IPCC 2014).

Transformative capacity: The capacity to make intentional change to stop or reduce the causes of risk, vulnerability, poverty, and inequality, and ensure the more equitable sharing of risk so it is not unfairly borne by people living in poverty or suffering from discrimination or marginalisation (Oxfam International 2017).

Vulnerability: The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt (IPCC 2014).

GUIDE ON THE USE OF THE MANUAL

Purpose of the Training Manual

This manual is designed to train at national and subnational (district/provincial) level planners and policy makers in a standardised manner to enable participants understand how to mainstream climate change adaptation into their development plans and policies. The process of mainstreaming climate change adaptation measures is practical and participatory in nature. This manual therefore provides guidance for practitioners on the implementation of the participatory mainstreaming process.

The Mainstreaming Manual:

- a. Promotes understanding of the implications of climate change and the associated need to mainstream climate adaptation in national and subnational development planning; and
- b. Provides guidance on how to mainstream climate change adaptation into development planning.

In terms of mainstreaming climate change adaptation, the manual:

- a. Explains what you are going to do;
- b. Why you are doing it;
- c. How to do it; and
- d. How you will know you have done it.

As part of the national adaptation planning process, the training will utilize existing governance and communication structures (provincial and district structures) to organise and conduct the training sessions. This will also include taking into account local cultural norms and practices.

The manual will be used together with other information products such as the module on Climate Change Adaptation. The module will provide more detail and act as a reference document for the facilitators.

Target Participants

The Mainstreaming Manual is targeted primarily at provincial and district development committees as well as economic planning and budgeting departments, policy makers, regulators, programme and project planners, catchment managers, capacity builders, private sector, catchment and sub-catchment councils, environmental committees, environmental monitors and other decision-makers. The provincial and district development committees consist of representatives from the following sectors:

- Rural and urban councils
- Agriculture
- Water
- Energy
- Wildlife and Biodiversity
- Health
- Tourism
- Infrastructure Development
- Forestry
- Education

Number of Participants

The ideal number of participants per training session should not exceed 50 and the training period should be two days.

Venue

Suitable venues include community hall, church building or other suitable building with adequate ventilation and good lighting. There must be suitable ablution facilities and safe water as well as provision for refreshments and meals. Virtual trainings can be considered in the context of COVID-19 pandemic.

Note on Cultural Norms

Greetings and salutations must be in accordance with cultural norms of the respective communities, and the local language must be used to the extent possible. Further details are provided on the guide on ethics, attitudes, behaviours and facilitation techniques.

Training Methodology

The Manual focuses on participant's own motivation for training and provides them with tools to deal with day-to-day climate change adaptation challenges at work.

The training methodology is based on practice oriented participatory approaches, and utilizes presentations, group discussions and feedbacks, and role play. Indigenous Knowledge systems that are relevant to the adaptation work will be considered. These will be building blocks upon which to further the adaptation work/process. Gender issues will be taken into consideration. The Manual has a facilitators guide and Participants worksheet that guides the training.

Suggested Activities (these might change depending on the various audiences, from basic simple to complex and elaborate).

- Ensuring observance of cultural norms and practises, greetings and introductions;
- Introduction of facilitators;
- Making use of teaching aids to introduce topic;
- Collect gender disaggregated data;
- For each Unit there will be a theoretical part, a case study/example, a short quiz, an exercise or a learning assessment;
- Making reference and explaining use of the workbook to take notes or answer questions;
- Have a 'parking' area to record questions which are unanswered or are related to the subject matter but need more research during or after the training;
- Inviting participants to complete blanks or take notes in Worksheet 1.1 and other worksheets as presentation proceeds;
- Brief plenary on feedback from participants; and
- Every day (if training is more than one day) have a 5-7-minute introductory opening summarizing what has been said the day before and building on the day's instructions; also have a 10 -minute wrap up at the end of each day as well as filling the day's evaluation.

Evaluation of Training

An evaluation is to be conducted at the beginning of the training to assess current understanding, and at the end of the training to evaluate what was learned and suggested improvements of the training.

This will be done as follows:

- Prepare standard questions (with the ideal answers) and run these questions on the participants after the first introductory session;
- Responses to the questions will be guided by possible answers such as (Excellent=1; Good =2; Bad=3; Poor=4) Template of evaluation form is on annex 2;
- Each participant will have to fill his/her own evaluation sheet;
- The same exercise will be done at the end of the whole training with the same questions. Answers will be compared to the first evaluation; and
- For each evaluation session, the time given should be 45 minutes and the Facilitator should read the questions and the participants will write their answers.

Units of the Training Manual

Units to be covered during the training programme are as follows:

Unit 1: Introduction

Unit 2: Current and Future Climate for Zimbabwe

Unit 3: Assessing Risk and Vulnerability to Climate Change and Adaptation Options

Unit 4: Stakeholder Engagement and Entry Points for Mainstreaming Climate Change Adaptation into Sector policy, national and Sub-national Development Planning

Unit 5: Steps for Mainstreaming Climate Change Adaptation into Development Planning

Unit 6: Monitoring, and Evaluation system for Climate Change Adaptation and Mainstreaming



GUIDE ON ETHICS, ATTITUDES, BEHAVIOURS AND FACILITATION TECHNIQUES

Respect local structures: The programme should first be introduced to the local leadership structures, who will arrange for the training. For instance, these should be through the District Development Coordinator.

Respect local cultural norms: As much as is practical, traditional norms and values must be observed. Participants to be treated with dignity and their culture should never be denigrated. A request must be made to take photographs inclusive of explaining what the pictures will be used for. Do no harm, try as much as possible to avoid actions that will leave communities exposed to further risk. Dress modestly. Avoid chewing gum whilst facilitating.

Introduction of meetings: Depending with the community, some require starting the meeting with a prayer. If chiefs are present there is need to observe their presence right from the beginning by clapping hands.

Build rapport: Efforts must be made to learn a few words in the local language particularly greetings and thank you. If provoked or annoyed for any reason, stay calm and collected.

Ground rules to include de - rolling: The local leadership to be engaged at the beginning in order to facilitate the session on ground rules including encouraging women, girls and community members of a high social status to freely and effectively participate and interact.

Use of participatory methodologies: The participants should own the process. Interactive methodologies are encouraged.

Facilitation versus training: Presenters should facilitate and avoid lecturing, the lecture method to be used minimally. Facilitators must prepare illustrations and to the extent possible ensure that presentations are interactive. There is need to engage and empower participants to come up with solutions to their problems. There is need for sensitivity when using examples, and rather ask participants to give local examples. For energizers, it is advisable to let the participants take the lead.

Knowledge on the subject matter: Facilitators to prepare thoroughly in advance, however, when stuck, in case of a difficult question, the question can be turned into

a discussion point or ask other facilitators to assist.

Be a good listener and observer, respect everyone's views: Facilitators to be on the lookout for non-verbal communication and vary methodologies accordingly including taking short breaks to minimise boredom. Avoid embarrassing participants that appear to be passive; some may be more active in small groups.

Voice pitch: Facilitators to try as much as possible to be loud enough in order to be heard by all participants.



UNIT 1: INTRODUCTION

Introduction

Climate change is a cross-cutting issue that has implications across development sectors, and can be effectively addressed when mainstreamed into development planning. While climate change is global, the poor stand as disproportionately vulnerable to it because they are unable to afford the goods and services they need to buffer against its worst impacts. Climate change adaptation therefore needs to unlock income and enterprise opportunities to underpin its demand driven mainstreaming.

Mainstreaming climate change adaptation into development planning refers to the process of integrating climate change considerations into development planning objectives – such as national and subnational development plans – and processes such as annual planning cycles and public finance management systems.

Mainstreaming climate change adaptation can also be described as the iterative process of integrating considerations of climate change adaptation into policy-making, budgeting, implementation and monitoring processes at national, subnational and sectoral levels. It entails working with a range of government and non-governmental actors, and other actors in the development field. Climate change considerations are thus incorporated into established or on-going development programmes, policies, or management strategies, rather than developing adaptation initiatives separately.

Mainstreaming climate adaptation needs to be a strategic district-led approach. It needs to integrate climate adaptation into development planning in efficient and effective ways. It also needs to premise actions as investment opportunities that unlock bottom-line socioeconomic priorities of the country (food security, income and job creation, economic expansion, as well as economic and financial dividends), and not purely social driven actions.

Mainstreaming climate change adaptation is in line with Government of Zimbabwe's devolution agenda, which is largely founded on the principle of empowering provincial and district councils to spearhead economic and social development projects in their areas by leveraging on local resources. Such an integrated approach will also necessitate that climate adaptation be premised in complementarity with mitigation, as called for in Article 7 of the Paris Agreement. For example, rehabilitation of a dam weir to increase availability of portable water for domestic and irrigation use, should be complemented by affordable clean energy powered solutions to ensure value addition of what is produced to unlock more income opportunities, and build socioeconomic resilience of communities as well. It therefore enables development planners to rationalise what could be done with what needs and what can be feasibly done within the structures, resources and capacity available.

To have real impact, mainstreaming must have a greater sense of ownership at all levels. The response to climate change must be built into the government's most vital institutions and policies, using existing capacity and priorities to integrate climate resilience into existing decision-making processes. District level officials are

to determine how climate change issues are relevant to their plans and decide what actions to take, using own systems, capacities and priorities. This unit presents an introductory aspect of climate change adaptation mainstreaming. The Unit is intended to provide participants with understanding of the actual causes of climate change as well as climate change adaptation mainstreaming. It is expected that after the training programme they will be able to highlight advantages of mainstreaming climate adaptation. The objectives of Unit 1 are given below.

Objectives

By the end of the Unit participants will be able to:

- Understand what is climate change and climate change adaptation mainstreaming;
- Understand the actual causes of climate change;
- Appreciate the importance of mainstreaming climate change adaptation in national and subnational development planning; and
- Unlock actions that drive adaptation from an investment dimension, not only the classical social venture.

Methodology

Plenary and group discussion with use of illustrations

Duration:

1 hour

Participant Worksheet 1.1	Facilitator Notes
<p>Overall aim of the Unit <i>Explain the meaning of the following words.</i> Climate Change..... What causes climate change? </p> <p>Adaptation..... </p> <p>Mitigation..... </p> <p>Risk..... </p> <p>Hazard..... </p> <p>Resilience..... </p> <p>Vulnerability..... </p> <p><i>What is climate change adaptation?</i></p>	<p>Overall aim of Unit</p> <ul style="list-style-type: none"> <input type="checkbox"/> Increase understanding of climate change, and climate change adaptation ; <input type="checkbox"/> Enhance appreciation of importance of mainstreaming climate change adaptation in national and subnational development planning and processes. <input type="checkbox"/> Increase understanding on the socioeconomic basis of vulnerability, and effective adaptation driven through the enterprise lens <input type="checkbox"/> Enhance understanding of climate adaptation driven as an investment opportunity by leveraging a cross-sectorial, investment approach <input type="checkbox"/> Lay the basis for adaptation & mitigation as complementary in reducing the impacts of climate change. <p>Outputs A common understanding of what climate change adaptation mainstreaming is.</p> <p>Activity I - Key Climate Change Terms to Know List key terms and explain them to participants, using illustrations. Participants can demonstrate their understanding of the key terms using local examples. The key words are climate change, adaptation, mitigation, risk, hazard, resilience, vulnerability. These terms relate to how we can react to climate change trends we see in Zimbabwe. We can adapt to the changes, we can mitigate carbon levels, we can become more resilient and we can decrease our vulnerability.</p> <p>During the debrief, ask the participants what they understand about these words. As they answer the</p>

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What are the advantages of mainstreaming climate change adaptation?
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Take notes or fill in the blanks

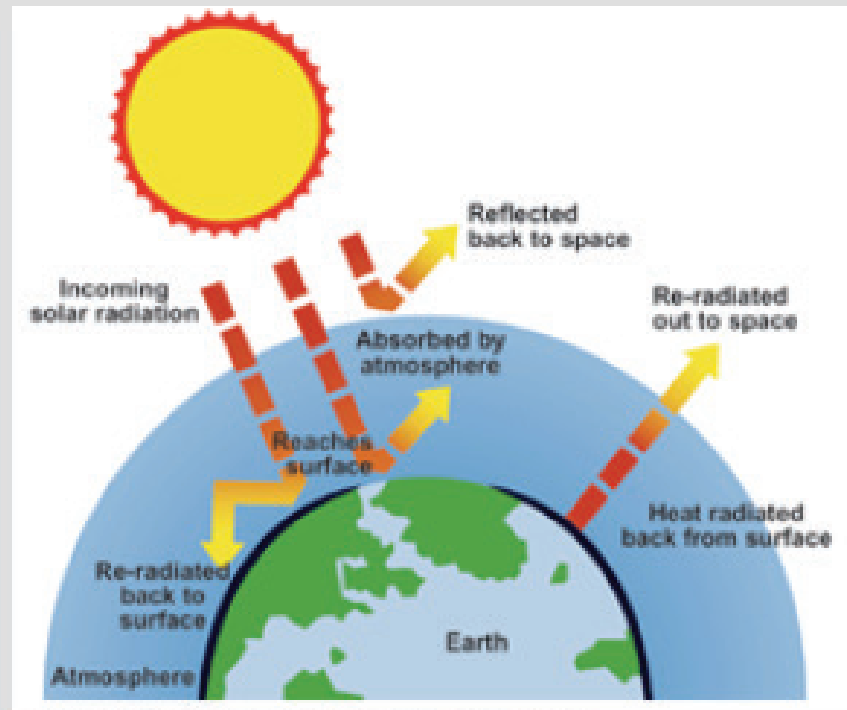


Figure 1.1 Global warming & the greenhouse effect

question, try to emphasize that they need to have ways to assess their own risk and vulnerability, and they need to adapt and change their habits so that they are more resilient. Expand on the concept of adaptation and mitigation and provide additional explanation and examples.

Activity II - Defining climate change adaptation

Now that the participants appreciate key terms related to adaptation and mitigation, introduce climate change adaptation mainstreaming, which is defined as the process of integrating climate change adaptation considerations into development planning (such as national and subnational development plans) and processes (policy-making, budgeting, implementation and monitoring).

Discuss advantages of mainstreaming climate change adaptation, which include the following:

- **Sustainability** - Mainstreaming is seen as a more sustainable, effective and efficient use of resources than designing and managing separate climate policies.
- **Stakeholder participation** - Mainstreaming enhances the performance and development contribution of each sector and government ministry. Climate change adaptation should be incorporated into all planning and policy frameworks.
- **Efficiency** - Mainstreaming can help to avoid investment in maladaptive development by enhancing awareness of climate change threats and issues at the planning and policy levels.



