GOVERNMENT OF ZIMBABWE

ZIMBABWE'S CLIMATE CHANGE NATIONAL ADAPTATION PLAN

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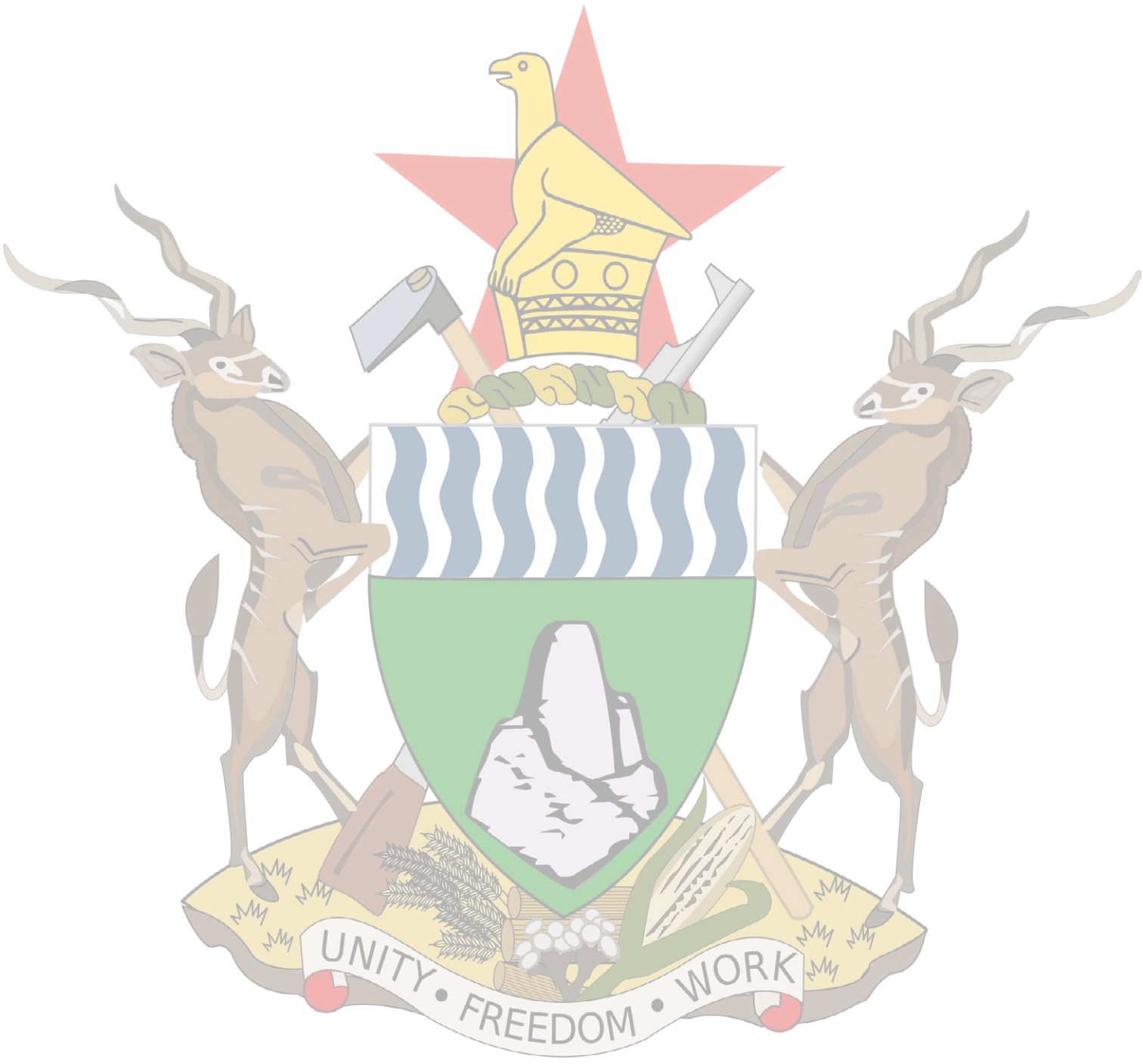

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FOREWORD

Climate change is one of the biggest threats facing global development with developing countries being more vulnerable due to their low adaptive capacity and reliance on climate sensitive sectors. Over the years, Zimbabwe has been experiencing increased frequency and magnitude of droughts, prolonged mid-season dry spells, violent storms and tropical cyclone activity. The extreme weather events are negatively impacting on water, agriculture, health, forestry & biodiversity, infrastructure, human settlement and tourism sectors. These impacts are stalling the country's development, posing serious risks to food security.

As a Party to the United Nations Framework Convention on Climate Change (UNFCCC) and its Paris Agreement, Zimbabwe is committed to tackling the global climate change challenge and has thus created an enabling environment through formulation of the National Climate Policy, the National Climate Change Response Strategy and establishment of requisite institutional arrangements. Furthermore, Zimbabwe has developed its Long-term Low Greenhouse Gas Emission Development Strategy (LEDS), Revised Nationally Determined Contribution (NDC) and this National Adaptation Plan (NAP).

The country's vulnerability to the adverse effects of climate change makes adaptation a national priority, demanding policy direction at the highest level and implementation at the local level. The National Development Strategy 1 (NDS1) (2021-2025) provides guidance towards transformation to low carbon and climate resilient development pathways and the NAP facilitates for this through mainstreaming of climate change issues into national and subnational development planning processes.

The formulation of the Climate Change National Adaptation Plan (NAP) involved a multi-stakeholder consultation process. It is my hope that the NAP will create a solid foundation for mainstreaming climate change into all key socio-economic sectors in order to bring about an integrated response across all sectors. Special thanks goes to key stakeholders who contributed in the development of this Plan. These include Government Ministries, Departments, Agencies, Local Authorities, Non-Governmental Organisations, Civil Society Organisations, Private Sector, Academic and Research Institutions, Development Partners, vulnerable groups constituency as well as local community members.

The Government of Zimbabwe expresses its gratitude to the Green Climate Fund (GCF) and the United Nations Environment Programme (UNEP) for providing financial and technical support to develop this National Adaptation Plan. The Government stands ready for continued collaborations and support during the critical upcoming phase of the implementation of this NAP in line with the vision of His Excellency, the President of the Republic of Zimbabwe, Cde. Dr. E. D. Mnangagwa of leaving no one and no place behind.

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Hon. Nqobizitha Mangaliso Ndhlovu (MP)
Minister of Environment, Climate, Tourism and Hospitality Industry

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LIST OF ABBREVIATIONS AND ACRONYMS

AAAP	Africa Adaptation Accelerator Programme
ACCF	Africa Climate Change Fund
AF	Adaptation Fund
AfDB	African Development Bank
AFS	Adaptation Finance Strategy
AGRITEX	Agricultural Technical and Extension Services
AIDS	Acquired Immunodeficiency Syndrome
ARDAS	Agriculture and Rural Development Advisory Services
^{0}C	Degree Celsius
CAMPFIRE	Communal Areas Management Programme for Indigenous Resources
CBA	Cost Benefit Analysis
CBOs	Community Based Organizations
CCMD	Climate Change Management Department
CIF	Climate Investment Fund
COMESA	Common Market for Eastern and Southern Africa
CSA	Climate Smart Agriculture
CSOs	Civil Society Organizations
CTCN	Climate Technology Centre and Network
DDC	District Development Committee
DEVPROMIS	Development Projects Management Information System
DJF	December January February
EMA	Environmental Management Agency
FAO	Food and Agriculture Organization
FBOs	Faith Based Organizations
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GF	Global Fund
GoZ	Government of Zimbabwe
ICT	Information and Communications Technology
IDBZ	Infrastructure Development Bank of Zimbabwe
IFAD	International Fund for Agricultural Development
IKS	Indigenous Knowledge Systems
IMF	International Monetary Fund
IPCC	Inter-Governmental Panel on Climate Change
IPEC	Insurance and Pensions Commission
LFA	Logical Framework Analysis
MAM	March April May
MCA	Multi-Criteria Analysis
MDAs	Ministries, Departments and Agencies
MDBs	Multilateral Development Banks
MICS	Multiple Indicator Cluster Survey

LIST OF ABBREVIATIONS AND ACRONYMS

M&E	Monitoring and Evaluation
MSD	Meteorological Services Department
NAP	National Adaptation Plan
NDA	National Designated Authority
NDC	Nationally Determined Contribution
NDS	National Development Strategy
NGOs	Non-Governmental Organisations
NIE	National Implementing Entity
ODA	Official Development Assistance
OPC	Office of the President and Cabinet
POTRAZ	Postal and Telecommunications Regulatory Authority of Zimbabwe
RBZ	Reserve Bank of Zimbabwe
SADC	Southern African Development Community
SCCF	Special Climate Change Fund
SMEs	Small and Medium-sized Enterprises
STAR	System for Transparent Allocation of Resources
SON	September October November
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollar
WASH	Water, Sanitation and Hygiene
WMO	World Meteorological Organisation
WWF	World Wide Fund
ZESA	Zimbabwe Electricity Supply Authority
ZIDA	Zimbabwe Investment Development Agency
ZimParks	Zimbabwe Parks and Wildlife Management Authority
ZimStat	Zimbabwe National Statistics Agency
ZimVAC	Zimbabwe Vulnerability Assessment Committee
ZINWA	Zimbabwe National Water Authority

KEY DEFINITIONS

Adaptation	is defined by the United Nations Framework Convention on Climate Change (UNFCCC), as "an adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities". There are several kinds of adaptation: anticipatory, reactive, private, public, autonomous and planned. Adaptation measures include prevention, tolerance, sharing of losses, changes in activities or of location and restoration.
Adaptation action	actions that help individuals, communities, organizations and natural systems to deal with the consequences of climate change that cannot be avoided.
Adaptive capacity	is the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences.
Adaptation finance	is finance for actions that help communities reduce the risks they face and harm they might suffer from climate hazards like storms or droughts (WRI defination)
Adaptation outcome	are changes in vulnerability, adaptive capacity, behavior; progress in development despite climate change.
Adaptation process	is implementing adaptation policies, plans and interventions, and building capacities to do so.
Baseline	is the situation before the policy or programme is implemented, against which progress can be assessed or comparisons made. Baseline data are collected before a programme or policy is implemented to assess the "before" state.
Climate	is the average weather conditions of a place or region over a long period of time stretching for decades.
Climate change	according to the UNFCCC, means "a 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". It refers to any change in climate over time, whether due to natural variability or a result of human activity".

Climate change mainstreaming	is the informed integration of relevant climate change values, themes or concerns into the decisions of institutions that drive national, local and sector development policy, rules, investment and action.
Climate change mitigation	according to the Inter-governmental Panel on Climate Change (IPCC), is "an anthropogenic (human) intervention to reduce sources or enhance the sinks of greenhouse gases".
Climate risk	means a risk resulting from climate change and affecting natural and human systems and regions. It is a combination of the probability of an event and its negative consequences. A societal element is said to be at risk when it is exposed to hazards and is likely to be adversely affected by the impact of those hazards when they occur.
Climate-smart agriculture	is an approach that helps to guide actions needed to transform and reorient agricultural systems, to effectively support development and ensure food security in a changing climate. Climate-smart agriculture (CSA) aims to tackle three main objectives: sustainably increasing agricultural productivity and incomes, adapting and building resilience to climate change, and reducing and/or removing greenhouse gas emissions, where possible.
Climate variability	is the way climatic parameters fluctuate during a few years to a few decades above or below a long-term average-value. Variability may be due to natural internal processes within the climate system or to variations in natural or anthropogenic external forcing.
Climatic hazard	is 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.
Cost-benefit analysis	is a systematic method for quantifying and comparing the total cost to the total expected rewards of undertaking a project.
Devolution	is the statutory delegation of powers from the central government of a sovereign state to govern at a subnational level, such as a regional or local level. It is a form of administrative decentralization.

Disaster	is a sudden accident or a natural catastrophe that causes great damage or loss of life.
Disaster risk management	according to the United Nations Office for Disaster Risk Reduction, is the systematic process of using administrative directives, organizations and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disasters. It aims to avoid and lessen or transfer the adverse effects of hazards through activities and measures for prevention, mitigation and preparedness.
Drought	is defined as "a period of abnormally dry weather sufficiently prolonged for the lack of water to cause serious hydrologic imbalance in the affected area.
Early warning systems	are according to the United Nations Office for Disaster Risk Reduction, the set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss.
Exposure	is the nature and degree to which a system is exposed to a significant climate variation.
Evaluation	is a rigorous and independent assessment of either completed or ongoing activities to determine the extent to which they are achieving stated objectives, or outcomes, and contributing to decision making.
Indicator	is a variable that measures a phenomenon of interest. The phenomenon can be an input, an output, an outcome, a characteristic, or an attribute.
Monitoring	is the ongoing process by which stakeholders obtain regular feedback on the progress being made towards achieving their goals and objectives. It involves collection of data on inputs, activities and outputs and is used to inform day-to-day management and decisions.
Multi-criteria analysis	is a form of appraisal that measures variable such as material costs, time savings and project sustainability.

Outcome-based indicators	are indicators for measuring the effectiveness of adaptation actions, which are themselves determined by policies and measures. They are likely to have increasing prominence in the long term.
Process-based indicators	are indicators for monitoring the development of adaptation policies and measures. Process-based indicators can be differentiated into 'adaptation policy indicators and adaptation measure indicators. They are likely to have prominence in the shorter term.
Resilience	is the ability of at-risk individuals, households, communities and systems to anticipate, cushion, adapt, bounce back better and move on from the effects of shocks and hazards in a manner that protects livelihoods and recovery gains, and supports sustainable transformation.
Scenario	is an account or synopsis of a possible course of action or events, a description of what could possibly happen.
Sensitivity	is the degree to which a system is affected either adversely or beneficially by climate related stimuli.
Tropical cyclone	an intense circular storm that originates over warm tropical oceans and is characterised by low atmospheric pressure, high winds and heavy rain (Britanicca defination)
Vulnerability	is the degree to which a system is susceptible to and unable to cope with, adverse effects of climate change including climate variability and extremes. Vulnerability is a function of the character, magnitude and rate of climate change and variation to which a system is exposed, its sensitivity and adaptive capacity.
Weather	refers to the state of the atmosphere at a given place and at a given time.

CHAPTER
01

INTRODUCTION

1.1 Background

The impacts of climate change in Zimbabwe are already being felt throughout all socio-economic sectors. The last three decades in Zimbabwe have seen increased variability in the seasonal distribution of rainfall, increased incidences of intense rainfall interspaced by long dry spells as well as late onset and early cessation of rains. There have also been increasing frequency and severity of droughts, floods and rising temperatures. These variations in rainfall and temperature are having profound impacts on Zimbabwe's agricultural production, food security, energy access, human settlements, communications and social infrastructure as well as downstream effects on climate sensitive economic sectors. This has subsequently slowed down economic growth and impacted the quality of life. Livelihoods of vulnerable groups, particularly women, children, youth, people with disabilities and the elderly, who are highly dependent on climate sensitive sectors such as agriculture, are disproportionately affected by climate change.

The Government of Zimbabwe regards climate change as one of the threats to the country and its people and recognises its potential to undermine sustainable development. Like many other African countries, Zimbabwe is bearing the brunt of climate variability and change, hence the need for a coordinated approach to address related vulnerabilities and risks caused by these extreme weather events. To this end, adaptation and resilience building are Zimbabwe's priority responses to climate change. This brings about the need to develop adaptation strategies that can reduce vulnerability and enhance the country's adaptive capacity to climate change and resilience in the long term.

Adaptation is closely intertwined with local climate, ecosystems, hydrology, livelihood options, culture and traditions, governance structures, levels of poverty and even political dynamics. This means responses to the changes in climate need to be implemented and managed at the national and sub-national level. Zimbabwe's adaptive capacity is constrained by limited alternative livelihood options for the majority of the population, inadequate ability to withstand or absorb disasters, and its socio-economic status.

The Government of Zimbabwe is moving forward its action on climate change adaptation by developing and implementing this National Adaptation Plan (NAP) in an effort to bring about transformative change in the country's capacity to address the impacts of climate change.

The main goal of the NAP process is to reduce vulnerability to the impacts of climate change and mainstream climate change adaptation into national and sub-national development planning processes. It seeks to strengthen institutional structures, coordination procedures, research, resource mobilisation and implementation of adaptation options for enhanced climate resilience.

At present, many sectoral and cross-sectoral policies, strategies and plans in Zimbabwe do not adequately consider climate change. The limited integration of climate change into cross-sectoral planning weakens the country's preparedness to deal with the impacts of climate change, thereby lowering the country's adaptive capacity.

The focus on climate change adaptation and climate resilience clearly emerges within the country's economic blueprint, the National Development Strategy 1 (NDS1) (2021-2025) as it is identified as a cross cutting enabler. Specifically, the Strategy puts priority on environmental protection, climate resilience and natural resource management. It calls for the implementation of programmes in weather, climate and climate change adaptation and mitigation. The NDS1 is complemented by policies and institutional frameworks to support climate change governance, notably through the National Climate Policy, the National Climate Change Response Strategy and the Revised Nationally Determined Contributions, among others.

The Zimbabwe Revised Nationally Determined Contributions (2021) focuses on four priority adaptation measures as follows:

- *Development, implementation and scaling-up of climate smart agriculture solutions and strengthening agricultural value chains and markets;*
- *Enhancement of early warning and climate-related disaster risk reduction systems (including information management systems);*
- *Ensuring climate resilient infrastructure designs; and*
- *Development and promotion of resilient and sustainable water resources management.*

The National Climate Policy Framework provides for an enabling environment for enhanced climate action at the national and local level. At the global level, Zimbabwe aligns with international conventions and protocols in its response to climate change. These multilateral agreements include the United Nations Framework Convention on Climate Change and its Paris Agreement, the Sendai Framework for Disaster Risk Reduction, the Ramsar Convention on Wetlands, Convention on Biological Diversity, Convention to Combat Desertification and the 2030 Agenda for Sustainable Development, amongst others.

1.2 Zimbabwe's National Circumstances

Climate change response hinges on the country's national circumstances which inform and influence its mitigation and adaptation policies. This section highlights the country's geographical profile, demography, governance structures and socio-economic status.

Geography

Zimbabwe is a landlocked country that covers 390,757km^2 and is elevated in the central plateau (Highveld) stretching from the southwest to the northeast at altitudes between 1,200 and 1,600m above mean sea level. The country is largely semi-arid and generally experiences low and erratic rainfall. The average annual rainfall is 650mm, but geographically it ranges from around 350 to 450mm per year in the Southern Lowveld to above 1,000mm per year in the Eastern Highlands.