Renewable energy reduce use of fossil fuels

Mitigation

Aims to curb and reduce greenhouse gas emissions

Adaptation

Actions to reduce vulnerability to climate change



Community in Mwenezi constructing a weir for livestock and irrigation

Figure 1.2 Adaptation and Mitigation



More secure infrastructure locations



Landscape restoration



Flexible and diverse cultivation



Research and development on possible catastrophes, etc



Preventive and cautionary measures



Rainwater harvesting and conservation

UNIT 2: CURRENT AND FUTURE CLIMATE OF ZIMBABWE

Introduction

Climate change, is referred to as change of climate which is attributed directly or indirectly to human activity, presents a great threat to development processes in many countries including Zimbabwe (IPCC 2014). A major driver of climate change has been identified as the emission of greenhouse gases such as carbon dioxide and methane into the atmosphere as a result of human activities such as burning coal or oil (known collectively as fossil fuels) for industry and transport and to produce electricity. Other sources of greenhouse gas emissions include largescale commercial agriculture, forest clearing, veld fires and unsustainable management of manure. An analysis of the time series emissions in Zimbabwe indicates a general increase in GHG over time. For example, in the year 2017, GHG emissions from the Agriculture, Forestry and Other Land Use (AFOLU) sector were estimated at 42,029 Gg CO₂equivalent, while removals were estimated at 14, 911 Gg CO₂, giving a net positive flux of 27,118 Gg CO₂eq. Conversion of forest land to grassland had the highest emission contribution of 17,342 Gg CO₂, that being 41 percent of the total emissions.

In Zimbabwe, changes in climate variables attributed to climate change include more hot days and fewer cold days, increase in temperatures, reduction in rainfall and uncertainty in its timing and amount, changes in start and end of season, and increase in frequency and length of dry spells among others.

Studies have shown that Zimbabwe's climate has changed over the last couple of decades. Notable changes include an increase in average temperatures, decrease in annual precipitation, change in spatial extent of the country's natural regions, change in the onset and cessation dates of the rainy season and an increase in the duration of the mid-season dry spell.¹ In fact, the greater part of the country now experience a late start to the season by as much as 18 days while some regions experience an early start to the season. Typical areas that have experienced late start to the rainfall season include Mashonaland Central, Mashonaland East, Mashonaland West, Matabeleland North, northern parts of Midlands and the greater part of Manicaland. In contrast, Matabeleland South, Masvingo and southern parts of Matabeleland North have now shifted towards an early start to the rainfall season. Other notable changes include the contraction of Agro ecological regions particularly Natural Region II, III and IV as well as expansion of Region V. Of significance in the new regions is the further division of agro ecological 5 into region 5a and 5b (Ministry of Environment, Climate, Tourism and Hospitality Industry, Climate Change Management Department, 2021).

This Unit looks at observed trends in temperature, rainfall and extreme weather events over Zimbabwe since 1901, as well as expected future changes of climate from the year 2020 to 2040 as detailed in the study by the Government of Zimbabwe (2020) produced in support of the National Adaptation Planning process. The study analysed past meteorological data to inform past climate trends. Data from climate models was post-processed to develop downscaled future climate of Zimbabwe covering the period 2020-2040 using the worst case scenario so as to inform provincial and national vulnerability and adaptation assessments for the National Adaptation Plan.

The future climate of Zimbabwe was prepared using global models used by the latest IPCC assessment, which represent different scenarios of emissions of greenhouse gases, aerosols and land-use change. The report uses the worst case scenario model which assumes increases in emissions leading to a CO₂ concentration of about 940 ppm by 2100.

Based on these trends, UNIT 3 looks at risk and vulnerability assessment and identify adaptation options.

Objectives

By the end of the unit, participants should be able to:

1. Understand observed and projected temperature trends in Zimbabwe and identify prone areas;
2. Understand observed and projected rainfall trends in Zimbabwe and identify prone areas; and
3. Understand projected trends in extreme events and identify prone areas.

Methodology

Plenary and group discussion with use of maps.

Duration:

3 hours

Participant	Facilitator Notes
Worksheet 2.1	Overall aim of Unit
<i>Describe observed and projected temperature trends for Zimbabwe</i>	Outputs A common understanding of observed and projected temperature, rainfall and extreme events trends in the country.
.....	Observed and projected temperature for Zimbabwe
.....	<ul style="list-style-type: none"> □ National mean surface temperature has warmed by about 0.9 °C from 1900 to 2018, with greatest warming occurring since the 1980s. For instance, it has been observed that temperatures have increased for both winter and summer months in all the provinces relative to 1980, although the changes have been more pronounced during winter. Summer warming of more than 1 °C was experienced in Matabeleland North which had the highest increases of 1.1 °C followed by Harare and Mashonaland West both with slightly more than 1 °C (Ministry of Environment, Climate, Tourism and Hospitality Industry, Climate Change Management Department, 2021). □ Both the mean, daily minimum and daily maximum temperatures are expected to increase throughout the period 2020 to 2080 for all regions in Zimbabwe.
.....	

- Increase in temperatures is expected to be higher compared to natural variability for the period 2020 to 2040.
- For the period 2020-2040, national annual average temperature is expected to increase by about 1.0-1.5 °C above the climate of 1986-2005 as showing (Figure 2.1).

Box 2.1 : Implications of Increases in Temperatures on Agriculture in Zimbabwe

Increases in temperatures have implications on crop production, while inflicting huge losses in the related agro production industry chain. Empirical agronomic studies in Zimbabwe have revealed that climate change has a negative effect on the agricultural performance of major crops. For instance studies done by Muchena (1994) and Magadza (1994) showed that a 2°C rise in ambient temperature and a rise of mean temperature by 4°C significantly lowered yields.⁴ In addition to losses in yields in both crop and livestock production, high temperatures are associated with insect infestations and plant disease. The incidence of forest and range fires also increase substantially as a result of high temperatures, which in turn places both human and wildlife populations at higher levels of risk (Ministry of Environment, Climate, Tourism and Hospitality Industry, Climate Change Management Department, 2021).

*Describe
observed and
projected rainfall
trends for
Zimbabwe*

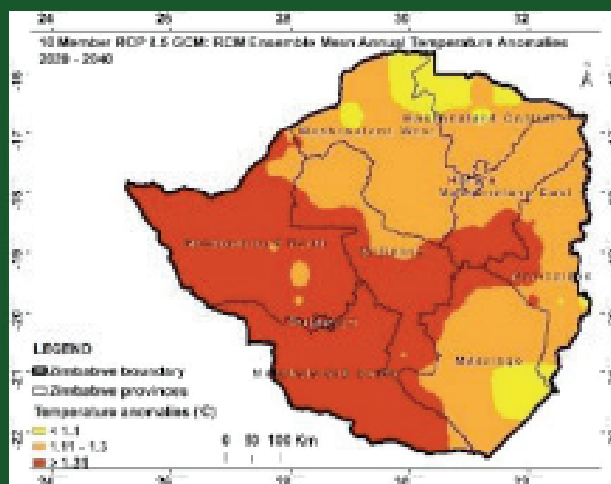


Figure 2.1 Mean change in mean annual temperature over Zimbabwe for 2020-2040 under the worst case scenario.

*Describe
projected*

Observed and projected rainfall for Zimbabwe

- Average annual rainfall has declined by about $\pm 5\%$ across the country over the period 1901 to 2018. A number of studies conclude that intra-seasonal characteristics of the rainfall season including the frequency and intensity of dry spells, length of rainfall season, onset and cessation dates of the rainfall season and the number of rainy days has undergone significant modification since the 1950s. An analysis done for monthly summer rainfall in the provinces notes that on average, except for Masvingo and Manicaland that had marginal increases, the rest had reductions in the summer rainfall amounts. The greatest monthly average reduction relative to 1980 of more than 55 mm was noted for Mashonaland West followed by Matabeleland North with 29 mm where the percentage reduction amounted to 34 percent and 21 percent respectively. The analysis thus demonstrates that Mashonaland West is the worst affected province in terms of temperature and rainfall changes (Ministry of Environment, Climate, Tourism and Hospitality Industry, Climate Change Management Department, 2021).
- Future projections of mean national annual precipitation show a decline of $\pm 10\%$ compared to the 1986-2005 baseline.
- The southern and south-eastern sections of the country including Matabeleland South, Masvingo and Manicaland Provinces show the greatest decrease in precipitation (up to 10%) for the period 2020 -2040. (Figure 2.3).

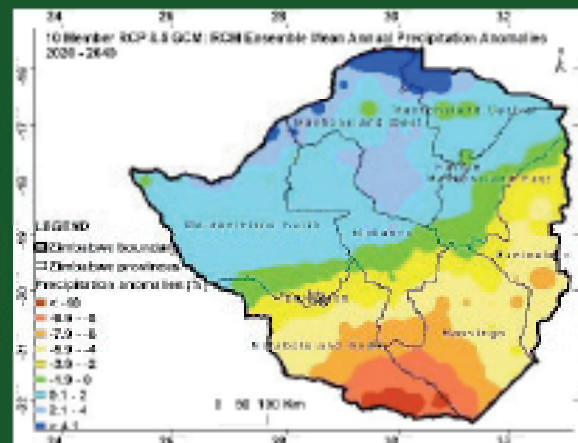


Figure 2.2 Future change (%) in mean annual precipitation for Zimbabwe under the worst case scenario for the period 2020-2040.

Extreme events

- Extreme rain events are projected to become more intense.
- Severe drought episodes affected the country in 1991–1992, 1994–1995, 2002–2003, 2015–2016, 2018–2019 and 2019-2020, with El Niño – Southern Oscillation (ENSO) phase changes modulating the droughts. Time in drought is projected to increase in southern

Observed and projected rainfall for Zimbabwe

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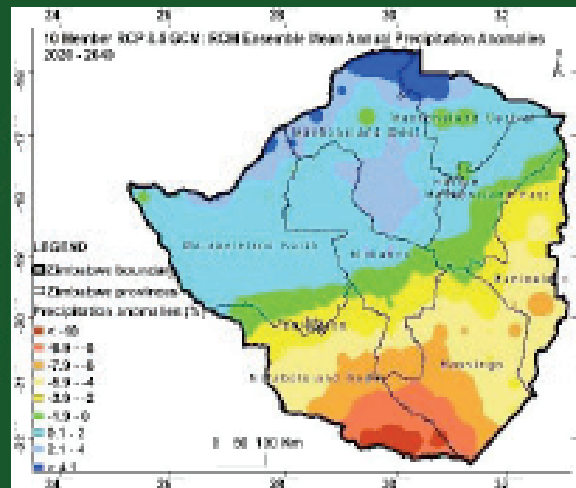


Figure 2.2 Future change (%) in mean annual precipitation for Zimbabwe under the worst case scenario for the period 2020-2040.

Extreme events

- Extreme rain events are projected to become more intense.
- Severe drought episodes affected the country in 1991–1992, 1994–1995, 2002–2003, 2015–2016, 2018–2019 and 2019–2020, with El Nino – Southern Oscillation (ENSO) phase changes modulating the droughts. Time in drought is projected to increase in southern

Zimbabwe, with a greater frequency of severe droughts.

- The frequency of occurrence of extreme wet events (rainfall more than one standard deviation above the mean) has declined from $\pm 20\%$ from 1902 to 1979 to $\pm 13\%$ from 1980 to 2018, and consecutive wet days are expected to decrease in the southwest and northern sections of the country during December, January, February (DJF) for the period 2020 to 2040 whereas consecutive dry days increase.
- The daily rainfall intensity is projected to increase toward higher global warming scenarios.

Box 2.2 : Understanding the El Niño – Southern Oscillation

The El Niño refers to the warming of the sea surface temperatures of approximately 2°C or more in the central and eastern Pacific Ocean of the Southern Hemisphere. (Ministry of Local Government, Zimbabwe 2009). During most El Niño episodes the bulk of southern Africa is likely to experience drought conditions. During a La Niña, which is approximately the opposite of El Niño, there are chances of higher than normal rainfall across southern Africa.

UNIT 3: ASSESSING RISK AND VULNERABILITY TO CLIMATE CHANGE AND ADAPTATION OPTIONS

Introduction

Zimbabwe and other developing countries are vulnerable to climate change due to factors such as exposure to climate induced extremes and risks, level of economic development, among others. The country has responded to climate change through several policy measures and, programmes and projects focusing on mitigation, adaptation and disaster risk reduction. The Zimbabwe Climate Change and Response Strategy emphasise the need for enhanced community resilience as well as the development of an integrated and coordinated approach to reducing disaster risk and to address impacts of climate change through a multi-stakeholder approach. It stresses out the importance of building capacity to conduct comprehensive vulnerability assessments and developing appropriate response models and mechanisms to mainstream climate change adaptation and disaster risk management into development programmes. In addition, the Communication Strategy for the National Adaptation Planning Process in Zimbabwe highlights the importance of enhancing the awareness of individuals, organizations, and institutions about climate change vulnerability, impacts, and adaptation as this can help in building individual, community and institutional capacity for adaptation planning and implementation. Further, the National Climate Change Learning Strategy 2020-2030 highlights the need for the participation and engagement of all stakeholders in response to climate change. The learning strategy underscores the importance of stakeholder participation, both from the public and private sectors as well as those in different communities especially the sensitive and vulnerable members of the community.

A priority area for work on the available policies and strategies includes how to align them, such that co-benefits may be realised, and action on the strategies could mutually reinforce each other to achieve multiple synergies and minimize trade-offs across sectors.

Tangible steps need to be taken to empower planning structures at all levels, different socio-economic sectors and communities to build their resilience to the threats that climate change brings by mainstreaming climate change adaptation into development planning. Left unchecked, these threats will erode long-term opportunities for human development, undermining human productivity and capabilities. Adaptation options need to be in confluence with already existing policy and non-policy investments in the country and be driven from a dimension that unlocks multiple socioeconomic opportunities.

This Unit introduces the key matters related to climate change adaptation and its link with development planning. It aims to build a basic understanding of risks and vulnerability to climate change and how it feeds into the adaptation process, the selection of adaptation options and the building of long-term resilience to climate change impacts.

Objectives

By the end of the unit, participants should be able to:

1. Identify and interpret risk and vulnerability of various socio-economic sectors to climate change.
2. Analyse risk and vulnerability to climate change hazards, taking into consideration the character of the climate hazard, the exposure and sensitivity to the hazard and the capacity to deal with or adapt to the hazard.
3. Identify adaptation options for the vulnerabilities, ensuring options are in confluence and build on planned/ongoing investments and premise adaptation as a socioeconomic opportunity.
4. Prioritize adaptation options.

Methodology

Plenary and group discussion with use of illustrations. At times role play.

Duration:
3 hours

Figure 3.1 shows an illustration of a hazard, exposure and vulnerability.

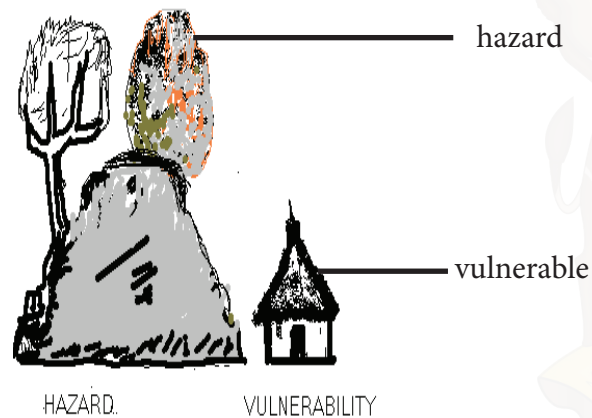


Figure 3.1 Hazard and vulnerability

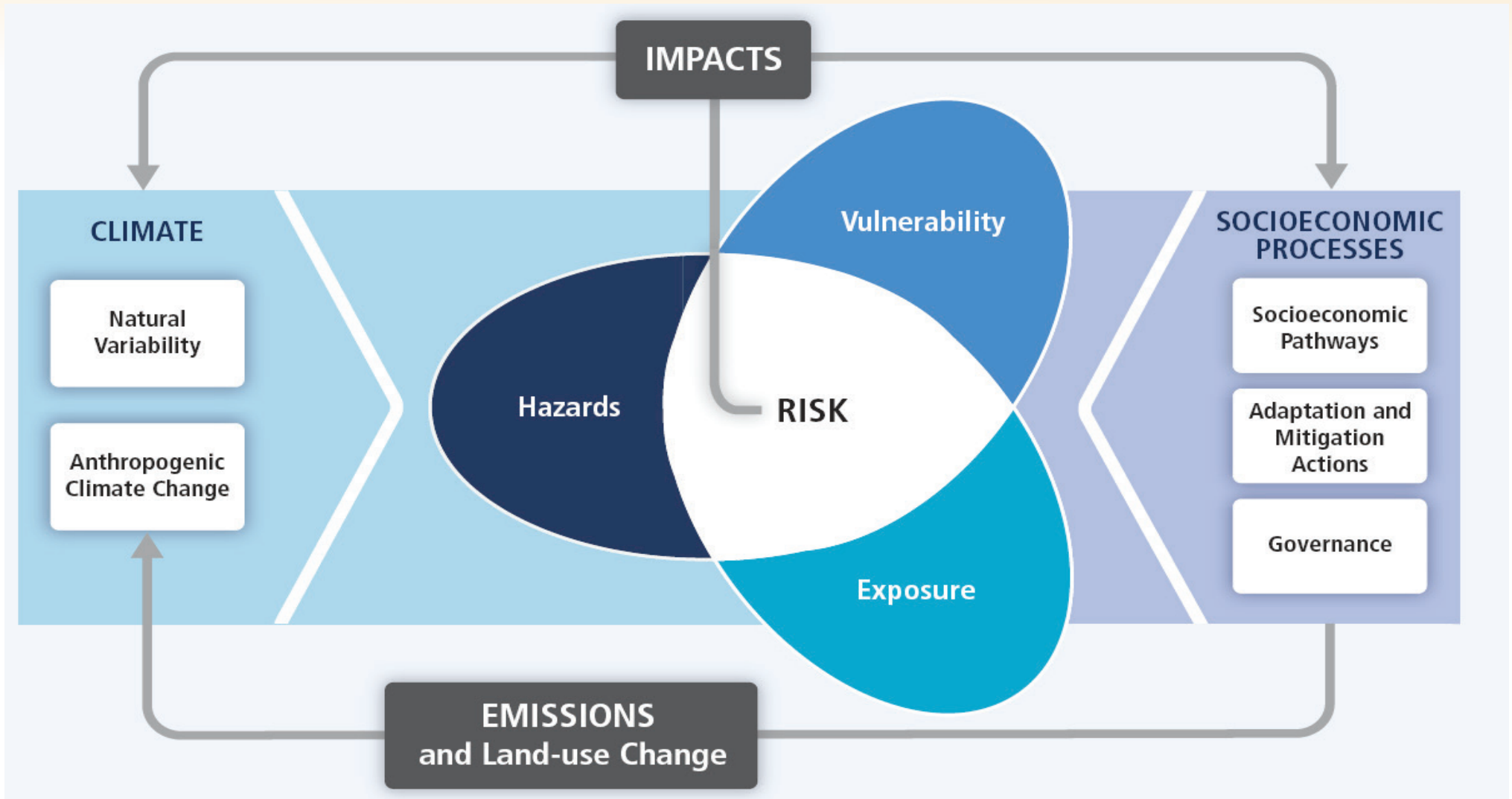


Fig 3.2 Risk Relationship
 IPCC 2014

Risk of climate-related impacts results from the interaction of climate-related hazards (including hazardous events and trends) with the vulnerability and exposure of human and natural systems. Changes in both the climate system (left) and socioeconomic processes including adaptation and mitigation (right) are drivers of hazards, exposure, and vulnerability.

Impacts of Climate Change and Extreme Weather Events in Zimbabwe



Classroom block destroyed by a hailstorm at Mushipe Primary School in Wedza, October 2020



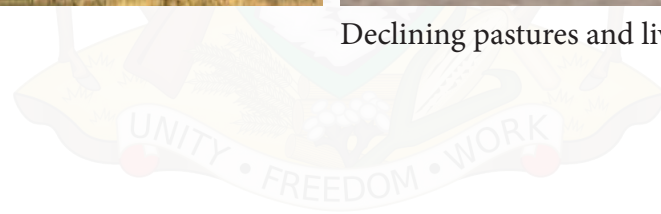
Communities search for survivors after Cyclone Idai



Climate change threatens existence of wild fruits



Declining pastures and livestock productivity



Participant Worksheet 3.1: Risk and Vulnerability to climate change

What is risk to climate change?

.....
.....
.....

What is vulnerability to climate change

.....
.....
.....

What is a climate hazard?

.....
.....
.....

What is exposure to climate hazards?

.....
.....
.....

What is potential impact of climate hazard?

.....

Facilitator's notes

Risk is a function of vulnerability, hazard and exposure figure 3.2 Besides assessing the hazards, the risk management approach includes concepts such as uncertainty and persecution of risk. The risk is defined in quantitative terms and subject to the availability of data, measures to reduce risk are developed in response to these quantitative estimates.

Vulnerability to climate change refers to the degree to which an individual, household, community or system is susceptible to, and unable to cope with, adverse effects of climate change. **Vulnerability** depends on the character of the climate **hazard**, the **exposure** to it, and the **sensitivity** of a system to the hazard and the **adaptive capacity** of the system. The poor, having the least resources are, often, more vulnerable to climate hazards than other population groups.

A **climate hazard** is an extreme climatic/weather event causing harm and damage to people, property, environment, biodiversity, infrastructure and land-uses. See Figure 3.1 and 3.2. It includes not only the direct impacts of the climate/weather event itself but also other indirect hazards triggered by the event. Examples are floods, droughts, storms, heat waves, sea level rise, fog, strong winds, and locusts.

Exposure is the degree to which an individual, household, community or system experiences climate hazards. This relates to when, how often and where climate hazards are experienced. For example, community in agro-ecological regions 4 and 5 have higher exposure to droughts as they happen more often than elsewhere in the country.

Sensitivity to climate hazards is the degree to which an individual, household, community or system is affected by a particular climatic hazard, either adversely or beneficially, by climate variability or change. For example, a community dependent on rain-fed agriculture is much more sensitive to changing rainfall patterns and droughts, than a community with access to irrigation facilities

Table 3.1 Potential Impact of climate change

Area: Chimanimani District

Sector: Tourism and Environment

Climate Hazard	Exposure	Sensitivity	Potential Impact
Increased average temperatures and heat waves	Overall increased temperatures are already felt across the districts. A maximum of 32 °C in highlands and a maximum of 42 °C in lowlands such as Nyanyadzi Temperatures are projected to increase with time.	Flora and fauna sensitive to high temperatures	Threatened extinction of some species
			Disruption of bird cycles eg. The blue swallow which migrate to the mountains to breed
		Dry flora increases susceptibility to wild fires	Increase in intensity and occurrence of veld fires destroying flora and fauna

Table 3.2 Identify hazards in your own area using the template below:

Area: District Name			
Sector:			
Climate Hazard	Exposure	Sensitivity	Potential Impact

Participant Worksheet 3.2: Risk and vulnerability assessment process

What are the factors that help characterise vulnerabilities?

.....
.....
.....
.....

Explain the three dimensions of a risks assessment matrix

.....
.....
.....

Giving examples explain the stages of the vulnerability assessment process

.....
.....
.....
.....

Facilitator's notes

Firstly, the focus is on understanding and determining risk, exposure and sensitivity to climate hazards. This will allow individual/groups to assess the potential impacts of a climate hazard and examine the adaptive capacity.

Factors that help characterise risks and vulnerabilities include: magnitude of potential impact; timing; persistence and reversibility; likelihood; distributional aspects; importance of the at-risk systems; potential for adaptation; and thresholds or trigger points that could exacerbate the change.

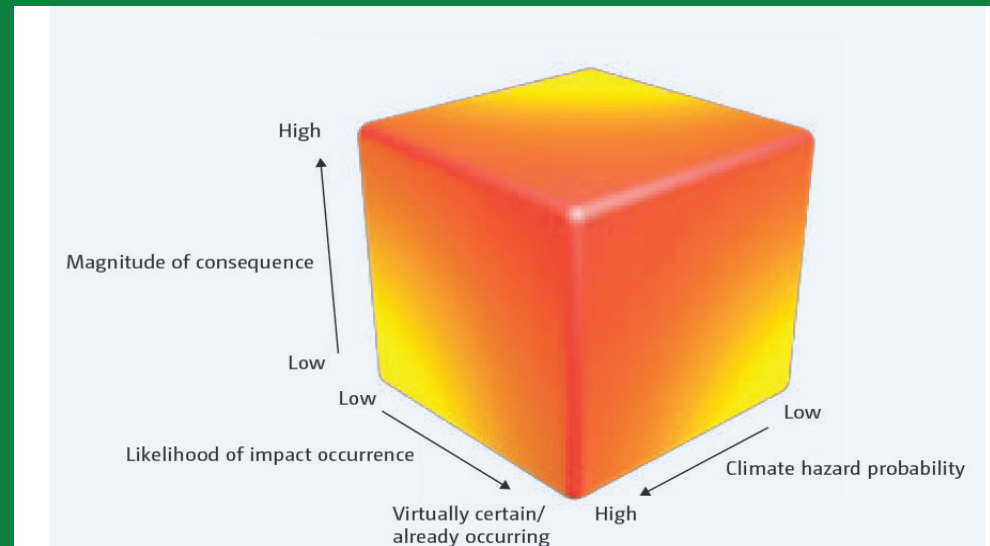


Figure 3.4 Climate risks assessment matrix
UNFCCC Technical Guidelines for the NAP process

- Red: Risks for which adaptation strategies should be developed
- Orange: Risks for which adaptation may need to be developed or for which further information is needed
- Yellow: Risks for which impacts should be monitored but which may not need actions at this time.



Women and children are among the most affected by climate change

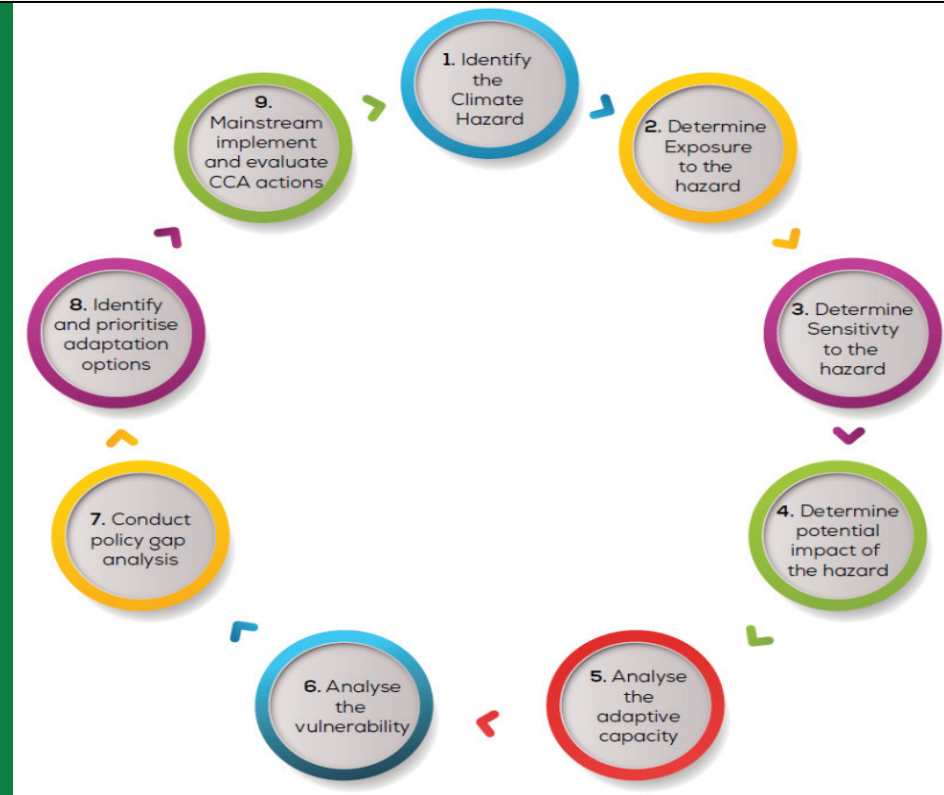


Figure 3.5. Vulnerability assessment process

Adapted from Allen Consulting 2005

Suggested Activities

Using the diagram on Figure 3.4, explain each stage of the process giving examples of local conditions.

Participant Worksheet 3.3: Identify and prioritise adaptation options

What are adaptation options?

.....

Facilitator's notes

For the risks and vulnerabilities defined previously, options for action are developed to reduce the effects of climate change. Firstly, the focus is on understanding and determining adaptation options.

What is the criteria for choice of adaptation options?