There are seven river catchments in the country, namely Manyame, Mazowe, Gwayi, Runde, Sanyati, Save and Mzingwane with over 5,000 small, medium and large dams constructed for household, livestock, and irrigation purposes including power generation. Zimbabwe is also endowed with wetlands covering 3 percent of the total land area. Flooding is more prominent in low lying areas of Zimbabwe such as Chicualacuala, Mbire, Gwayi, Beitbridge, Mt Darwin, Tsholotsho and Muzarabani.

Demography

According to the Zimbabwe National Statistical Agency (ZIMSTAT) Census Report published in 2022, the population of Zimbabwe as of 2022 was 15,178,979, of which 48 percent were male and 52 percent were female. Given the 2012 population size of 13,061,329, this gives an annual or intercensal population growth rate of 1.5 percent which is greater than the 2002-2012 intercensal growth rate of 1.1 percent. The life expectancy at birth for Zimbabweans is 61.89 years; and the total fertility rate is 3.38 births per woman. The total dependency ratio of the population in 2022 was 84.1 percent with about 41.9 percent of the population under 15 years; 54.3 percent between 15 and 64 years old and 3.8 percent over 65 years. A high dependency ratio is associated with more poverty since it implies that there are relatively more dependents relative to the working population which in turn has a bearing on the country's adaptative capacity. The population in urban areas increased from 33 percent in 2012 to 38.6 percent in 2022; compared to 61.4 percent of the population who live in rural areas. The population density stood at 39 persons per square kilometre.

Administrative Structure

Zimbabwe is divided into 10 administrative provinces, namely Bulawayo, Harare, Manicaland, Mashonaland East, Mashonaland Central, Mashonaland West, Masvingo, Matabeleland North, Matabeleland South and Midlands; further divided into approximately 60 districts. Bulawayo and Harare are Metropolitan provinces while the remaining eight are mixed but mainly rural, with several towns and growth points.

The country has adopted the principles of devolution across the governance structures, namely: National, Provincial and Local Authorities. The implementation of the NAP will hinge on these three governance structures. The devolution process provides good entry points for climate change mainstreaming in development planning.

Zimbabwe's Economy

Zimbabwe has a fairly diversified economy based on agriculture, mining, manufacturing, commerce and tourism, among others. The Gross Domestic Product (GDP) in Zimbabwe was worth USD 28.37 billion in 2021, according to official data from the World Bank. The GDP value of Zimbabwe represents 0.02 percent of the world economy. The GDP per capita in Zimbabwe was last recorded at USD 1,362.45 in 2021. Agriculture is one of the key contributors of Zimbabwe's economy, with 70 percent of the population being dependant on rain-fed agriculture. The sector provides direct and indirect employment to approximately 65 percent of the population, supplies 60 percent of the industrial raw materials and contributes approximately 40 percent towards export earnings. The sector also contributes about 15-18 percent to GDP. Agriculture in Zimbabwe is however mainly rain fed and as such is vulnerable to erratic rainfall, recurrent droughts and floods. Agriculture uses about 42 percent of total land area, and of this area approximately 365,000ha is suitable for irrigated agriculture. However, only about 123,000ha are currently under irrigation, mostly by commercial farmers, government and smallholder farmers.

Zimbabwe has a diversified agricultural sector, producing food crops, cash crops and livestock. Over 23 types of food and cash crops are grown. The major food crops produced include maize, small grains, wheat, groundnuts and beans. The main cash crops are tobacco, cotton, tea, coffee, sugarcane, soya beans and horticulture crops. The livestock sector mainly consists of beef, dairy, poultry, goats, pigs and sheep, among others. During periods of severe droughts, crop production and livestock herds decline significantly. As a result, the Government

of Zimbabwe introduced the Climate Proofed Presidential Agricultural Input Scheme (Pfumvudza/ Intwasa) to help vulnerable communities cope with the impacts of climate change and improve household food security.

Whilst climate change affects trade, it offers an opportunity to increase national adaptive capacity through increased market access and improved value chains. Zimbabwe's major trading partner is South Africa and a relatively smaller share with other Southern African Development Community member states. Its total imports had decreased from USD 6.0 billion in 2015 to USD 4.8 billion in 2019. Mining and quarrying contribution to GDP rose significantly from USD 560 million in 2009 to USD 1.350 billion in 2018. This could be attributed to a wide range of emerging mineral resources that include diamonds.

Land-Use

Forest land constitutes the highest land-use (61.55 percent), followed by agriculture (30.83 percent) and other land uses (7.62 percent). Forest land is further divided into plantation, natural moist, woodlands and bush-land. Agriculture land is further divided into arable land, permanent crops and permanent pasture. Other land uses include built-up areas, transport network, barren land and water bodies.

Forests generate a wide range of both timber and non-timber products and services and provide an important habitat for the country's wildlife and biodiversity. The forests are made up of indigenous forests and plantations of exotic commercial species. More than two thirds of the country's forests and woodlands are in communal and resettlement areas. Less than one quarter of the area under woodland and forest is situated in the protected areas. There are also small areas of moist forests and plantations of exotic commercial species, mainly in the Eastern Highlands.

Zimbabwe's forests and woodlands provide a variety of valuable products such as timber, fuel wood, fibre and non-timber forest products. Forests contribute significantly to the livelihoods of both urban and rural communities and also provide vital ecosystem services, such as combating desertification, protecting watersheds, maintaining biodiversity, enhancing carbon sequestration and the provision of wildlife habitats. They also play an important role in preserving social and cultural values.

Forests support crop and livestock production and also provide a habitat for wildlife which is the basis of tourism. The Government of Zimbabwe acknowledges the local and national importance of forests for human well-being, socio-economic development, poverty reduction and environmental protection, and is also popularizing and mainstreaming agroforestry into all relevant initiatives.

Infrastructure

Zimbabwe is predominantly serviced by road transport with 88,133km of road, of which only 17,420km are paved. Most of the roads are gravel and therefore are susceptible to climate hazards such as floods which in turn affects market linkages, accessibility and mobility. In addition, built infrastructure such as schools, houses, commercial buildings, bridges, industrial and service centres and dams amongst others are affected by climate change as they are not able to withstand current climate shocks and stressors.

The Gross Domestic Product (GDP) in Zimbabwe was worth USD 28.37 billion in 2021, according to official data from the World Bank.

CHAPTER
02

CURRENT AND FUTURE CLIMATE OF ZIMBABWE: VULNERABILITIES, RISKS AND IMPACTS

2.1 Overview of the Climate of Zimbabwe

Zimbabwe lies wholly within the tropics and experiences a sub-tropical climate that is influenced by altitude. Mean monthly temperature varies from 15°C in July to 24°C in November. Mean annual temperature varies from 18°C in the Highveld to 23°C in the Lowveld. The national annual mean surface temperature has warmed during the period 1900 to 2019, with the greatest warming occurring since the 1980s. Zimbabwe experiences a unimodal rain season extending from October to March of the following year. Annual average rainfall ranges from about 400mm in the south to over 1,000mm in the eastern parts of the country. According to meteorological observations, Zimbabwe's climate has been changing since the 1900s. Notable changes include an increase in average temperatures, decrease in annual precipitation, change in the onset and cessation dates of the rainy season, an increase in the duration of the mid-season dry spell and change in the spatial extent of the country's Agro-Ecological Zones.

The country experiences four seasons namely Cool season (Mid-May to mid-August), Hot season (Mid-August to mid-November), Main rainy season (Mid-November to mid-March) and Post rainy season (Mid-March to mid-May). The country is experiencing extreme weather events with increased frequency, magnitude and intensity. These include tropical cyclones, floods, hailstorms, droughts, increased and extended mid-season dry spells, and heatwaves.

2.2 Observed, Past and Future Climate Trends over Zimbabwe

2.2.1 Temperature

The altitude of the country has a bearing on the mean annual temperature. The low-lying areas in the south-east and northern parts of the country have a mean temperature of 25°C while the Eastern Highlands have the mean temperature below 19°C (Figure 2.1 (a)). The spatial and temporal variation of temperature is seasonal with the lowest minimum temperatures experienced in June or July and the highest maximum temperatures in October to December (Figure 2.1 (b)).

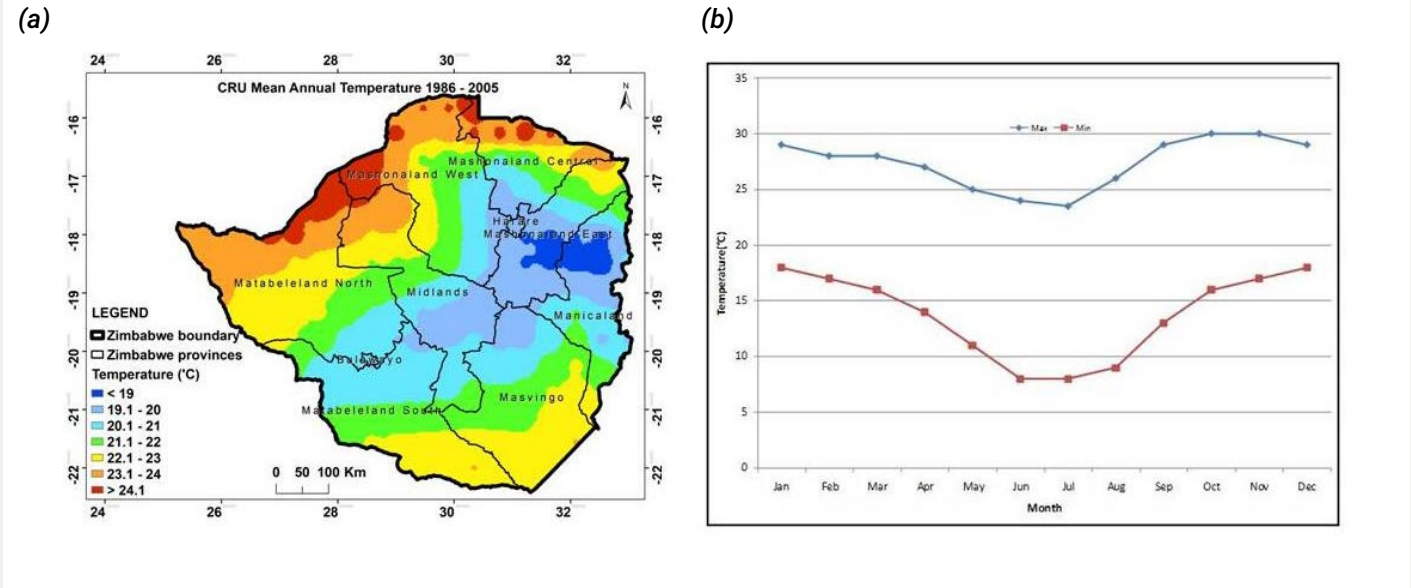


Figure 2.1 (a) Zimbabwe mean annual temperature and (b) temporal variation in mean monthly maximum and minimum temperature for Zimbabwe (Source of data: Meteorological Services Department, Zimbabwe)