Complete table 3.4 giving adaptation options
Table 3.4

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>
<i>Vulnerabilities to climate change</i>	<i>Adaptation options</i>	<i>Next steps</i>	<i>responsibility</i>
Loss of grazing areas due to overuse of lands	Change breeds Income Diversification	Find out which breed adapted to future climate condition Market analysis	Agric .extension services. Depart. of Animal husbandry Local community; expert support on chain marketing
Less available in wells due to reduced groundwater recharge and over pumping.			
reduced harvests due to changes in precipitation and lack of heat and drought tolerant crops			

For the choice of options the criteria such as the following can be used:

Table 3.3 Criteria for choice of adaptation options/ prioritising

Criteria	Description of the criteria
Strategic relevance	-Has a reliable and long-term, goal-oriented effect (i.e. risk reduction). -prevents irreversible and dramatic damages
Urgency	Climatic projections and risks are already occurring or will occur in the near future.
Side effect	-Consistent with the objectives of other activities (sustainability, biodiversity, climate protection).
No regret	Positive effects will be generated both without changed climatic conditions as well as within different climate scenarios.
Flexibility	- Can be modified or further developed. - Can be reversed once conditions change.
Economic aspects	- The medium or long-term benefit of the option is greater compared to its costs. Cost benefit analysis is done - The use of resources is efficient
Timing	The moment for implementing the option is favourable (“window of opportunity”

Facilitator guides identification of adaptation options

Column A shows the vulnerabilities that have been defined in the first workshop session. - In column B discuss what adaptation options are possible. First brainstorm broadly and then select the most relevant options. - In column C, define which steps are necessary to put the options into practice. - In column D specify the actors with capacities to take action or contribute to solutions. Think of synergies with and support needed from actors at state and national level as well as non-state actors. Examples of adaptation options to include climate smart agriculture, use of small grains

Suggested Activities

Using the Table 3.4 explain each stage of the process giving examples of local conditions

What are the costs and benefits of each adaptation option?

.....

Participant Worksheet 3.4 Adaptation measures and evaluation criteria in Agriculture

Using example in table 3.5 evaluate adaptation measures in the land management sector

Facilitator's notes Table 3.4 provides an example of evaluating adaptation measures in agriculture. Possible adaptation measures are evaluated against a set of criteria as in table 3.3

Table 3.5 Example of adaptation measures and evaluation criteria in agriculture

Proposed measures	Low cost?	Technically feasible?	Additional positive benefits (social, economic, environmental)?	Likely to be effective?	Achievable in the short or long term?
Provide forecasts on information water availability	Variable	Yes	Yes	Yes, if information is used for decision making	Short
Develop improved varieties and genetic seed banks	No	Yes	Depends	Yes, though testing will be needed	Long
Create public-private partnerships to coordinate and mobilise resources	Variable	Yes	Yes	Not all the time	Medium
Introduce agroforestry systems	Yes	Yes	Yes, positive environmental impacts	Yes	Medium
Improve post-harvest storage and management	Variable	Yes	Yes	Somewhat has to be done in conjunction with resilient seed	Sort-medium
Strengthen local technical capacities eg best practices	No	Yes	Yes	Yes, if designed appropriately	Short- medium
State-led public policy on agriculture, nutrition food security	No	Yes	Possible, positive health benefits	No, not most of the time	Long
Improve water resources management	Variable	Yes	Yes	Yes, if done correctly	Short-medium
Improve irrigation	Yes	Yes	Yes, eg could reduce conflict over water by increasing efficiency of use	Yes. But depends on how much is done	Medium
Better land use planning	Yes	Yes, with data and proper analysis	Yes, if considering other factors	Yes, if enforced	Long



UNIT 4: STAKEHOLDER ENGAGEMENT AND ENTRY POINTS FOR MAINSTREAMING CLIMATE CHANGE ADAPTATION INTO SECTOR POLICY AND NATIONAL AND SUB-NATIONAL DEVELOPMENT PLANNING

Introduction

Mainstreaming climate change into development planning is effectively achieved when there is a shift away from externally imposed priorities and capacity to developing approaches that evolve from and are embedded in existing development planning systems, capacity and priorities.

Factors that influence risk, vulnerability and adaptive capacity are also highly context-specific. As such, national and subnational plans and policies should enable local responses. Stakeholder engagement at the local level is therefore crucial in mainstreaming climate change in subnational planning. The private sector and local communities have key roles in economic development and thus are critical to the effectiveness of mainstreaming efforts on the ground. The exclusion of local insight and knowledge concerning adaptation can therefore be a limitation to adaptation planning and provides a strong argument for the introduction of more efforts aimed at improving the amount of participation and local deliberation.

A mainstreaming “entry point” is an opportunity for interface with elements in a strategic or planning framework through which a climate change adaptation intervention can be incorporated into an institution’s operational planning. Finding the entry points is concerned with setting the stage for mainstreaming climate change. This entails understanding the linkages between climate change and national/subnational development priorities, as well as understanding the governmental, institutional and social contexts and needs, in order to define adaptation outcomes on which to focus on. From this vantage point, those involved in mainstreaming climate change can identify entry points into development planning..

This unit presents an overview of stakeholder involvement and entry points in mainstreaming climate change adaptation into development planning.

Objectives

By the end of the unit, participants should be able to:

- Understand stakeholder role and involvement in climate change adaptation ,
- Identify entry points for mainstreaming climate change adaptation into national and subnational development planning.
- Identify multi-stakeholder, cross-sectorial partnerships that drive adaptation from enterprise dimension for demand-driven mainstreaming.
- Identify opportunities for integrating climate change adaptation into development planning

Methodology

Discussion with use of illustrations/plenary.

Duration:

3 hours

Participant Worksheet 4.1: Stakeholder role and involvement in climate change adaptation mainstreaming

List stakeholders involved in climate change adaptation:

.....

.....

.....

.....

What role can each stakeholder identified above play in the climate change adaptation mainstreaming process?

.....

.....

.....



Stakeholder participation

Take notes or fill in the blanks

Facilitator's notes

- In order to determine who should participate in the mainstreaming activity, it is helpful to go through a stakeholder mapping process to ensure that all of the people who need to be engaged in the discussions are aware of the process to be undertaken and given the opportunity to participate.

- While Provincial and District Development Committees will be very aware of the stakeholders that are part of their climate adaptation framework, there are additional actors that would need to be engaged. These are especially enterprise actors in priority economic sectors where mainstreaming is targeted, who should be guided to leverage climate action as an additional area of investment. Resistance to mainstreaming could result from excluding some stakeholders in the mainstreaming process.

The stakeholder process entails two steps:

- Stakeholder identification to ascertain which organisations, sectors and groups are directly or indirectly involved in climate change; and;
- Stakeholder analysis to understand climate vulnerability and risk exposure of each group.

Table 4.1 Strategic areas of focus by national and sub-national policy stakeholders

National and subnational policy stakeholders	Strategic areas of focus
National government agencies (e.g. Ministries of Planning, Finance, Development, and Public Administration, Agriculture, Health)	National and sub national policies Public finances Fiscal policy Institutional governance framework Operational capacity of government Management of government assets Disaster preparedness and response
Members of Parliament	Regulation and standards Legislation National and subnational policies Public finances Fiscal policy
Research community	Research and development Awareness-building and lobbying
Private sector, Civil society organisations and non-governmental organisations operating at the national level	Awareness-building, specifically on how climate adaptation, complemented by mitigation, can become an investment opportunity – opening up new product lines, reducing operational costs, increasing revenues, increasing profitability.
Donor agencies	Public finances Research and development
Traditional leaders	Custodians of local natural resources.



Figure 4.1 Stakeholder participation is critical in mainstreaming climate change

Suggested activities

- Identifying stakeholders and their roles in the climate change adaptation mainstreaming process.
- Group discussions and report back.

Participant Worksheet 4.2:

Entry points for mainstreaming climate change into national and subnational development planning.

What is a climate change mainstreaming entry point?

.....

What do you think are entry points to champion climate change adaptation in development planning?

.....

Facilitator notes

- A mainstreaming “entry point” is an opportunity where there is a dialogue or an interface with elements in a policy or planning framework through which climate change adaptation approaches and interventions can be incorporated into a sector policy, national, provincial and/or district plan, budget, implementation, monitoring and evaluation.

The identification of “entry points” serves a number of purposes:

- a. It establishes a sector policy relevant point or points of focus for discussion, planning and decision making.
- b. It establishes that the proposed mainstreaming dialogue and process will be a practical, applied exercise, intended to produce tangible and utilizable outputs.
- c. It encourages dialogue on climate risk management and adaptation to climate change.
- d. Establishes and demonstrates the strong links that exist between national priorities, disaster risk management and climate change adaptation.

Identification of entry point help determine which development policies, plans, activities, strategies and budgets need to be modified to reduce the vulnerabilities to climate change impacts.

.....
What policies/plans/structures/bylaws/actions are available at community level to mainstream climate change adaptation into development planning?

.....

Do district plans speak to climate change adaptation?

.....

What is the role of district structures in climate change adaptation?

Entry points to integrate climate change adaptation in development planning.

Each district in Zimbabwe has a development plan, renewed after every five years. These offer an opportunity to integrate climate adaptation actions into the plans. Other districts such as Guruve Rural District Council have developed natural resources by-laws that cover an array of issues, including penalties for cutting down trees or practicing stream bank cultivation. These by-laws offer an opportunity for climate change mainstreaming along the lines of adaptation.

Structures available at community level to mainstream climate change into development planning.

District Development Committees chaired by District Development Coordinators exist at district level across the country to respond to disasters and emergencies and can play a major role in spearheading climate mainstreaming activities. Environment committees at district level as well as environment sub-committees at sub-district level exist in some districts in the country. Environmental monitors active at ward level can be mandated to monitor climate change compliancy.

Education institutions also offer another avenue for mainstreaming climate change, for example through integrating ecosystems-based actions such as increasing forest cover and protecting land cover in the education policy. Ecosystems based approaches for adaptation focusses on adaptation activities that rely on goods and services provided by the ecosystems such as food and water production and services such as recreation. If mainstreamed in the education policy, the adaptation measures will be applied in all public primary and secondary schools in the country thereby resulting in more adaptation and mitigation benefits.

Review of district development plans

District plans can mainstream climate change through consideration or inclusion of climate adaptation components. Climate change adaptation can also be mainstreamed during yearly budgeting as well as through the devolution agenda as more capacity and support is channelled.

Table 4.2 Climate Change Mainstreaming Entry points

Planning level	Entry points
National government & cross sectoral ministries	National Development Strategy
	Poverty reduction strategy paper
	National development plan
Ministries	National budget allocation process or review
	Sector strategies, plans and policies
	Preparation of sector budgets
Sub-national authorities	Public expenditure reviews
	Devolution policies
	District plans, by laws
	Preparation of sub-national budgets

	<p>Mainstream Climate Change into National and subnational Planning Processes</p> <ul style="list-style-type: none"> - Understanding national and subnational development planning processes - Integrating climate change into national and subnational development planning processes - Identifying opportunities for implementing climate change responsive development plans <p>Mainstream Climate Change into Budgeting Processes</p> <ul style="list-style-type: none"> - Engaging stakeholders in the budgeting Process at national and subnational level <p>Mainstream Climate Change into Sector Strategies and Subnational Plans and Budgets</p> <ul style="list-style-type: none"> - Integrating climate change issues into devolution funds. - <p>Suggested activities</p> <ul style="list-style-type: none"> - Discussing the existing development planning structures - Discussing existing development plans - Discussing the entry points and opportunities, including income creating enterprise opportunities - Explaining how existing structures and plans can be used as entry points to mainstream climate change adaptation - Inviting participants to complete blanks
<p>Participant worksheet 4.3 Stakeholders and their Roles in Integrating CCA into plans and policies</p> <p><i>Explain the opportunities of working with government stakeholders</i></p> <p>.....</p>	<p>Facilitators notes:</p> <p>An analysis of stakeholders will indicate their roles in integrating climate adaptation into planning</p> <p>Table 4.3.Stakeholders and the opportunities of working with them</p>

	Stakeholder	Opportunities	
<i>What are the opportunities of working with non-governmental stakeholders in integrating climate change adaptation into development planning?</i>	Parliament	Leverage its legislative role	
		Foster its advocacy role especially for budgeting Cooperate with committees on CCA issues	
	Finance and planning bodies	Turn these bodies into champions Have them take a lead role in the effort with environmental institutions Develop synergies with revenue collection measures eg fight against corruption, tax	
	Environmental institutions	Make use of their expertise including in monitoring climate change Develop their potential to take several roles eg advocacy and coordination Develop synergies related to obligations with multilateral environmental agreements	
	Civil society organisations	Make use of their expertise including addressing gender issues related to climate change adaptation. Help reflect local realities and brings voices from the community level Foster their role in information, collection, sharing and awareness raising from policy makers to local communities Encourage them in their watchdog role in promoting transparency and accountability Turn them into champions for climate change adaptation integration	
	Academic and research institutes	Make use of their expertise particularly with respect to data collection, analysis of CCA linkages with development and collection of country specific evidence. Promote interdisciplinary teams	
	General public and communities and small-scale farmers	Include the poorest group of population Include poorest when defining adaptation effort Make use of their knowledge of CCA issues at	

		the grass roots level	
	Media	<p>Make use of their role in shaping the opinion of both decision makers and the general public</p> <p>Work with them to encourage public involvement in national development planning</p> <p>Collaborate with them to reach out to the community level</p> <p>Provide them with scientific and policy related information</p>	



UNIT 5: STEPS FOR MAINSTREAMING CLIMATE CHANGE ADAPTATION INTO NATIONAL AND SUBNATIONAL DEVELOPMENT PLANNING

Introduction

Implementation of climate change interventions require coordinated, holistic and multi-stakeholder engagements in order to effectively climate proof national and subnational development plans. Mainstreaming climate change requires relevant stakeholders at all levels to clearly understand the various climate change related policies that govern the country's development agenda. As such, there is need to integrate considerations of climate change adaptation within various stages of the policy cycle at the national subnational level. The national level provides the overall national priorities and guiding policy framework within which subnational levels operate. Introducing climate risks and impact on achieving sector and national/subnational development objectives will increase the recognition on the need for adaptation. This increasing recognition will filter to lower levels of decision-making and create an opportunity for systematic consideration of climate risks and the need for adaptation at all levels of decision-making, including sector and subnational levels and budgeting.

Objectives

By the end of the presentation on this unit participants will be able to:

- Explain the steps taken when integrating climate change into national and sub-national planning.

This unit presents an overview on steps for integrating climate change adaptation priorities into national and subnational development planning.

Methodology

Group discussions with use of illustrations/ plenary

Duration:

3 hours

Participant Worksheet 5. 1:
Steps for mainstreaming climate change into developmental planning and budgets.

Step 1 – Preparation

What is involved in the preparation step?

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Step 2 – Analyse climate change vulnerabilities What is involved in the analysis of climate vulnerabilities?

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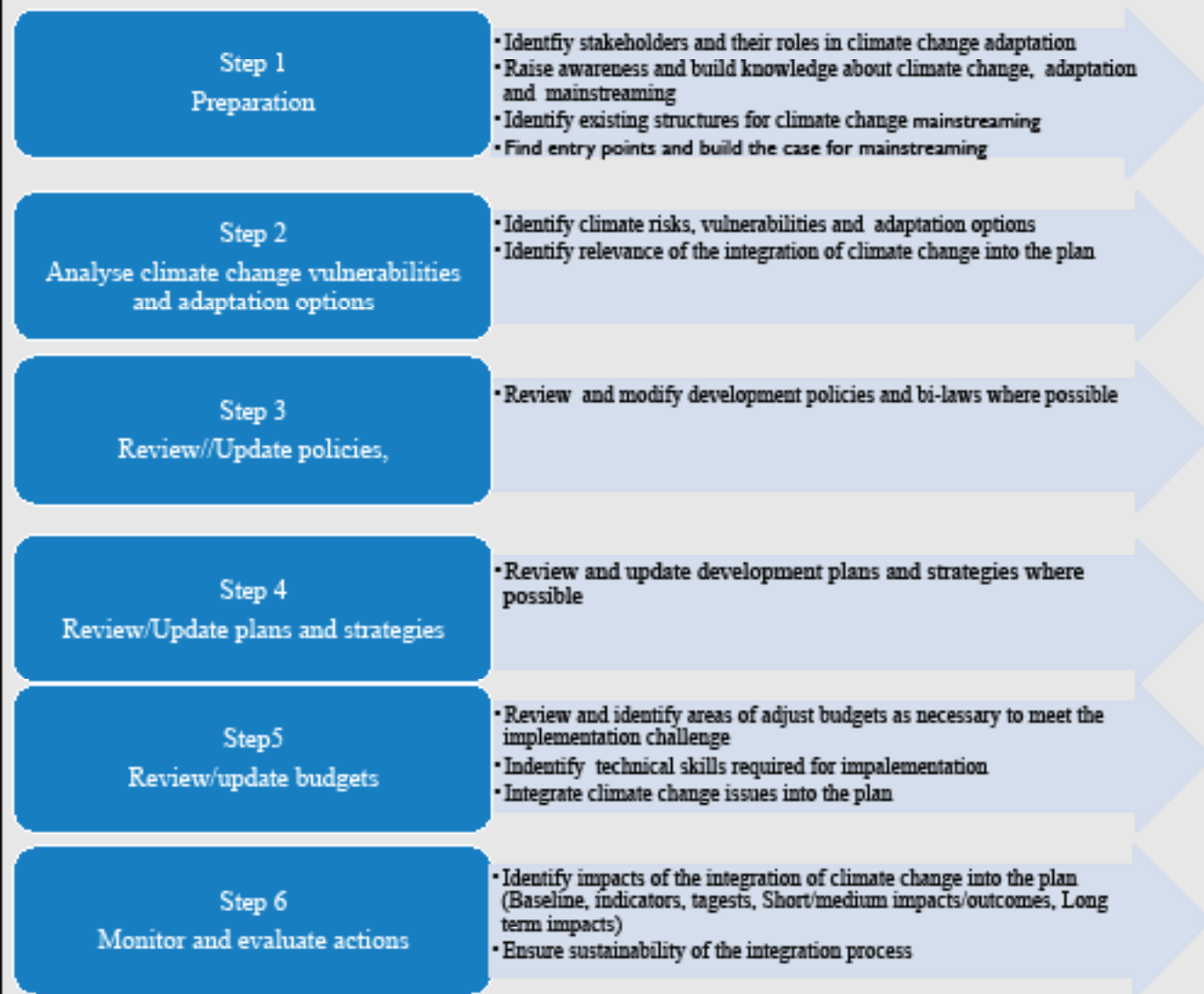
Which adaptation options can be applied for the vulnerabilities identified

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Facilitator notes:



*Step 3 – What is involved in Step 3
- Review/Update policies and bi-
laws,*

*Step 4 What is involved in Step 4
change. Review and Update plans*

*Step: 5. What is involved in step 5
Review/Update budgets*

*Step 6 –What is involved in Step 6
- Monitor and evaluate actions*

Step 1: Preparation

Step 1 of the mainstreaming process is to identify stakeholders and their roles in climate change as well as raise awareness of the climate change adaptation mainstreaming process. Realizing the central role played by subnational local authorities and various stakeholders, it is essential that an awareness and sensitization programme be undertaken to create common understanding of the climate change adaptation mainstreaming process. This gives an opportunity of various stakeholders to understand their role in the process. This also include training of vulnerable and disadvantaged social groups on climate change adaptation initiatives and stakeholder involvement processes for climate change adaptation in order for them to actively participate in the National Adaptation Planning process.

It is essential to ensure that appropriate structures are in place for climate change adaptation mainstreaming. Coordination within and across sectors and levels is critical for effective climate change adaptation mainstreaming. At the national level, the Climate Change Management Department in the Ministry of Environment, Climate, Tourism and Hospitality Industry has the authority to facilitate coordination around climate change adaptation mainstreaming. At Sub-national levels the Provincial Development Committees and District Development Committees are in charge of coordination. It is important to build on existing cross-sectoral coordination mechanisms, such as platforms for disaster risk reduction and vertical cooperation, e.g. between water sector institutions at national and local levels. NAP working groups chaired by the District Development Coordinator have been established in all the country's districts to facilitate the mainstreaming process. The working groups comprise of stakeholders from all sectors, given that climate change is a cross-cutting issue. Individuals with sufficient background and experience in climate change issues can also be chosen to act as champions.

Given that integrating climate change adaptation in development planning, requires participation and involvement of all stakeholders, it is essential to identify and engage them at an early stage. The main players national and sub-national levels include line ministries such as Ministries of Finance, Planning and Development, as well as central-level bodies responsible for the co-ordination across various government agencies (e.g. for disaster risk management, and cross-sectoral co-ordination). Other critical stakeholders to consider include parliaments, private sector and civil society, non-governmental organisations active at national level and sub-national level as well as disadvantaged social groups. Each of these has a specific role to play facilitating climate change adaptation integration at the national level and sub-national level (Table 3.1).

It is essential to find entry points and build the case for mainstreaming. This involves understanding the linkages between climate change and national development priorities, understanding the governmental, institutional and political context, that inform efforts to define adaptation outcomes, Examples of entry points include policies, strategies and plans; current level of mainstreaming; roles and mandates; coordination mechanism . A policy gap analysis helps establish these entry points. Adaptation mainstreaming also requires specific awareness raising and partnerships, in particular among climate specialists, planners and financiers.



Groundwater a relief during droughts

Step 2: Analyse climate change risks and vulnerabilities, and identify adaptation options (Refer to Unit 3)

The purpose of climate risk assessment is to determine current and likely future climate risks that can be faced at sub-national level to ensure that they are recognized within the sub-national plan. It is important for planning purposes to identify the spatial and social nature of climate risk and ensure that key projects and activities in the development plans incorporate those risks. This is done to ensure that particular plans will not be at risk from climate change; and to identify vulnerability to climate hazards that otherwise might be overlooked and would need to be addressed within the plan to reduce climate risk. Particular emphasis should be paid to socially disadvantaged groups.

The National Climate Policy (2017) recognises the role of Indigenous Knowledge Systems (IKS) in adapting to climate change. Communities have already been adapting to adverse effects of climate change using traditional knowledge to predict climate and weather conditions with some degree of accuracy. As such, local information can add context to scientific data. Expert recall of climate trends, such as temperatures (trends, hot days/nights, and cold days/nights), rainfall (length of rainy season and distribution of rains, e.g. frequency and lengths of dry spells within the rainy season), groundwater availability, and extreme events (heat waves, droughts, floods, fires, storms) can supplement scientific data.

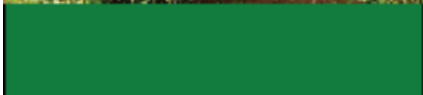
The climate risk assessment should also identify future climate risks for a particular district. Global climate models give indications of the nature of anticipated future climate but there is need to downscale these to local level to as to inform sub-national development planning.

An example can be given of Chiredzi District where temperatures are projected to rise. Over the years, average temperatures have already increased and in turn evapotranspiration rates have also risen. The increased evaporation heightens the water stress on crop production. Climate models also, overall, projected decreasing and more variable rainfall in the future. This may have an impact on crop production, namely in the case of smallholder farmers producing maize on dry land.

Adaptation options can include moving to small grains, water harvesting, and innovative soil conservation methods, changing of livestock breeds to climate resistant ones.

Step 3: Review/update policies and bi-laws where possible

This step involves reviewing and strengthening existing development policies and bi-laws in light of the changing environment. Firstly the development policies to be modified are identified during a gap analysis mentioned in Step 1. Significant opportunities that are caused by climate change that may be captured to increase the success of development policies are identified. Actions and resources required to change development policies and bi-laws, are identified. There is also need to identify who should take the lead. This mainstreaming CCA into policy processes focuses on integrating issues into planned or ongoing policy process, based on country-specific evidence. Complementary to country-specific evidence developed as part of a poverty-environment mainstreaming effort are, for example, impact, vulnerability and adaptation assessments; socio-economic analysis of the costs and benefits of adaptation options; and the lessons drawn from adaptation demonstration projects. Based on this evidence, policy documents and measures need to be analysed in light of climate change, be climate-proofed and include additional priority interventions as appropriate. Policy measures at different levels include both general measures revisited with



Adaptation initiatives: soil erosion control using vetiver grass and sand bags

a climate lens and adaptation-specific measures. Among the ways policy makers can explore the scope for recalibrating the policy or strategy are the following:

- Defining the policy or bi-law goals and/or time scales;
- Introducing an explicit provision for revision every few years, to ensure that the policy or strategy is revised in a timely fashion to adjust to new information on climate impacts, vulnerability and adaptation needs;
- Engaging different stakeholders in the policy or bi-law formulation process to ensure a broad consensus on adaptation measures;
- Providing stronger legal support for mainstreaming adaptation into development planning in general; and
- Avoiding specific policy measures (including economic incentives) that are counterproductive

The Zimbabwe vision 2030 already recognises the need to mainstream CCA in development plans. This is reflected in the National strategy 2021-2025 where climate change resilience is a priority

Step 4 Review/update plans and strategies where possible

This step involves reviewing and strengthening development plans and strategies to factor in climate change adaptation actions aimed at reducing and in some cases eradicating the potential impacts of weather related extremes. The plans should be grounded in the new National Development Strategy whose first phase is from 2021 to 2025. The strategy interventions that reduce risk are identified. Future climate risk may have implications for where the activity takes place, when it takes place, or the nature of the project/activity itself. As an example, if there is a plan to build a public facility, such as a school or clinic in a location that has been identified to be at risk of flooding, this plan would need to be modified to reduce the likelihood of the development gains being undermined by climate change.

If anti-malaria spraying campaigns are most effective when they take place immediately prior to the onset of the rains, then the risk of a later onset of the rainy season would mean that the timing of this spraying would need to be delayed in order to maintain optimal benefits. If a livelihood improvement project based on maize production is planned for an area that is at risk of increasing incidence of droughts and dry spells, it may be that promoting a drought-tolerant crop, such as sorghum or millet, would yield better development outcomes in the context of a changing climate. Livelihood improvement projects should pay particular attention to gender differences in risk, since men and women typically engage in different livelihood activities. If an agricultural intervention aims to increase production, for example, the nature of its support should be gendered such that it does not end up differentially reducing risk for men at the expense of women.

Since all districts in Zimbabwe will be exposed to increasing temperatures, the orientation and design of buildings should be done to maximise shade and ventilation. Options for solar power and rainwater harvesting should be explored. If infrastructure is planned for areas that will be exposed to floods, and it is not possible to modify their location (e.g. relocate to higher ground), they must be constructed to withstand floods, for example as raised structures or reinforced. In the case of roads, adequate elevation and drainage must be incorporated. Development planners should therefore monitor and ensure that these measures are taken into account when implementing projects and programmes.



Rooftop rainwater harvesting into infiltration tank

Step 5 Review/update budgets

Once Climate Change Adaptation actions are mainstreamed into development frameworks, these have to be supported by a budget. There can be two types of costs: Business-as-Usual development and transformational adaptation costs. Business-as-Usual development refers to activities that would be implemented regardless of climate change. The additional adaptation costs are those costs that are necessary to reduce vulnerability and increase adaptive capacity to the impacts of Climate Change thereby protecting the development gains. Including the additional Climate Change Adaptation cost within the national/development budgets is crucial for sustainable implementation of development measures. It is the precondition for well-coordinated, maintained and longterm action. An irrigation scheme damaged by a flash flood may need to rehabilitate pumps and irrigation systems. However, if climate hazards such as extreme rainfall events are not taken into account, this investment may be lost with the next flash flood. The additional Climate Change Adaptation measures could be to raise the pumps to protect them from flooding and install drainage structures, thus raising the investment costs, but also protecting the investment for a longer term .e Budgeting and financing adaptation means both integrating adaptation into national and subnational systems and leveraging special funding sources and modalities. That means allocating some of the devolution allocation to climate change proofing of policies, and plans.

Step 6: Monitor and evaluate actions (Refer to Unit 6)

The last step in the process of mainstreaming climate change adaptation is to ensure, through appropriate monitoring and evaluation, that implementation of the national and subnational plans are supporting adaptation to climate change and enabling climate resilient development. Indicators for monitoring progress towards for example reducing risk and enabling adaptation and climate-resilient development are to be measured.

Suggested activities:

- Introducing sub-topic
- Brainstorming on each step of the mainstreaming process
- Inviting each participant to fill in the blanks
- Asking volunteers to offer answers and give feedback
- Summarizing the unit

UNIT 6: MONITORING AND EVALUATION SYSTEM FOR CLIMATE CHANGE ADAPTATION MAINSTREAMING

Introduction

Monitoring and Evaluation (M&E) can take two approaches. Firstly, Monitoring and Evaluation on the National Adaptation Planning (NAP) document indicators by the lead agency responsible for the NAP, and secondly Monitoring, and Evaluation of adaptation approaches and measures integrated in national plans, sector strategies and plans, and district development plans as captured in their respective indicators and as monitored, reviewed and reported by responsible institutions (e.g. Zimbabwe National Statistics Agency, sector ministry monitoring departments for sector policies and plans, and district monitoring offices for District Plans).

The Monitoring and Evaluation of climate change adaptation mainstreaming aims to track progress achieved in the implementation of adaptation interventions, as well as their effectiveness in reducing vulnerability, improving adaptive capacity and supporting the overall well-being of populations affected by the impacts of climate change.