The country's mean annual surface temperature has warmed by about 0.9°C from 1900 to 2019. This is consistent with detected increases in global mean annual surface air temperatures over southern Africa since 1900. National average maximum temperature has warmed by about 1°C during the same period. There is evidence of an increase in the number of hotter days and decrease of colder days than before. The period from 2000 to date has been the warmest in the instrument record. The frequency of cold nights and cold days has decreased.

Studies done under the NAP process show that Zimbabwe has been warming and will continue to warm through to year 2080. There is very high confidence in continued increases of mean daily minimum and daily maximum temperatures throughout the period 2020 to 2080 for all regions in Zimbabwe. Warming is greatest in the western and southern regions of the country. Furthermore, there will be an increase in hot days and warmer nights, longer and more frequent heatwaves.

2.2.2 Rainfall

Zimbabwe's rainfall is highly variable in both space and time as well as intensity, distribution, and frequency. Annual rainfall ranges from below 400mm in the south to over 1,000mm in the eastern parts of the country (Figure 2.2) with a national average of about 650mm.

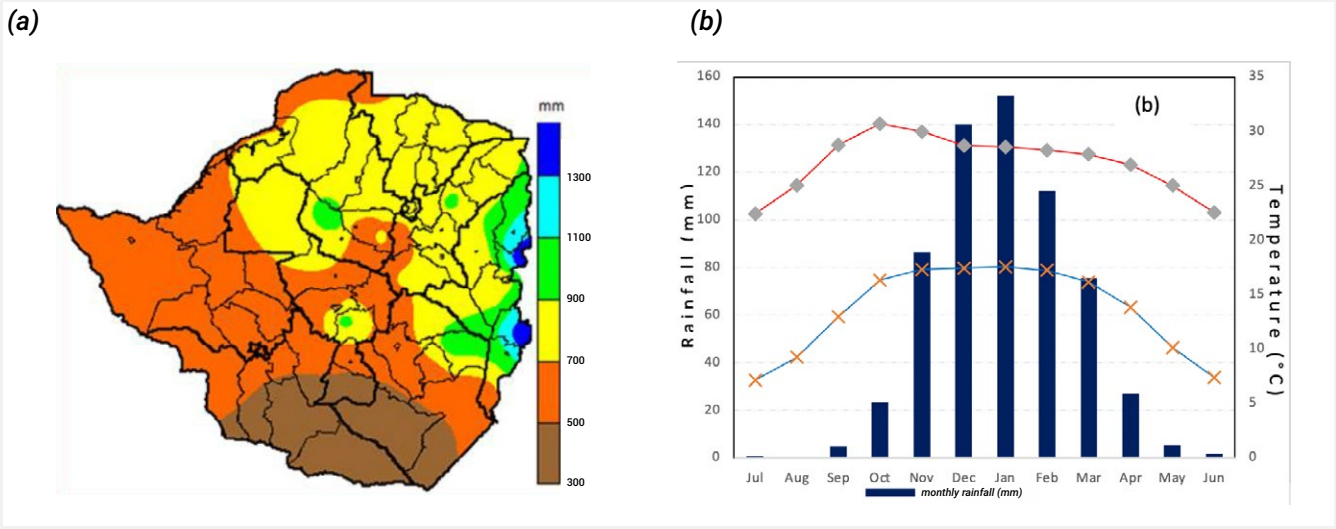
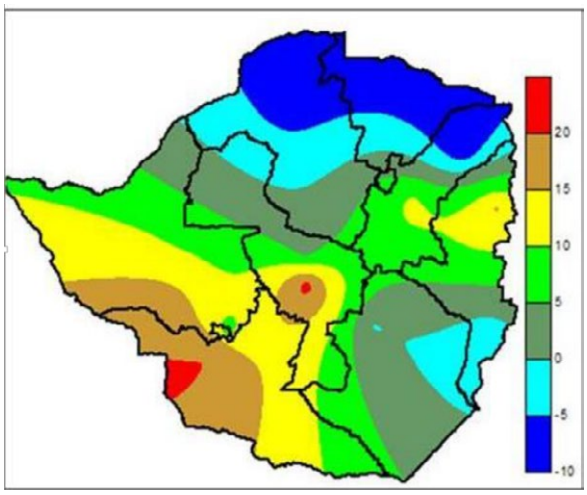


Figure 2.2 (a) Spatial distribution for national annual rainfall and (b) national average monthly rainfall (bars) and monthly mean maximum and minimum temperature (lines) for Zimbabwe for the period 1960-2019.

The driest region is in the south and southwest low-lying areas which experience a dry climate with rainfall ranging from 250 to 500mm per year. The rainfall pattern is characterized by shifts in the onset and cessation dates of the rainfall season, increase in frequency of dry spells interspaced with increase in the frequency of heavy short-lived rainfall events. These characteristics determine the quality of the rainfall season in any given year.

Available evidence for rainfall trends suggests moderate decreases in annual rainfall over Zimbabwe of approximately 5 percent since 1900. The number of days with rainfall shows a decreasing trend. There is also evidence which shows that inter (between seasons) /intra (within season) rainfall variability over the country has increased since the late 1960s and that droughts have become more frequent, severe and widespread. On the other hand, intense periods of heavy short-lived rainfall have resulted in increased incidences of flooding.

Figure 2.3 shows a snapshot of the spatial distribution of the length of mid-season dry spells in the period 1981 to 2016 across the country with some regions having dry spells of up to 40 days. Generally, from the data available, the length of the dry spells has increased over the years in most parts of the country save for the extreme northern areas which have seen a shortening of the mid-season dry spells.



Legend

Color	Days	Description
	>20	Dry spell
	15 -19	
	10 -14	
	5 - 9	
	0 - 4	
	-5 - -1	Wet
	-10 - -6	

Figure 2.3 Spatial distribution of the length of dry spells in Zimbabwe

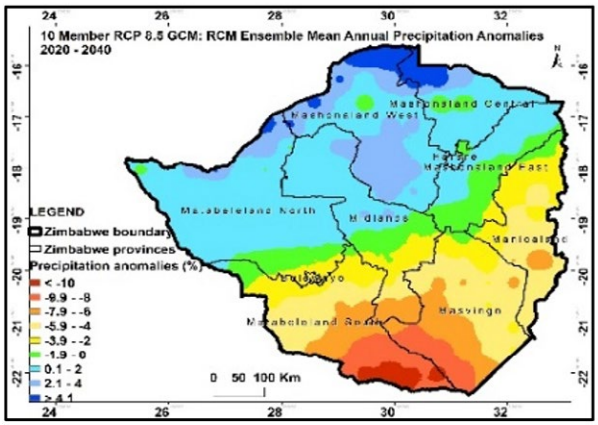
2.2.2.1 Projected Rainfall Patterns

Future rainfall simulations were carried out for the annual time scale and the three segments of September, October, November (SON), December, January, February (DJF) and March, April, May (MAM).

a) Annual precipitation projections

The projections show a future mean annual precipitation decrease of up to approximately10 percent compared to the 1986-2005 baseline, across all three future periods (2020-2040, 2041-2060 and 2061-2080). The western, southern and south-eastern sections of the country including Matabeleland, Masvingo and southern parts of Manicaland Province show the greatest decrease in precipitation (up to 10 percent) for all the three future periods. Figure 2.4 shows the spatial distribution of Zimbabwe's mean annual rainfall for the future periods. By 2061-2080 nearly the whole country is projected to experience precipitation decline with the southern sections of the country showing the strongest change signal.