The M&E system for NAP entails collecting information on the process, assessing it through a national monitoring and evaluation system and providing outputs for reporting on the progress to the Conference of Parties. The M&E system thus presents an opportunity for systematically gathering, organizing, storing and sharing of information on climate change, climate change impacts, risks, vulnerability and adaptation. This will be achieved through development of indicators and mechanisms that ensure that all data generated and gathered by the different actors and players is shared and stored in a centralized data repository.

The M&E process for the NAP in Zimbabwe is aligned to national monitoring and evaluation frameworks such as Results Based Management Framework used by the Government of Zimbabwe for tracking progress and effective use of allocated resources for programmes by government agencies and departments. It is also aligned to the National Monitoring and Evaluation Policy and finance tracking system being developed by the Ministry of Finance and Economic Development.

Given that climate change adaptation is context specific, the M&E system makes use of climate data to develop an analytical framework, with inputs from different sectors. Performance targets, monitoring and reporting schedules and data collection systems, must include key climate change information and its links to different sector outcomes, as stipulated in the sector and district plans.

This unit presents an overview on monitoring and evaluation in the context of climate change adaptation actions.

Objectives

By the end of the unit, participants should be able to:

- Understand key principles of monitoring and evaluation in relation to climate change adaptation mainstreaming
- Use indicators to monitor and evaluate climate adaptation mainstreaming

Methodology

Discussion with use of illustrations/ plenary

Duration:
2 hours

Participant Worksheet 6. 1:Monitoring and Evaluation of climate change adaptation mainstreaming

What is monitoring?

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What is evaluation

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Facilitators Notes

Monitoring is the ongoing observation and recording of the progress of an action. Monitoring considers!

- Are the activities running as planned and with the expected results?
- Is there need to adjust the activities or the budget

Reviewing is the systematic assessment of the results, impact, relevance and efficiency of an intervention at key stages during implementation.

An example of Monitoring and Evaluation is given in Table 6.1 which provides a Monitoring and Evaluation (M&E) Framework for the integration of climate change into sector plans and budgets. Table 6.2 provides the evaluation framework. The process involves definition of objectives and targets, selection of indicators and means of verification, identification of data sources and collection methods, support to data and information management, undertaking of special assessments, and the facilitation of reporting and review.

When doing monitoring, evaluation and learning in the context of climate change adaptation actions. It is important to:

- **Check** if you are on course and adjust if necessary. All interventions experience challenges and unforeseen events, and with the continued changes in the climate, you may often need to change or improve your strategies to adapt to new challenging conditions or new opportunities.
- **Document** the results you achieve. When implementing adaptation actions it is important to find if you are making a difference in terms of reducing the vulnerability of your district, sector or target group to climate hazards. Systematic documentation of results also allows you to share your knowledge with others and scale up interventions. With a strong evidence base and proven results, it is also easier to develop a selling point for financial support by government institutions and development partners.
- **Learn** from the experiences and improve your adaptation strategies. Reflecting on challenges, successes and lessons learnt will help you to plan strategically for climate-resilient development and take action in the short and the long run. Reflection on past experiences is especially important as part

Why is monitoring and evaluation of climate change adaptation important?

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What indicators can we use to monitor and evaluate climate change adaptation mainstreaming progress?

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Fill in the blank spaces



Fill in the matrix in Table 6.1. Take note of explanatory notes below the matrix

of strategy development and design of interventions.

- **Be accountable** to financing partners, partners in implementation and beneficiaries.

Indicators are a key element of an M&E system as they enable monitoring and tracking of progress, and ultimately the findings in evaluations. A good indicator helps us to assess if the intended result has been achieved and/or if activities are on track. It usually provides information on quality, quantity, time and extent of the intended change.

One measure of good indicators is the SMART approach: Specific, Measurable, Achievable, Relevant and Time bound.

In the example of drought affecting the water supply in the dry areas of Chimanimani, one of the proposed adaptation options were to drill more boreholes to ensure a reliable, safe drinking water supply throughout the year. An example of a SMART indicator could then be:

By the end of 2021 Chimanimani district would have drilled 25 new boreholes at 60 m depth and installed solar powered water pumps benefiting 25 communities, servicing a total of 2500 households.

Specific: Chimanimani District will drill new boreholes at 60 M depth and install solar powered water pumps

Measurable: 25 boreholes, benefiting 25 communities with a total of 2500 households/12,500 persons

Achievable: District Development Fund are already trained on borehole drilling and solar powered water pumping technologies and ready to manage the process

Relevant: Drought is currently affecting 20% of the boreholes in Chimanimani which are drying up earlier and replenishing later in drought years.

Time bound: By end of 2021.

Suggested activities:

- Introducing subtopic
- Brainstorming on monitoring and evaluation
- Inviting each participant to fill in the blanks
- Asking volunteers to proffer answers and discuss why we should monitor and evaluate climate change adaptation mainstreaming
- Ask participations to suggest possible indicators for monitoring and evaluating climate change adaptation mainstreaming

- Demonstrate Monitoring and Evaluation using a logframe, with all elements including a baseline data, objectives, outputs/targets, indicators, and means of verification, and responsibility, as in table 6.1
- To select indicators participants will be guided by the sample indicators presented in the matrix in Annex 2 attached to this manual



Table 6.1 Monitoring and Evaluation (M&E) Framework for the integration of climate change into sector plans and budgets

Sector	Performance measurement/ analysis of integration process			Information Management System			Reporting System			Responsibility centre
	Baseline	Performance Target	Performance Indicator	Information required	Source of information	Data collection frequency, collection and analysis methods	Frequency of reporting	Methods reporting feedback mechanism	of and	
Agriculture & food security			<i>Eg area under irrigation</i>							
Environment /Natural Resources & biodiversity										
Water and Sanitation										
Energy, and oil/gas										
Human health										
Infrastructure & settlements										
Education										
Gender sensitivity			<i>Number of men and women involved in mainstreaming CCA into development plans</i>							

Note:

Note:

1. Baseline - The situation before climate change has been integrated into the sector plans and budgets;
2. Performance Target - The level of integration planned for achievement (measurable and attainable) e.g. the level and quantity, pattern and distribution of activities, level of budgeting for climate change adaptation and mitigation etc;
3. Performance Indicator - The measurement of the performance level e.g. below or above or within the performance target;
4. Information required - The information needed/required during the integration process;
5. Source of information - The primary or secondary origin of the required information e.g. from Sector reports, community, resource users, agencies, academia and research institutions;
6. Data collection frequency - Periodic framework for data collection e.g. quarterly or annual;
7. Data collection and analysis methods - Techniques used in data collection and analysis (Quantitative and Qualitative techniques);
8. Frequency of reporting (as in data collection frequency);
9. Reporting methods (as in data collection and analysis methods); and
10. Responsibility Centre - Institution responsible for the integration process.

Table 6 2: Impact Evaluation Framework for the integration of climate change

Sector	Impacts of the integration of climate change into the sector			Relevance of the integration of climate change into the sector				Sustainability mechanisms for the integration process	Responsibility centre
	Baseline	Short/medium impacts/outcomes	Long term impacts	Policy relevance	Institutional relevance	Efficiency relevance	Effectiveness relevance		
Agriculture & food security									
Environment /Natural Resources & biodiversity									
Water and Sanitation									
Energy, and oil/gas									
Human health									
Infrastructure & settlements									

Ministry of Water and Environment (2014) Guidelines for the Integration of Climate Change in Sector Plans and Budgets, Ministry of Water and Environment. Kampala. Available at <http://ccd.go.ug/wp-content/uploads/2018/04/National-Climate-Change-Mainstreaming-Guidelines-.pdf>

Note:

1. Impacts of the integration of climate change into sectors

- a) Economic impacts; production, distribution, consumption of goods and services (economic prosperity)
- b) Social impacts; access to goods and services for social wellbeing and social inclusion in development processes.
- c) Environmental impacts; environmental sustainability and resource productivity, and;
- d) Governance impacts; institutional/organizational/structural or process impacts

2. Impact timeline

- a) Short/medium term - 1-5 years
- b) Long term; - 5+ years

3. Relevance of the integration of climate change into sectors

- a) Policy relevance - in line with the respective sector and climate change policies;
- b) Institutional relevance - in line with the sector/district mandate, vision, mission, goal, objectives and strategies;
- c) Efficiency relevance - in line correspondence to the available resources (human, financial, capital and time)
- d) Effectiveness relevance - in line with the sector/district strategic plans and intended results/outcomes

4. Sustainability mechanisms

Measures/strategies the District has put in place to maintain and sustain the integration process after the current technical interventions by NAP and other partners phase out.

REFERENCES

- Center for Climate and Energy Solutions (2020) Available at <https://www.c2es.org/content/climate-resilience-overview/>
- CDEMA (2011), The Guidance Tool: A Manual for Mainstreaming Climate Change Adaptation into the CDM Country Work Programme, Caribbean Disaster Emergency Management Agency
- Chigwata, T. C (2019). Devolution Demystified: Emerging Debates and Prospects for Devolution in Zimbabwe: A Discussion Paper.
- Government of Zimbabwe (2020). Understanding Climate Risks over Zimbabwe. Ministry of Environment, Climate, Tourism and Hospitality Industry, Harare
- Climate Technology Centre and Network (2017) Climate Smart Agriculture Manual for Zimbabwe, CTCN, Denmark
- <http://www.fao.org/zimbabwe/fao-in-zimbabwe/zimbabwe-at-a-glance/en/>
- <http://www.oecd.org/derec/netherlands/IOB-Monitoring-Evaluating-Mainstreamed-Adaptation-Climate-Change.pdf>
- <https://pubs.iied.org/pdfs/10034IIED.pdf>
- <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwjQ4PbXiJ7lAhUXQkEAHfVGCb8QFjAAegQIA-BAC&url=https%3A%2F%2Fwww.ajol.info%2Findex.php%2Fajsw%2Farticle%2Fdownload%2F165222%2F154682&usq=AOvVaw0erO4XI5zYBiV0hgBt4ton>
- https://www.kas.de/c/document_library/get_file?uuid=6dfce726-fdd1-4f7b-72e7-e6c1ca9c9a95&groupId=252038
- IIED Climate Change Working Paper No. 3
- Integrating Climate Change Adaptation into Development Co-Operation: Policy Guidance
- IPCC (2001), Climate Change 2001: Impacts, Adaptation and Vulnerability, McCarthy, J.J., Canziani, O.F., Leary, N.A., Dokken, D.J., and White, K.S., (eds.), Cambridge: Cambridge University Press.
- IPCC, (2012) Glossary of terms. In: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation [Field, C.B., V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley (eds.)]. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change (IPCC). Cambridge University Press, Cambridge, UK, and New York, NY, USA, pp. 555-564
- IPCC, 2014: Annex II: Glossary [Mach, K.J., S. Planton and C. von Stechow (eds.)]. In: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, pp. 117-130.
- Jessica Ayers, Saleemul Huq, Helena Wright, Arif M. Faisal & Syed Tanveer Hussain (2014), Mainstreaming climate change adaptation into development in Bangladesh, *Climate and Development*, 6:4, 293-305
- Klein, R.J.T, Schipper, L.F E, Dessai,S. (2005) Integrating mitigation and adaptation into climate and development policy: three research questions. *Environmental Science & Policy*, Volume 8, Issue 6, 2005, Pages 579-588.
- Lebel, L., L. Li, C. Krittasudthacheewa, et al. (2012). Mainstreaming climate change adaptation into development planning. Bangkok: Adaptation Knowledge Platform and Stockholm Environment Institute. 32 pp.
- Ministry of Local Government, Zimbabwe (2009) Disaster Risk Management: A Resource Book for Educational Institutions in Zimbabwe, Prepared by the Civil Protection Organisation of Zimbabwe, Harare

Ministry of Environment, Water and Climate (2014), Zimbabwe Climate Change Response Strategy, Harare

Ministry of Lands, Agriculture, Water, Climate and Rural Resettlement (2019), Zimbabwe Climate Change Adaptation Manual, Ministry of Lands, Agriculture, Water, Climate and Rural Resettlement, Harare

Ministry of Environment, Climate, Tourism and Hospitality Industry, Climate Change Management Department (2021). Zimbabwe Climate Change Vulnerability Assessment: An indicator-based report, Climate Change Management Department, Harare

Mousumi Pervin, Shahana Sultana, Am Phirum, Isatou F. Camara, Vincent M. Nzau, Vanhthone Phonnasane, Pasalath Khounsy, Nanki Kaur and Simon Anderson (2013) A framework for mainstreaming climate resilience into development planning, IIED Working Paper, Climate Change, November 2013 <http://pubs.iied.org/10050IIED>

OECD (2009), Integrating Climate Change Adaptation into Development Co-operation: Policy Guidance.

Oxfam International (2017). The Future is a Choice: Absorb, adapt, transform Resilience Capacities. Oxfam GB. Oxford. Available at <https://oxfamilibrary.openrepository.com/bitstream/handle/10546/620178/gd-resilience-capacities-absorb-adapt-transform-250117-en.pdf?sequence=4&isAllowed=y>

UNDP (2005). Adaptation Policy Frameworks for Climate Change. Developing Strategies, Policies and Measures, Ed. Bo Lim, Erika Spanger-Siegfried, Co-authors Ian Burton, Elizabeth Malone, Saleemul Huq

UNDP (1992) An Overview of Disaster Management, Department of Humanitarian Affairs/United Nations Disaster Relief Office - United Nations Development Programme, 1992, 136 p.

UNISDR (2009) UNISDR Terminology on Disaster Risk Reduction, UNISDR, Geneva

UNDP (2011), Mainstreaming Climate Change in National Development Processes and UN Country Programming: A guide to assist UN Country Teams in integrating climate change risks and opportunities. United Nations

UNDP-UNEP (2011) Mainstreaming Adaptation to Climate Change into Development Planning: A Guide for Practitioners. UNDP-UNEP Poverty-Environment Initiative.