(a)



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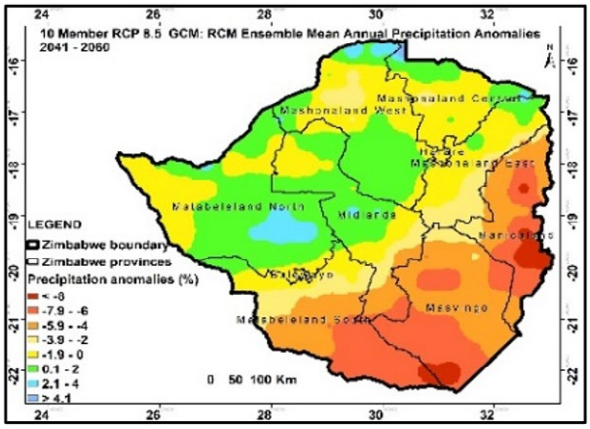

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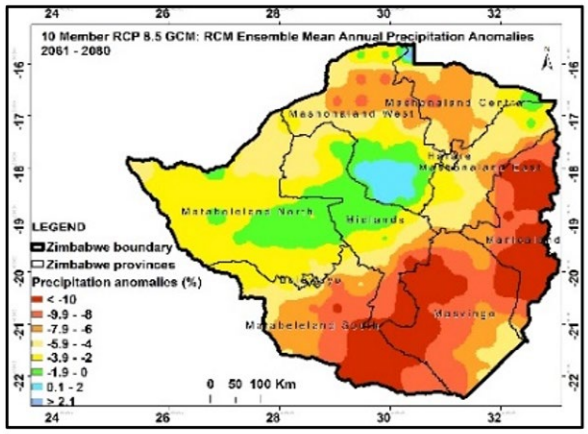


Figure 2.4 Spatial distribution of Zimbabwe future change (percent) in mean annual precipitation for the periods of (a) 2020-2040, (b) 2041-2060 and (c) 2061-2080.

b) Seasonal Rainfall Projections

Future SON climate projections show that much of the country will experience precipitation decline of approximately 5 percent from 2020 to 2040, 5 to 15 percent (2041-2060) and approximately 25 percent (2061-2080), suggesting possible periodic delays in the onset of the rainfall season in November.

During DJF the ensemble, precipitation is projected to decline by 5 to 10 percent in all three future periods with the south-eastern sections of the country showing the greatest decline. The ensemble mean shows a slight increase (approximately 5 percent) in precipitation during 2020-2040 in the northern half of the country.

The MAM season generally shows a tendency for increased precipitation in all three future periods across the bulk of the country. Only the extreme southern and eastern sections of the country experience a precipitation decline below 5 percent during 2020-2040 and 2041-2060. This finding suggests possible late cessation during the MAM season.

2.2.3 Extreme climate/weather events

Changes in extreme weather and climate events (drought, floods, and heatwaves) have significant impacts on socio-economic systems and are among the most serious challenges to society in coping with a changing climate. There is growing scientific consensus that some extremes will become more frequent, more widespread and/or more intense during the 21st century (IPCC, 2021).

2.2.3.1 Droughts

Zimbabwe is among the countries that face frequent and severe droughts with adverse impacts on water resources, ecosystems, agriculture and food security, human well-being and rural livelihoods. The

frequency of droughts increased from approximately 10 percent between 1902 and 1979 to approximately 25 percent between 1980 and 2011 (Zimbabwe Meteorological Services Department, 2020). Severe drought episodes affected the country during the 1991–1992, 1994–1995, 2002–2003, 2015–2016, 2018–2019 and 2019-2020 agricultural seasons (Figure 2.5). The 1991-92 episode was the worst drought to have affected the country during the period of instrumental records.

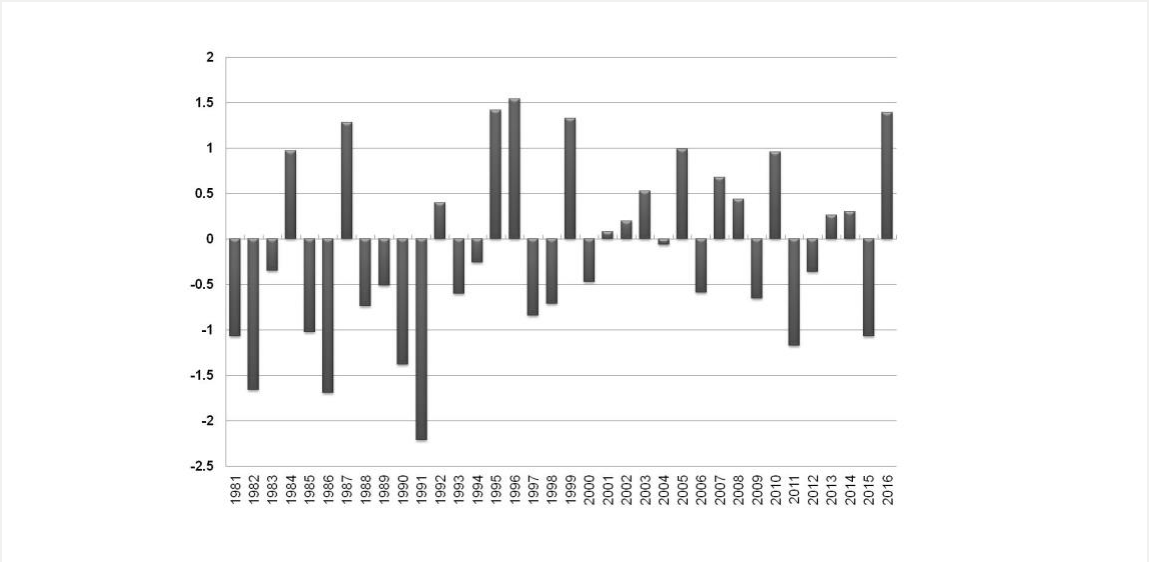


Figure 2.5 Time series of Zimbabwe National Annual Average Standardized Precipitation Index from 1981 to 2016 (Source: Meteorological Services Department).

Drought exposure and vulnerability vary substantially in the country but is more severe in the western and southern parts of the country (Figure 2.6). In recent years, there is an increasing tendency for drought and floods to occur back-to-back in the same rainfall season creating challenges for farmers and water resources managers.

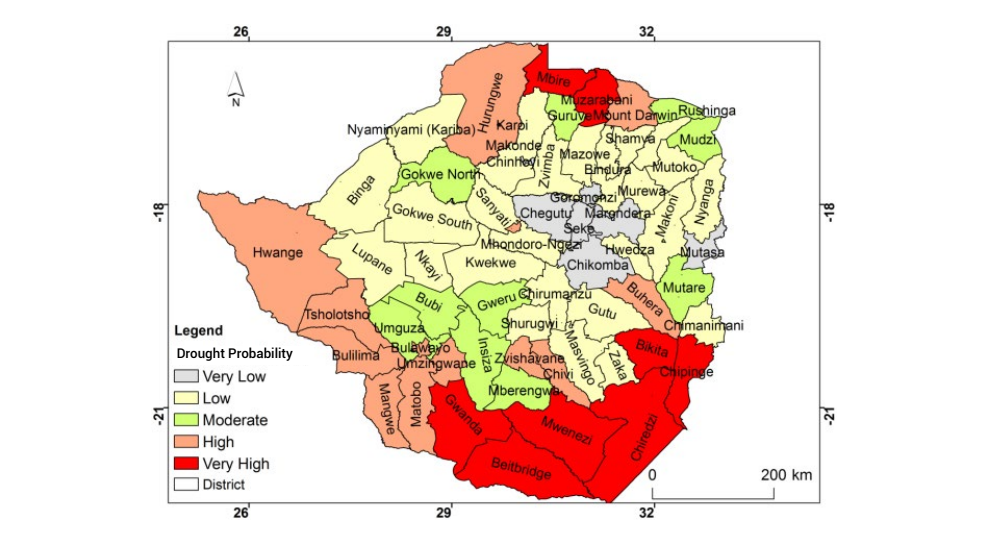


Figure 2.6 Drought probability map

Given the projected decline in seasonal and annual precipitation across much of the country, there is high likelihood of occurrence of droughts with increased severity.

2.2.3.2 Floods

Floods tend to occur in the northern and southern low-lying areas of Zimbabwe, usually in the paths of tropical cyclones and confluences of rivers, as well as upstream (as back-lash) and down- stream of major dams (Figure 2.7). Recent meteorological records indicate an increase in the frequency of violent storms which are sometimes accompanied by hail stones that damage infrastructure, property, crops and cause loss of human and livestock lives and also result in flooding. Of late, devastating floods occur almost everywhere including in traditionally 'flood-free' areas.

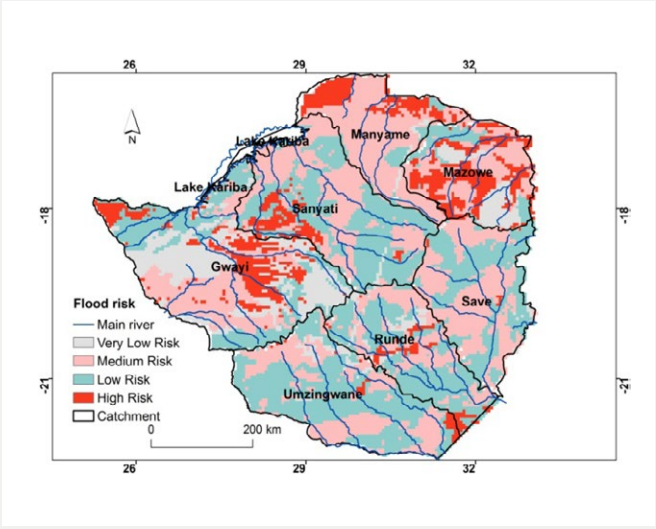


Figure 2.7 Flood Risk Map by Catchment

2.2.3.3 Tropical Cyclones

Zimbabwe is now experiencing extensive flooding as a result of tropical cyclones which became more prominent from the year 2000. There has been an increase in the number of tropical cyclones that make landfall on the Mozambican coast and eventually reach Zimbabwe. There have been several cyclones from the southwest Indian Ocean that have severely affected Zimbabwe that include Cyclone Eline 2000, Japhet 2003, Dineo 2017, Idai 2019, tropical storm Chalene 2020, Eloise 2021, Ana 2022 and Freddy 2023, among others.