UNDP-UNEP (2011) Mainstreaming Climate Change Adaptation into Development Planning – A Guide for Practitioners, UNEP, 2011

Vincent, K., Climate Risk Management (2018), Developing and applying a five-step process for mainstreaming climate change into local development plans: A case study from Zambia. Climate Risk Management, Climate Risk Management, Volume 21, 2018, Pages 26-38

LIST OF ANNEXES

1. Sample indicators for mainstreaming CCA into national and subnational development plans
2. Evaluation Form
3. Participant Worksheets



Annex 1 Sample Indicators

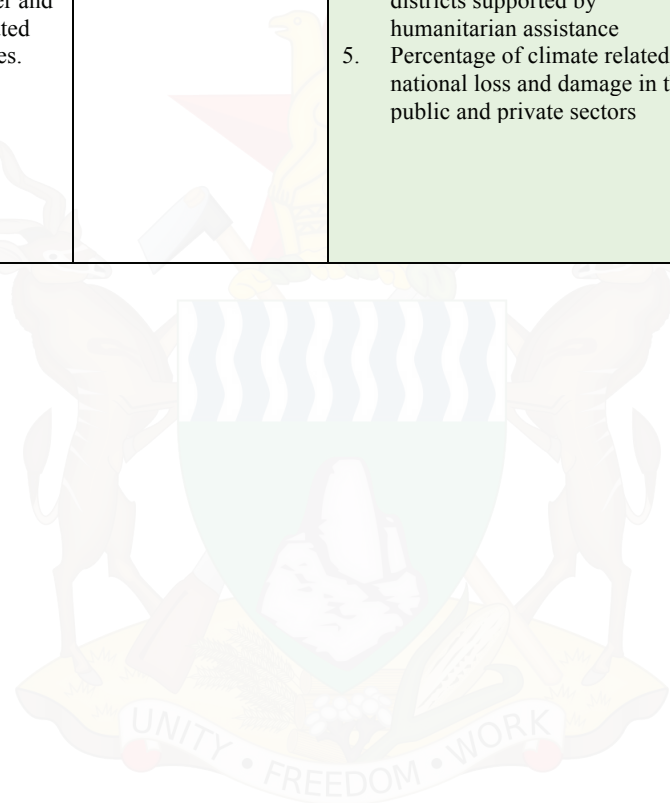
NAP Strategic Priorities Framework

NAP Strategic Priority	Specific Objective	Anticipated Outcome	Performance Indicator	Data Sources	Assumptions/Risks
<p>Climate change adaptation mainstreamed into national and sub-level development policies, strategies and plans</p> <p>(Target: on-going to be fully implemented in the medium term by 2025 Aligned to NDS1- at least 5 districts per year)</p>	<ol style="list-style-type: none"> 1. Mainstream climate change adaptation into development policies, strategies and plans. 	<ol style="list-style-type: none"> 1. Climate change adaptation is intentionally included in government development plans policies, programmes, actions and budgets at national and sub-national level. 2. Provision of enabling environment for building resilience capacities of communities is established 	<ol style="list-style-type: none"> 1. Number of Ministries that have integrated climate change adaptation in their policies, strategies, plans and programmes 2. Number of provinces and districts that have integrated climate change adaptation in their sub-national plans and budgets 3. Proportion of national and sub-national policy documents that refer to climate change adaptation 4. Number of development programmes aimed at building the adaptive and resilience capacities of communities. 	<ol style="list-style-type: none"> 1 Ministry of Local Government and Public Works 2 New government and private sector policy and strategy documents 3 National and sub-national strategic planning documents 4 Evaluation reports 5 Civic Society reports 	<ol style="list-style-type: none"> 1. Government demonstrates strong political will to support adaptation efforts at national and sub-national levels 2. Awareness raising and training result in change in attitude and behaviour, especially among the leadership at national and sub-national levels 3. Sufficient capacity for strengthening institutional capacity can be mobilized.
<p>Institutional arrangements and capacities of institutions involved in climate change adaptation strengthened</p> <p>(on-going process, to be intensified and completed in the medium term)</p>	<ol style="list-style-type: none"> 1. Strengthen structures to support the coordination, integration and implementation of climate change adaptation actions including designing adaptation activities at national and sub-national levels 2. Strengthen the financial, technical and human capacity of institutions so that they can adequately respond to climate change 	<ol style="list-style-type: none"> 1. Establishment and strengthening of institutions with capacity to adequately respond to climate change related issues at national, provincial and community levels. 	<ol style="list-style-type: none"> 1. Number of climate change adaptation capacity building programmes implemented for institutions involved in climate change adaptation 2. Number of training programmes for government officers, CSO members and private sector employees on climate change adaptation 3. % of government staff that have received training on climate change adaptation. 4. Number of government programmes that are systematically including 	<ol style="list-style-type: none"> 1. Climate Change adaptation training manual 2. Training workshop records 3. Evaluation reports 	<ol style="list-style-type: none"> 1. Resources are mobilized to support strengthening institutional capacities 2. Retention of trained staff

NAP Strategic Priority	Specific Objective	Anticipated Outcome	Performance Indicator	Data Sources	Assumptions/Risks
			climate change adaptation and specifically budgeting for it		
Climate financing resources identified and accessed; and efficient, sustainable, transparent, long term investment facilities and resources for adaptation created (on going and continuous throughout review period)	<ol style="list-style-type: none"> 1. Identify and mobilize sustainable financing and investments for climate change adaptation from domestic and international sources. 2. Increase national capacity to secure funding for climate change adaptation. 	<ol style="list-style-type: none"> 1. Climate adaptation implementation resources identified and used to create long-term climate change investments 	<ol style="list-style-type: none"> 1. Proportion of national budget allocated for climate change adaptation and related activities 2. Proportion of budget allocated for climate change adaptation at the sub-national level 3. Number of signed funding/ cooperation agreements to support adaptation action 4. Amount of funding available for adaptation and resilience building programmes from international and regional sources 5. Amount of private sector financing for climate change adaptation 	<ol style="list-style-type: none"> 1. Ministry of Finance Reports 2. National Budget Statements 3. Climate Financing Tracking tool 4. Donor Agencies Financial Reports 5. Surveys of financial institutions contributing to adaptation 6. Evaluation reports 	<ol style="list-style-type: none"> 1. Low to insignificant inflationary pressure on incomes, savings, and financial products like insurance 2. Climate change remains a priority funding area for development partners 3. Sufficient awareness and incentives for encouraging uptake of insurance and other financial products for climate adaptation
Generation and management of climate change information and knowledge for adaptation enhanced through research,	<ol style="list-style-type: none"> 1. Improve and expand the current knowledge on observed and projected changes of climate; associated physical vulnerabilities; socio-economic impacts and what works to build adaptive 	<ol style="list-style-type: none"> 1. Expanded scientific knowledge to support context specific adaptation action for Zimbabwe 	<ol style="list-style-type: none"> 1. Number of research reports/ articles on climate change adaptation and resilience 2. No of programmes to support research in adaptation 3. Policy briefs on relevant research findings 	<ol style="list-style-type: none"> 1 Higher education and research institutions annual reports 2 Number of Policy Dialogues and conferences on 	<ol style="list-style-type: none"> 1. Mechanisms to ensure dissemination of information to policy makers and communities are strengthened

NAP Strategic Priority	Specific Objective	Anticipated Outcome	Performance Indicator	Data Sources	Assumptions/Risks
innovation and technology development and transfer (on going, to be strengthened by medium term and intensified)	<ol style="list-style-type: none"> capacity and resilience through scientific research. Support research and development of technologies for use in adaption to climate change in all relevant sectors Use the knowledge generated from research to inform climate change adaptation policy and practice. Increase the knowledge and skills on successful practices for adaptation through well designed education, training and awareness programmes 		<ol style="list-style-type: none"> Number of programmes to raise awareness on results of research New curriculum designed to incorporate findings from relevant research on adaptation. 	<ol style="list-style-type: none"> adaptation Number of new scientific publications on adaptation in Zimbabwe Programme Evaluation reports e.g. Zimbabwe Resilience Building Fund . USAID Food for Peace and Zimbabwe Livelihoods and Food Security Programme New Intellectual Property on adaptation technologies/processes 	<ol style="list-style-type: none"> and functional Public trust for climate information is at least fair to good
Generation, management and utilization of climate information to inform adaptation enhanced (On- going, must be completed in the short to medium term)	<ol style="list-style-type: none"> Strengthen the preparedness to counter the threats of climate change through establishment of advanced monitoring and surveillance systems, timely weather and climate forecasting systems and effective communication channels for information dissemination Promote and support documentation and tapping into indigenous knowledge systems to complement scientific knowledge for climate change forecasting and early warning systems 	<ol style="list-style-type: none"> Timely climate information to inform decision making Use of information to develop effective early warning systems to trigger appropriate response to climate related disasters 	<ol style="list-style-type: none"> Number/proportion of functional hydro-meteorological systems Effective weather forecasting systems Efficient climate information dissemination channels Early warning systems 	<ol style="list-style-type: none"> Annual reports from Meteorological Services Department Ministry of Local Government and Public Works Reports Zimbabwe National Water Authority Reports Evaluation reports Climate information system 	<ol style="list-style-type: none"> Pathways to ensure research is disseminated to policy makers, civil society and communities are established and functional Public trust for climate information is at least fair to good
Adaptation systems for effective preparedness,	1. Develop mechanisms to	1. Improved	1. Proportion of funds allocated for	Ministry of Local Government –	1. Communication

NAP Strategic Priority	Specific Objective	Anticipated Outcome	Performance Indicator	Data Sources	Assumptions/Risks
<p>response and management of extreme climate events, hazards and disasters strengthened at national, sub-national and sectoral levels.</p> <p>(captured in National Development Strategy1 – at least 70% of Local authorities to have improved disaster risk management system by 2025 – 100% by 2030)</p> <p>(100% to have achieved functional early warning system by 2025 – National Development Strategy 1)</p>	<p>mainstream climate change adaptation and disaster risk management into development programmes</p> <ol style="list-style-type: none"> Establish, strengthen, and resource early warning and early response mechanisms to deal with extreme climate events at all levels Introduce surveillance and monitoring systems which can be used to trigger a crisis modifier and reduce impacts of climate related extreme events on communities. Insurance 	<p>systems for disaster risk management to reduce the vulnerabilities of communities and increase their risk preparedness for extreme events</p>	<p>disaster risk management</p> <ol style="list-style-type: none"> Proportion of local authorities conducting risk and resilience assessments and utilizing the information to inform planning Reduced loss of life and assets due to climate induced extreme events and disasters Percentage of population in high risk climate change hotspot districts supported by humanitarian assistance Percentage of climate related national loss and damage in the public and private sectors 	<p>Department of Civil Protection</p> <p>Department of Social Welfare</p> <p>Ministry of Finance</p> <p>ZimVAC</p> <p>Surveys</p>	<p>is effective</p> <ol style="list-style-type: none"> Resources for enabling early response/action given climate-related warning can be accessed



Annex 2 Evaluation Form



Climate Change Mainstreaming Programme

Evaluation Form

Please circle below as appropriate

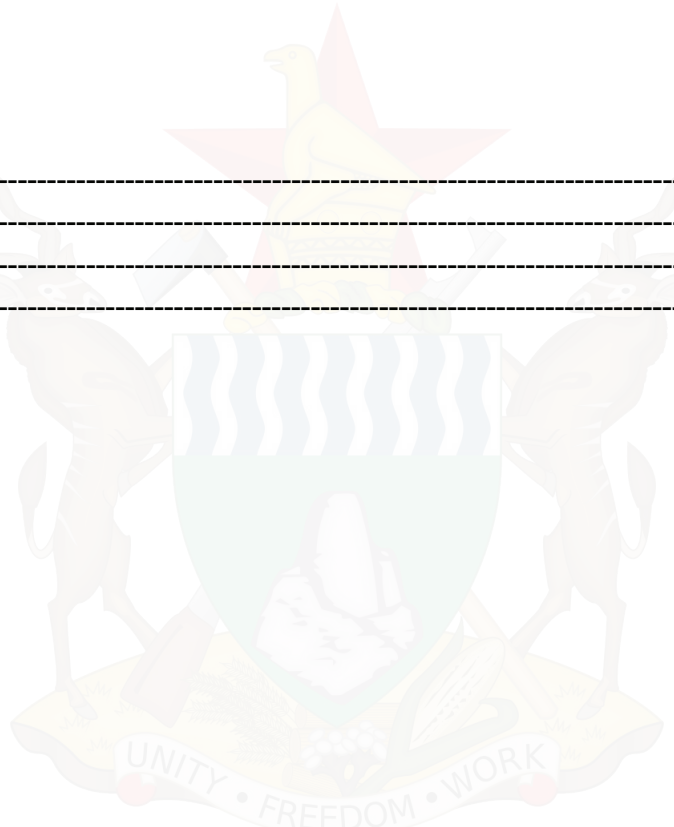
(Excellent=1; Good =2; Bad=3; Poor=4)

Quality of the Training

I found this training a valuable use of my time	1	2	3	4
Relevance of the information to me	1	2	3	4
Ability of facilitators to effectively communicate the information	1	2	3	4
The training enhanced my appreciation of climate change issues	1	2	3	4

Was the training successful in raising awareness on climate change	1	2	3	4
Participant quiz/learning assessment sessions	1	2	3	4
Overall Quality of the training	1	2	3	4
Effectiveness of the methodology used to raise awareness	1	2	3	4
Participant involvement in the sessions	1	2	3	4

General Comments



Annex 3 Participants Worksheets

Participant Worksheet 1.1

Overall aim of the Unit

Explain the meaning of the following words.

Climate Change.....

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What causes climate change?

.....

Adaptation.....

Mitigation.....

Risk.....

Hazard.....

Resilience.....

Vulnerability.....

What is climate change adaptation?

.....

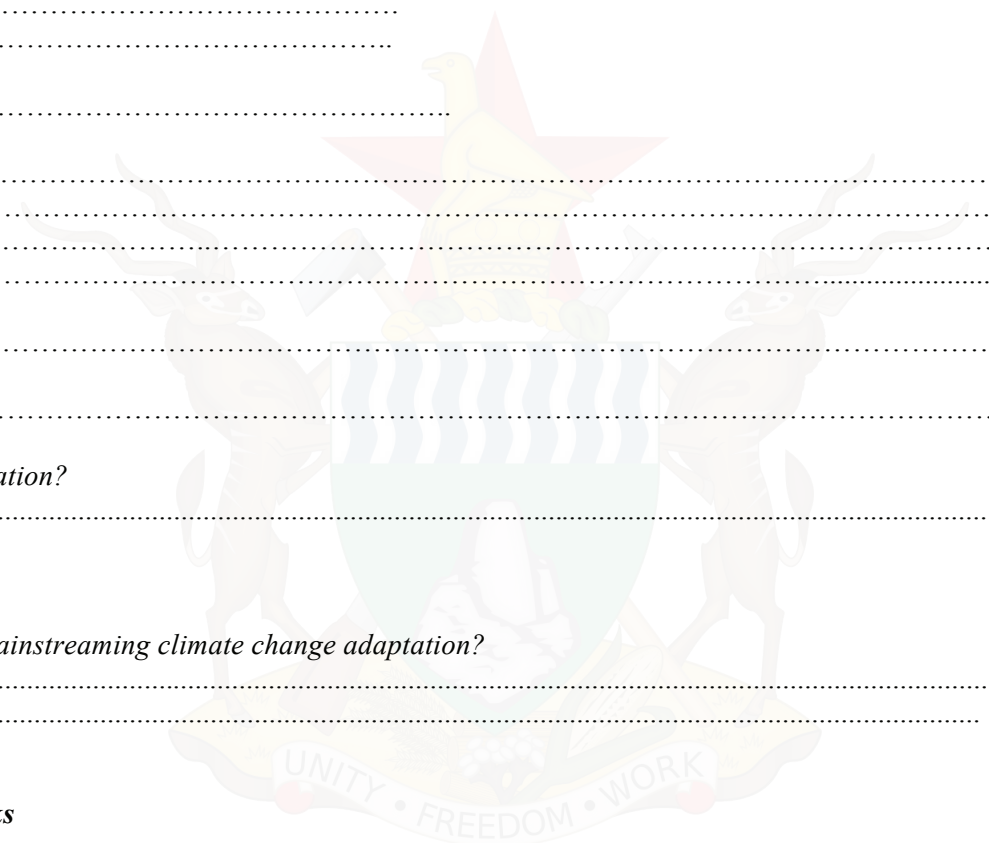
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What are the advantages of mainstreaming climate change adaptation?

.....

.....

Take notes or fill in the blanks



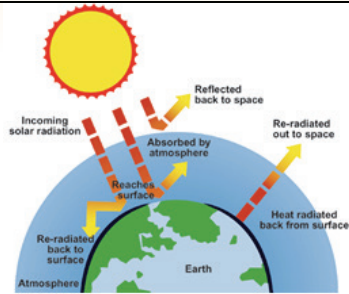
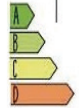


Figure 1.1 Global warming & the greenhouse effect

Mitigation

Aims to curb and reduce greenhouse gas emissions



Energy efficiency



Electrification of industrial processes



Greater use of renewable energy



Efficient transport system
(Electric buses, cars, trains)



Carbon tax and emission markets



Reforestation

Describe projected occurrences of extreme events in Zimbabwe and prone areas

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Participant Worksheet 3.1: Risk and Vulnerability to climate change

What is risk to climate change?

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What is vulnerability to climate change

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What is a climate hazard?

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What is exposure to climate hazards?

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What is potential impact of climate hazard?

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What is sensitivity to climate hazards?

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What is adaptive capacity to climate hazards?

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Table 3.2 Identify hazards in your own area using the template below:

Area: District Name			
Sector:			
Climate Hazard	Exposure	Sensitivity	Potential Impact

Participant Worksheet 3.2

Participant Worksheet 3.2: Risk and vulnerability assessment process

What are the factors that help characterise vulnerabilities?

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Explain the three dimensions of a risks assessment matrix

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Giving examples explain the stages of the vulnerability assessment process

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Participant Worksheet 3.3: Identify and prioritise adaptation options

What are adaptation options?

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What is the criteria for choice of adaptation options?

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.....
Complete table 3.3 giving adaptation options

Table 3.4

A	B	C	D
<i>Vulnerabilities to climate change</i>	<i>Adaptation options</i>	<i>Next steps</i>	<i>Responsibility</i>

What are the costs and benefits of each adaptation option?

.....
.....

Participant Worksheet 3.4 Adaptation measures and evaluation criteria in Agriculture

Using example in table 3.4 evaluate adaptation measures in the land management sector

Table 3.5: Example of adaptation measures and evaluation criteria in agriculture

Proposed measures	Low cost?	Technically feasible?	Additional positive benefits (social, economic, environmental)?	Likely to be effective?	Achievable in the short or long term?
Provide forecasts on information water availability	Variable	Yes	Yes	Yes, if information is used for decision making	Short
Develop improved varieties and genetic seed banks	No	Yes	Depends	Yes, though testing will be needed	Long
Create public-private partnerships to coordinate and mobilise resources	Variable	Yes	Yes	Not all the time	Medium
Introduce agroforestry systems	Yes	Yes	Yes, positive environmental impacts	Yes	Medium
Improve post-harvest storage and management	Variable	Yes	Yes	Somewhat has to be done in conjunction with resilient seed	Sort-medium
Strengthen local technical capacities eg best practices	No	Yes	Yes	Yes, if designed appropriately	Short- medium
State-led public policy on agriculture, nutrition food security	No	Yes	Possible, positive health benefits	No. not most of the time	Long
Improve water resources management	Variable	Yes	Yes	Yes, if done correctly	Short-medium
Improve irrigation	Yes	Yes	Yes, eg could reduce conflict over water by increasing efficiency of use	Yes. But depends on how much is done	Medium
Better land use planning	Yes	Yes, with data and proper analysis	Yes, if considering other factors	Yes, if enforced	Long

Participant Worksheet 4.1: Stakeholder role and involvement in climate change.

List stakeholders involved in climate change:

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.....

.....

What role can each stakeholder identified above play in the climate change adaptation mainstreaming process?

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Stakeholder participation



Figure 4.1 Stakeholder participation is critical in mainstreaming climate change

Participant Worksheet 4.2:

Entry points for mainstreaming climate change into national and subnational development planning.

What is a climate change mainstreaming entry point?

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What do you think are entry points to champion climate change adaptation in development planning?

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What policies/plans/structures/bylaws/actions are available at community level to mainstream climate change adaptation into development planning?

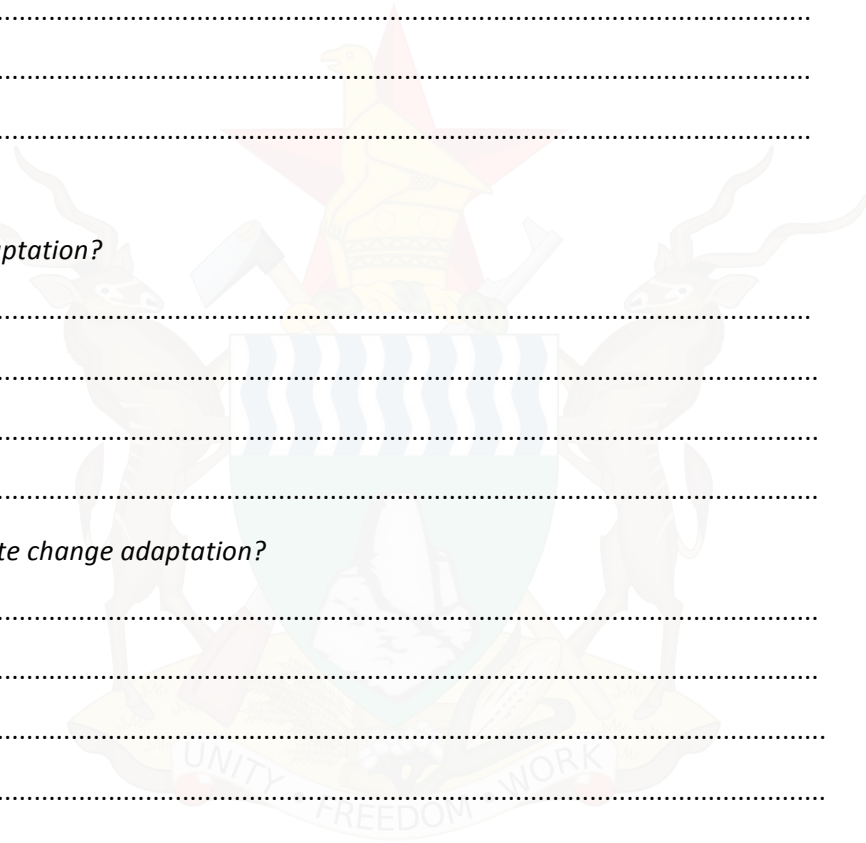
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Do district plans speak to climate change adaptation?

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What is the role of district structures in climate change adaptation?

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Participant worksheet 4.3: Stakeholders and their Roles in Integrating CCA into plans and policies

Explain the opportunities of working with government stakeholders

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What are the opportunities of working with non-governmental stakeholders in integrating climate change adaptation into development planning?

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Participant Worksheet 5. 1: Steps for mainstreaming climate change into developmental planning and budgets.

Step 1 – Preparation

What is involved in the preparation step?

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Step 2 – Analyse climate change vulnerabilities What is involved in the analysis of climate vulnerabilities?

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Which adaptation options can be applied for the vulnerabilities identified

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Step 3 – What is involved in Step 3 - Review/Update policies,

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Step 4 What is involved in Step 4 Review. Update plans

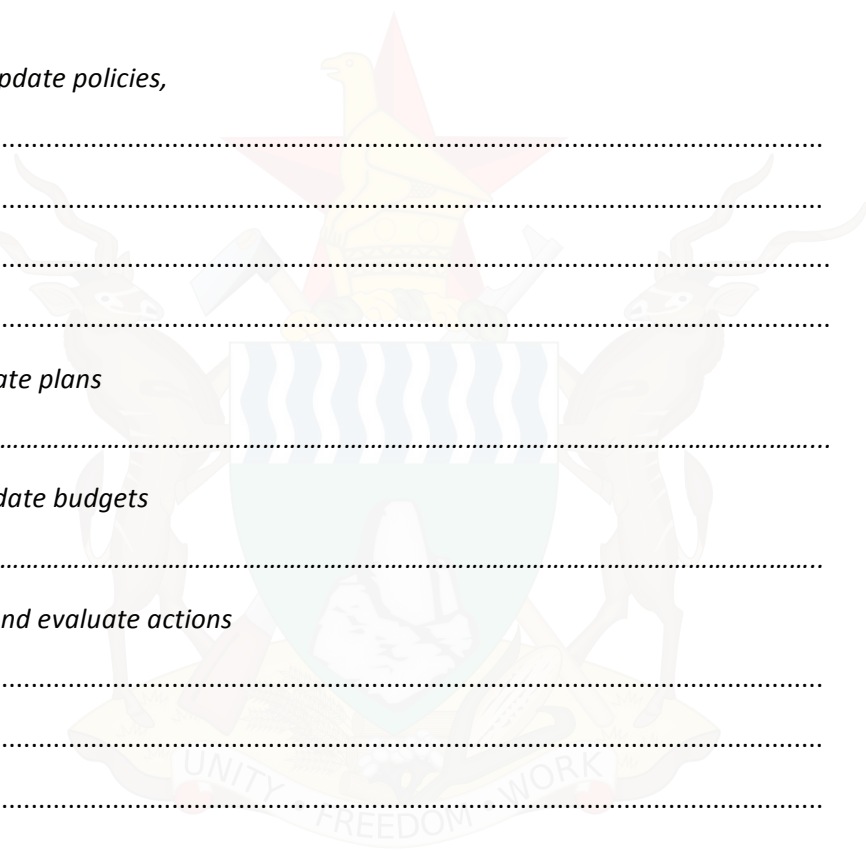
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Step: 5. What in involved in step 5 Review/Update budgets

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Step 6 –What is involved in Step 6 - Monitor and evaluate actions

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Examples of adaptation initiatives in Masvingo Province

Women diversifying agriculture

Groundwater a relief during droughts





Soil erosion control using vertva grass and sandbags

Rooftop rainwater harvesting into infiltration tank

Participant Worksheet 6.1

Participant Worksheet 6. 1:Monitoring reviewing and reporting of climate change adaptation mainstreaming

What is monitoring?

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What is evaluation?

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Why is monitoring and evaluation of climate change adaptation important?

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What indicators can we use to monitor and evaluate climate change adaptation mainstreaming progress?

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Fill in the matrix in Table 6.1. Take note of explanatory notes below the matrix

Table 6.1 Monitoring and Evaluation (M&E) Framework for the integration of climate change into sector plans and budgets

Sector	Performance measurement/ analysis of integration process			Information Management System			Reporting System		Responsibility centre
	Baseline	Performance Target	Performance Indicator	Information required	Source of information	Data collection frequency, collection and analysis methods	Frequency of reporting	Methods of reporting and feedback mechanism	
Agriculture & food security			<i>Eg area under irrigation</i>						
Environment /Natural Resources & biodiversity									
Water and Sanitation									
Energy, and oil/gas									
Human health									
Infrastructure & settlements									
Education									
Gender sensitivity			<i>Number of men and women involved in mainstreaming</i>						
			<i>CCA into development plans</i>						

Note:

Note:

1. **Baseline** - The situation before climate change has been integrated into the sector plans and budgets;
2. **Performance Target** - The level of integration planned for achievement (measurable and attainable) e.g. the level and quantity, pattern and distribution of activities, level of budgeting for climate change adaptation and mitigation etc;
3. **Performance Indicator** - The measurement of the performance level e.g. below or above or within the performance target;
4. **Information required** - The information needed/required during the integration process;
5. **Source of information** - The primary or secondary origin of the required information e.g. from Sector reports, community, resource users, agencies, academia and research institutions;
6. **Data collection frequency** - Periodic framework for data collection e.g. quarterly or annual;
7. **Data collection and analysis methods** - Techniques used in data collection and analysis (Quantitative and Qualitative techniques);
8. **Frequency of reporting** (as in data collection frequency);
9. **Reporting methods** (as in data collection and analysis methods); and
10. **Responsibility Centre** - Institution responsible for the integration process.

Table 6 2: *Impact Evaluation Framework for the integration of climate change*

Sector	Impacts of the integration of climate change into the sector			Relevance of the integration of climate change into the sector				Sustainability mechanisms for the integration process	Responsibility centre
	Baseline	Short/medium impacts/outcomes	Long term impacts	Policy relevance	Institutional relevance	Efficiency relevance	Effectiveness relevance		
Agriculture & food security									
Environment /Natural Resources & biodiversity									
Water and Sanitation									
Energy, and oil/gas									
Human health									
Infrastructure & settlements									

Ministry of Water and Environment (2014) Guidelines for the Integration of Climate Change in Sector Plans and Budgets, Ministry of Water and Environment. Kampala. Available at <http://ccd.go.ug/wp-content/uploads/2018/04/National-Climate-Change-Mainstreaming-Guidelines-.pdf>

Note:

1. Impacts of the integration of climate change into sectors

- a) Economic impacts; production, distribution, consumption of goods and services (economic prosperity)
- b) Social impacts; access to goods and services for social wellbeing and social inclusion in development processes.
- c) Environmental impacts; environmental sustainability and resource productivity, and;
- d) Governance impacts; institutional/organizational/structural or process impacts

2. Impact timeline

- a) Short/medium term - 1-5 years
- b) Long term; - 5+ years

3. Relevance of the integration of climate change into sectors

- a) **Policy relevance** - in line with the respective sector and climate change policies;
- b) **Institutional relevance** - in line with the sector/district mandate, vision, mission, goal, objectives and strategies;
- c) **Efficiency relevance** - in line correspondence to the available resources (human, financial, capital and time)
- d) **Effectiveness relevance** - in line with the sector/district strategic plans and intended results/outcomes

4. Sustainability mechanisms

Measures/strategies the District has put in place to maintain and sustain the integration process after the current technical interventions by NAP and other partners phase out.