Cyclone Idai was one of the strongest tropical cyclones on record to affect Zimbabwe. The storm caused widespread devastation of infrastructure, human settlements and livelihoods. The disaster claimed over 300 lives and affected over a quarter of a million people, with damage costing of approximately USD 600 million (World Bank 2021).

2.2.4 KEY MESSAGES

1. National average temperature has warmed at a rate of about 0.1°C per decade and is projected to warm by 1.5 to 3.5°C by 2080.

2. Rainfall has declined by about 5 percent since 1901 and is projected to further decline by approximately 15 percent by 2060 and up to 25 percent by 2080, especially over the south-western parts of the country.

3. The frequency and intensity of extreme weather events such as droughts, floods and tropical cyclones are projected to increase.

4. Zimbabwe now lies in the path of tropical cyclones.

5. The projected changes in climate have negative effects on basic services such as nutrition, health, education, water, sanitation and hygiene (WASH); which are essential for human wellbeing especially women, children, youth, people with disabilities and the elderly.

6. Given the current and future climate scenarios it has become apparent that the degree of exposure and sensitivity of the country to climate impacts will increase the country's vulnerability going into the future.

2.3 ZIMBABWE'S CLIMATE VULNERABILITY

Zimbabwe is vulnerable to the various impacts of climate change as a result of the degree of exposure to climate hazards and limited adaptive capacity. The country's adaptive capacity and response to the challenges caused by the changing climate are constrained by high poverty levels and limited human, institutional and financial capacity. There is therefore need to strengthen and sustain climate change mainstreaming into development planning in order to effectively respond and adapt to the effects of climate change.

Effective mainstreaming of climate change into development plans requires an understanding of the different vulnerabilities that exist across different sectors of the economy and various societal groups. A vulnerability assessment was carried out for agriculture, water, forestry, biodiversity, health, tourism, human settlements and infrastructure sectors as informed by Zimbabwe's National Climate Policy (2017). This was done to understand the nature and extent of current and future threats of climate change to Zimbabwe's human and ecological systems.

2.3.1 Climate Change Vulnerabilities by Key Sectors

The vulnerability assessment[1] results were informed by the determinants of exposure, sensitivity and adaptive capacity. Exposure and capacity were determined by the probability of droughts and floods as the two main climatic hazards identified by stakeholders. Adaptive capacity indicators used were: poverty, dependency on rain-fed agriculture, household head characteristics, and prevalence of chronic conditions (diseases) among households. Based on the vulnerabilities identified in different parts of the country, sector specific impacts were determined. When considered against selected future climate change scenarios, these impacts then formed the main basis on which adaptation options were developed to enhance resilience to climate change.

According to Zimbabwe's National Climate Policy, climate variability and change will have profound effects on key sectors of Zimbabwe's economy. The vulnerability of Zimbabwe's systems to climate variability and change can best be understood by the close relationship between climate hazards, system vulnerability and the associated impacts. The projected changes in climate will impact on the performance of the following sectors, among others: Water, Agriculture, Forestry and Biodiversity, Tourism, Health, Infrastructure and Human Settlements. Based on the vulnerability identified in different parts of the country, sector specific impacts were determined. When considered against selected future climate change scenarios, these impacts then form the main basis for the development of adaptation options. Tables 2.1 outlines the climate hazards, vulnerabilities and the associated impacts.

1 Zimbabwe's Vulnerability Assessment Report of 2021.

Table 2.1: Summary of the vulnerabilities and impacts per sector

Sector	Climate Hazards	Vulnerabilities	Impacts
Water	*Increase in:* • temperature and heat waves • extended dry spells • frequency and severity of • droughts and floods • irregular/erratic rainfall patterns • rainfall variability in space and time • incidents of intense rainfall • frequency of cyclones and strong winds	*Increase in:* • evaporation • flooding and water logging • rate of siltation of reservoirs • variability of water in reservoirs • water demand	*Increase in:* • damage to water infrastructure
	Decrease in: • seasonal rainfall amount • rainfall season length	*Decrease in:* • water table • river flows • ground water recharge • water quality	*Decrease in:* • quality of surface and ground water for human consumption, domestic use • quantity of water for irrigation, electricity generation and industrial use

Sector	Climate Hazards	Vulnerabilities	Impacts
Agriculture (Crops, Livestock Fisheries)	*Increase in:* • day and night temperature and heat waves • shorter and warmer winter season • dry spells • frequency and severity of droughts and floods • incidence of intense rainfall • cyclones and strong winds • shift in the onset, cessation and length of the rainfall season	*Increase in:* • heat stress on crops and livestock • damage to agricultural infrastructure, crops and fields due to extreme weather events • Evaporation and evapo-transpiration • distribution, incidence and severity of insect pests, diseases and weeds • rates of runoff and soil erosion • incidences of waterlogging	*Increases in:* • area coverage of drier agro-ecological zones • livestock deaths and crop losses. • national food and nutrition insecurity
		Decrease in: • surface and ground water availability for irrigation and livestock watering • soil moisture and soil quality • number of growing days	*Decrease in:* • crop and livestock productivity • productivity of soils • livestock feed availability and quality • animal and plant health • rural livelihoods and food security

Sector	Climate Hazards	Vulnerabilities	Impacts
Human Settlement and Infrastructure (rural and urban settlement)	*Increase in:* • temperature and heat waves • frequency and severity of floods • seasonal rainfall variability • incidence of intense thunderstorms and hailstorms • strong winds • tropical cyclone activity	*Increase in:* • incidence of water pollution • incidence of heat stress related diseases • incidence of exposure to pests and diseases • incidence of flooding of infrastructure and settlements • safety risks of infrastructure	*Increase in:* • incidence of thermal stress related deaths • dependence on artificial cooling systems • damage and destruction of property and infrastructure [including housing, drainage, water, sanitation and hygiene (WASH) system, telecommunication, roads, railways, etc.] • incidence of diseases, injury and loss of life • land/mudslides and rockfalls
		Decrease in: • capacity of drainage systems	

Sector	Climate Hazards	Vulnerabilities	Impacts
Forestry and Biodiversity (forests, wild life, wetlands and ecosystem services)	*Increase in:* • temperature and heat waves • droughts and floods • incidence of intense rainfall • cyclones and strong winds • shift in the onset, cessation and length of the rainfall season	*Increase in:* • evaporation and evapotranspiration • heat and water stress on flora and fauna • incidence of veld fires	*Increase in:* • biodiversity loss and extinction of species • forest die-back • drying out of wetlands • migration of species • human-wildlife conflict
	Decrease in Number of cold days	*Decrease in* • ground water recharge • breeding window for fauna	*Decrease in:* • ecosystem services and alternative livelihoods • availability of water for flora, fauna, ecosystem services and environmental flows • biodiversity richness • habitat and forage loss

Sector	Climate Hazards	Vulnerabilities	Impacts
Tourism (infrastructure, tourist attractions and products)	*Increase in:* • temperature and heat waves • frequency and severity of droughts and floods • incidence of intense rainfall, cyclones and strong winds	*Increase in:* • degradation of natural • ecosystems and biodiversity • drying out of water bodies • damage to tourism infrastructure (including access roads, bridges, chalets, hotels, power and water supply infrastructure) • probability of disaster situation	*Increase in:* • destination risk rating • migration of wildlife • species extinction
		Decrease in • recreational areas • groundwater recharge	*Decrease in* • scenic attractions and aesthetic value • cultural assets • recreational activities • accessibility to recreational facilities and tourist attractions • revenue

Sector	Climate Hazards	Vulnerabilities	Impacts
Health	*Increase in:* • temperature and heat waves • frequency and severity of floods and droughts • strong winds • incidences of intense thunderstorms and hail storms • tropical cyclones	*Increase in:* • occurrence of vector, air and water borne diseases • incidences of pests • risk of contamination and damage of WASH and health facilities • malnutrition	*Increase in:* • loss of life due to extreme weather events • deaths due to vector, air and water borne diseases • stunted growth and poor health. • destruction of health facilities
			Decrease in • access to health facilities

2.4 KEY MESSAGES

1. Zimbabwe is highly vulnerable to the impacts of climate change.

2. National average temperature has warmed at a rate of about 0.1°C per decade and is projected to warm by 1.5 to 3.5°C by 2080.

3. Rainfall has declined by about 5 percent since 1901 and is projected to further decline by approximately 15 percent by 2060 and up to 25 percent by 2080, especially over the south-western parts of the country.

4. The frequency and intensity of extreme weather events such as droughts, floods and tropical cyclones are projected to increase.

5. Zimbabwe now lies in the path of tropical cyclones.

6. The projected changes in climate have negative effects on basic services such as nutrition, health, education, water, sanitation and hygiene (WASH); which are essential for human wellbeing especially women, children, youth, people with disabilities and the elderly.

7. Given the current and future climate scenarios it has become apparent that the degree of exposure and sensitivity of the country to climate impacts will increase the country's vulnerability going into the future.

8. The frequency and intensity of climate related disasters is projected to increase.

CHAPTER
03

THE NATIONAL ADAPTATION PLAN

3.1 INTRODUCTION

Recognizing the country's climate realities and high vulnerability to climate change and the need to build resilience, the Government of Zimbabwe (GoZ) embarked on the process of mainstreaming climate change in development planning through the national adaptation planning process. The mainstreaming agenda enhances the country's resilience to the impacts of climate change.

The National Adaptation Plan sets a roadmap and strategic framework that guides and integrates the efforts of the government and its stakeholders in strengthening Zimbabwe's capacity to adapt to climate change. It is a Plan with a set of implementable measures identified by multiple stakeholders as key to reducing the current and projected climate change impacts. The NAP enhances the country's capacity to plan, integrate, implement, monitor and evaluate adaptation programmes and projects.

3.2 SECTORS MOST VULNERABLE TO IMPACTS OF CLIMATE CHANGE IN ZIMBABWE

According to the National Climate Policy, climate variability and change will have profound effects on key sectors of Zimbabwe's economy. The vulnerability of the country's systems to climate variability and change can best be understood by the close relationship between the performance of Zimbabwe's economic sectors and the hydrological cycle. The projected changes in climate will impact on the performance of the following identified and prioritized climate sensitive sectors: water, agriculture, health, forestry and biodiversity, tourism, infrastructure and human settlements. These sectors are identified as priority areas of focus in the National Climate Policy.

Zimbabwe's development goal is to be an "Empowered and Prosperous Upper Middle-Income Society by 2030." However, climate change, if not addressed might hinder the attainment of this goal. The Inter-Governmental Panel on Climate Change (IPCC) Fifth Assessment Report (2014) highlights that climate change impacts are likely to continue to affect the world beyond 2100, particularly developing countries such as Zimbabwe; exacerbating their vulnerability to external shocks. A framework to guide short, medium and long-term action is therefore needed to enhance the country's resilience.

3.3. ZIMBABWE'S ADAPTATION DIRECTION

Integrating climate change into development planning processes is fundamental for building Zimbabwe's adaptive capacity and resilience to climate change. In support of the national Vision of becoming an Empowered and Prosperous Upper Middle-Income Society by 2030, Zimbabwe's vision for climate change adaptation and its long-term Goal for the National Adaptation Plan are:

Adaptation Vision for Zimbabwe:
"A climate resilient Zimbabwe"

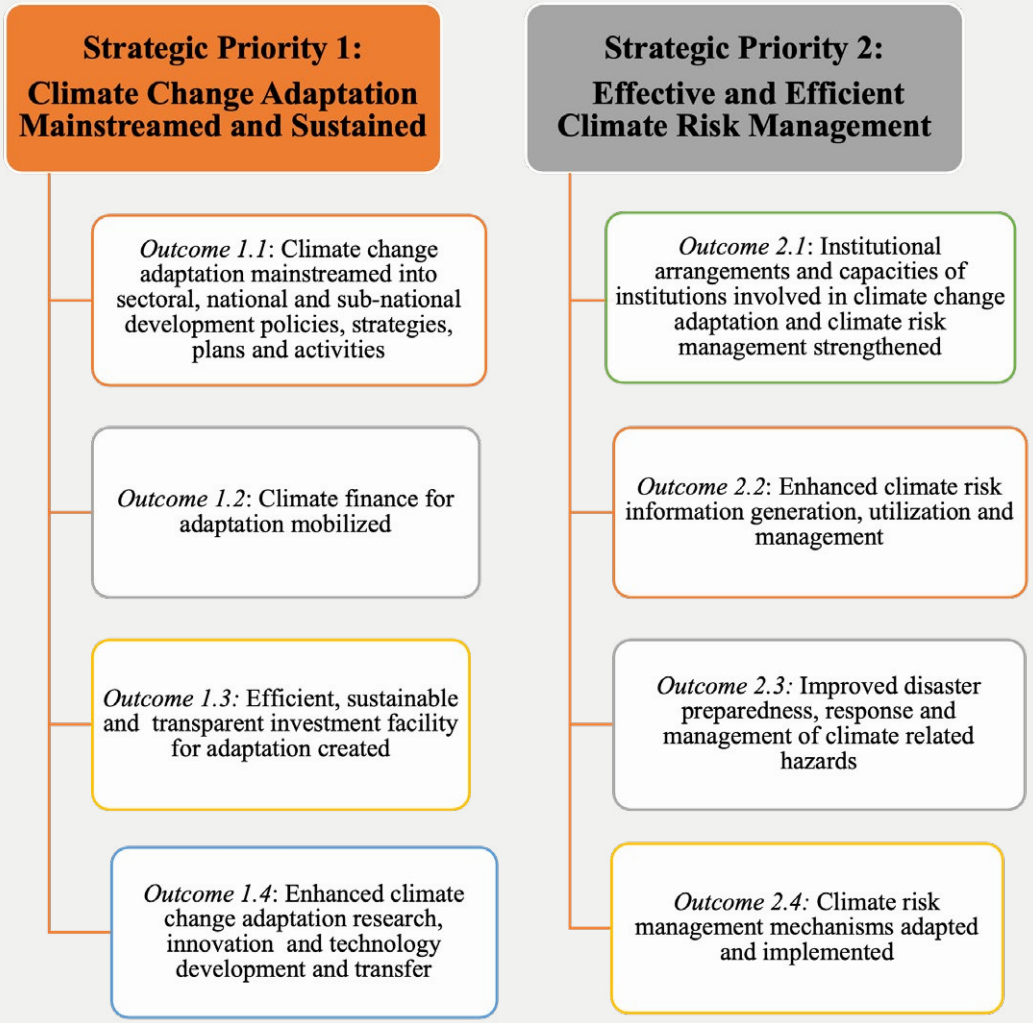
Goal of the National Adaptation Plan:
"Climate change adaptation integrated in development policies, strategies, plans programmes and activities."

3.4 ADAPTATION STRATEGIC PRIORITIES AND OUTCOMES FRAMEWORK

The National Adaptation Plan is informed by strategic priorities, outcomes, priority adaptation actions (outputs), milestones and timeframes which are guided by its Vision and Goal. The NAP's two strategic priorities are:

1) Climate change adaptation mainstreamed and sustained; and
2) Effective and efficient climate risk management.

These two strategic priorities inform eight priority outcomes as presented in Figure 3.1 and explained thereafter.



3.4.1 Strategic Priority 1: Climate Change Adaptation Mainstreamed and Sustained

The long-term sustainability of the outcomes of the adaptation interventions outlined in the NAP are critical hence one of the Strategic Priorities of the NAP is to ensure that adaptation performance is sustained. This will be achieved through mainstreaming of climate change adaptation into development planning. In addition, climate financing resources should be identified and accessed, complemented by creation of sustainable long term investment facilities.

Outcome 1.1

Climate change adaptation mainstreamed into sectoral, national and sub-national level development policies, strategies, plans and activities

Building adaptive capacity and subsequently resilience of communities can be achieved if climate change is mainstreamed into all existing and new policies, development plans, programmes and projects. This allows for building of transformative capacity, which is a key enabler for building absorptive and adaptive capacities, culminating in resilience.

Outcome 1.2

Climate finance for adaptation mobilized

The process of reducing vulnerability through building adaptive capacity and resilience to climate change and variability in Zimbabwe requires financial resources to support implementation of appropriate adaptation actions. Although the Government has embarked on implementing a number of projects on adaptation, these have not adequately covered the prioritized actions because of lack of adequate funding. Therefore, a comprehensive approach to resource mobilization from domestic and international sources is required to increase current levels of adaptation finance to contribute towards resilience building.

Mobilization of funding to meet the adaptation gap requires participation of all key stakeholders which includes Government, civil society organizations, non-governmental organizations, community-based organizations faith-based organizations as well as development partners, the private sector and individuals. Finance mobilization needs to be coordinated for transparency and accountability.

Regarding private sector participation and investment to fund the country's adaptation needs, it is essential to design innovative climate finance instruments and quality adaptation projects that are attractive to the private sector. Financing instruments that make up blended finance such as guarantees, insurance, currency hedging and technical assistance can be used to de-risk climate change adaptation investments.

Outcome 1.3

Efficient, sustainable and transparent investment facility for adaptation created

Budgeting and resource mobilization would help to ensure initiatives can be financed in a timely and flexible manner while meeting local needs. There is need to design a facility that manages financial resources in a way which provides incentives for climate action. Improving local-level financing mechanisms, modalities, and fiduciary management supported by transparent monitoring, reviewing and reporting would greatly enhance the flow of finance to support adaptation interventions.

Zimbabwe is in the process of establishing a National Climate Fund that will be supported by a national budgetary allocation and associated taxes, levies as well as bilateral and multilateral funding sources to finance adaptation activities. In addition, Zimbabwe has developed a Climate Finance Tracking System that is part of the Development Projects Management Information System (DEVPROMIS) managed by the Treasury.

Outcome 1.4

Enhanced climate change adaptation research, innovation and technology development and transfer

Generation of new knowledge through research and innovation is a key enabler and strategic national outcome for the NAP. There is need to strengthen current research efforts and promote innovations on adaptation to climate change across the different sectors that are vulnerable to the impacts of climate change. The impacts of climate change are not only cross-cutting but also differ spatially across different agro-ecological zones. Adaptation, therefore, requires a systemic approach where multi-disciplinary or collaborative research, innovation and technology development and transfer are encouraged. Knowledge generated through research should be appropriately packaged and disseminated for decision making to inform appropriate response to climate change.

3.4.2 Strategic Priority 2: Effective and Efficient Climate Risk Management

Limited capacity to respond to climate change risks has adversely affected the development and wellbeing of Zimbabwean communities. Building the adaptive capacity and resilience of communities requires efficient and effective management of climate risk. Therefore, the second Strategic Priority of the NAP ensures that climate risk is efficiently and effectively managed. This strategic priority will be realized through enhancing institutional arrangements and capacities, information management, effective disaster preparedness and response, and climate related insurance.

Outcome 2.1

Institutional arrangements and capacities of institutions involved in climate change adaptation and climate risk management strengthened

Whilst the government has taken action to respond to impacts of climate change and variability, there is still need to further enhance institutional arrangements and coordination to improve their capacities to effectively respond and support communities in building their adaptive capacity and resilience to climate change. Institutions must have adequate capacity in terms of material (physical capital - infrastructure and inputs; financial, technology) and human capacity (knowledge, tools, technical skills and competency) to implement and support priority adaptation actions and respond to climate induced disasters. There is need to enhance capacities of institutions at both national and sub-national levels to ensure effective and efficient climate risk management.

Outcome 2.2

Enhanced climate risk information generation, utilization and management

Zimbabwe's National Climate Policy acknowledges that climate information is key to managing current climate risks and adapting to a future climate. Essentially, effective climate responses are underpinned by the development of a strategy or system to share and access climate information and knowledge. The country needs to enhance its climate information services by developing a system involving the production, processing and communication of climate information to the decision maker or user. It is important to ensure that relevant climate information services is accessible at appropriate times and is communicated in a medium and manner which end-users can understand.

Improving access to climate information by government, sub-national development planners, extension workers, civil society organizations, communities, and the private sector enhances their understanding of risks within their relevant geographical contexts. Such information may include hazard mapping, socio-economic data, vulnerabilities as well as seasonal and climate projections. This information needs to be integrated into sub-national development planning processes and national institutions including planners to contribute to building adaptive capacity and resilience.

Outcome 2.3:

Improved disaster preparedness, response and management of climate related hazards

Zimbabwe has witnessed an increase in extreme climate events and disasters, including cyclones, floods and droughts. Development of adequate and timely response to the impacts of extreme climate events, hazards and disasters is critical to preserving lives, livelihoods and development gains in areas prone to such disasters. Therefore, there is need to strengthen response to such disasters and hazards through mainstreaming disaster risk reduction into development planning and develop appropriate early warning systems.

Outcome 2.4

Climate risk management mechanisms adapted and implemented

Recognising the current and projected climate change impacts, loss and damage associated with the adverse impacts of climate change is expected to worsen. This calls for readily accessible finance and technical support to minimise or avert the adverse impacts of climate change. Operationalizing Decision 1/ CP27 which established a financing facility and a fund for loss and damage will be critical in addressing climate change risk, impacts and recovery in Zimbabwe. To enhance climate risk management, Zimbabwe needs to track losses and damages from extreme climate events and disasters. This will lead to improved knowledge and understanding of climate risk and implementation of risk proofing measures in different sectors.

Support from the loss and damage facility will be complemented by the envisaged National Climate Fund which is provided for in the National Climate Policy. In addition, other innovative climate risk financing mechanisms such as insurance and risk pooling which are evolving tools in reducing vulnerability and promoting resilience of communities and countries may need to be explored. Countries with climate risk management mechanisms are likely to recover faster from disasters. Insurance also contributes to the wider understanding of climate-change risks, and helps promote measures that individuals and communities can use to improve their protection from climate change driven disasters. Climate risk management policies include the need to climate proof operations, to limit potential loss and damage to supply chains and assets.

3.5 IMPLEMENTATION OF THE ADAPTATION STRATEGIC PRIORITIES AND OUTCOMES FRAMEWORK

The NAP Strategic Priorities provide an enabling environment for building adaptive capacity and resilience at national and sub-national levels. Figure 3.1 provides a framework outlining the objectives of each strategic priority and the intended outcomes. The output indicators, sources of data and the assumptions on which the priorities are premised, are presented in Chapter 6 in a Logical Framework Analysis that is meant to monitor and evaluate the implementation of the NAP Adaptation Strategic Priorities and Outcomes Framework.

A robust institutional framework for implementation of the NAP is imperative. Thus, a set of indicators for policies and institutions are used to evaluate the existence and effectiveness of institutional frameworks that guide the adaptation interventions as well as the effectiveness of climate change adaptation policies and strategies.

3.6 ADAPTATION OPTIONS

Implementation of the two Strategic Priorities and the eight outcomes of the NAP is critical in reducing the barriers that limit the capacity to adapt to climate change at all levels. Strategic Priorities represent a set of cross-sectoral interventions required to strengthen the capacity of the country to identify, prioritise, plan, attract funding and effectively implement adaptation actions. The Strategic Priorities aid in the creation of a conducive and enabling environment for implementation of adaptation interventions. The NAP proposes a set of adaptation measures, specific to the seven key sectors prioritised. The following section highlights the identified adaptation outputs and subsequent actions to deliver a resilient Zimbabwe through the implementation of this NAP.

3.7 PRIORITY ADAPTATION ACTIONS

A total of 18 adaptation outputs were identified across the seven sectors based on the proposed national climate change adaptation strategic priorities through Multi-Criteria Analysis (MCA) and Cost Benefit Analysis (CBA). The prioritised adaptation options by sector are summarized in Table 3.1 which shows the direct climate smart options and complementary adaptation options across sectors.

Zimbabwe's development goal is to be an "Empowered and Prosperous Upper Middle-Income Society by 2030."

Table 3.1 Priority Adaptation Actions by Sector

Sector	Adaptation Outputs	Adaptation Actions
Agriculture	1. Improved access to weather and climate information services	• Increase the density of hydro-meteorological network and early warning infrastructure • Upscale training of extension workers, farmers and other stakeholders in weather and climate information access and use
	2. Climate Smart Agriculture practices adopted	• Enhance Conservation Agriculture through initiatives such as Pfumvudza /Intwasa • Enhance training of farmers and other stakeholders in climate smart crop and livestock production systems including crop and livestock diversification
	3. Agriculture technologies promoted	• Invest in climate smart agricultural equipment/ mechanisation • Upscale research, development and uptake of drought tolerant crop and livestock varieties • Rehabilitate and develop new climate proofed irrigation schemes
	4. Frameworks for sustainable intensification and commercialization of agriculture developed	• Promote the uptake of appropriate mechanisation and technologies such as low cost/ efficient irrigation systems, energy efficient systems • Strengthen and enhance implementation of policies, plans and strategies on crop and livestock production systems through diversification, use of fertilizers and use of climate smart agriculture practices • Promote the uptake of climate related insurance across the agriculture sector
	5. Efficient value chains and markets for crop and livestock established (including drought tolerant crops)	• Establish and promote efficient value chains and sustainable markets • Develop and promote uptake of appropriate agricultural technologies for agro-processing
Water	6. Water resources developed and sustainably managed including catchment management and wetlands protection	• Upscale water harvesting (rooftop, weirs, dams among others) • Sustainable exploitation of ground water resources • Strengthen institutions in water resource management
	7. Water use efficient systems adopted	• Establish a water accounting system • Enhance water use efficiency (efficient irrigation – drip etc) • Enhance wastewater recycling • Implement stepped tariff and prepayment systems
	8. Potable water infrastructure developed and maintained	• Maintain and upgrade water infrastructure. • Develop/rehabilitate potable water infrastructure

Sector	Adaptation Outputs	Adaptation Actions
Health	9. Integrate climate change, weather and climate information into the health surveillance and information system	• Facilitate and promote the integration of climate change, weather and climate information into the health surveillance and information system
	10. Improved research and response to climate related diseases	• Enhance the capacity of research institutions to conduct research on climate related vector-borne and pathogenic diseases
Infrastructure	11. Climate resilient infrastructure standards developed and adopted	• Develop and promote climate resilient infrastructure standards (buildings, roads, dams, irrigation, telecommunications, bridges, power lines, etc.) • Update existing building guidelines and standards to integrate climate change considerations • Increase the density of the hydro-meteorological network
Human settlements	12. Increased integration of climate in spatial planning	• Capacity building in climate responsive spatial planning and development • Develop capacity on climate resilient human settlement infrastructure
	13. Populations at risk from climate related hazards relocated	• Relocate and regularise settlements at risk from climate related hazards
Forestry and Biodiversity	14. Enhanced alternative natural resource-based livelihoods options	• Enhance community led conservation initiatives (Communal Areas Management Programme for Indigenous Resources (CAMPFIRE), non-timber forest products, apiculture, aquaculture, ecotourism)
	15. Improved biodiversity and reduced habitat loss	• Initiate and promote recovery of highly threatened ecosystems and species through integrated research on impacts of, and adaptation to climate change
Tourism	16. Climate Smart infrastructure products and facilities promoted	• Develop and implement plans and strategies for climate proofing the tourism and hospitality sector • Integrate climate change into the tourism policy and strategies • Climate proof tourism infrastructure
	17. Eco-tourism enterprises established/ supported	• Develop and promote eco-tourism • Promote community-based tourism enterprises
	18. Circular economy practices adopted by hospitality industry	• Train tourism authorities in sustainable tourism • Adopt the principles of circular economy in the sector

3.8 KEY MESSAGES

1. Strengthening early warning systems underpins the success of most of the prioritised adaptation options.
2. There is need to upscale and sustain cross-cutting enablers such as capacity building, awareness raising and financing, in order to build resilience.
3. The prioritised adaptation options are interlinked, therefore, require a co-ordinated multi-sectoral approach.

CHAPTER
04

NATIONAL ADAPTATION PLAN IMPLEMENTATION FRAMEWORK

The implementation framework for adaptation is a key enabler to reduce vulnerability to the impacts of climate change as well as build adaptive capacity and resilience. The success of this National Adaptation Plan is dependent on the integration of climate change into development plans.

4.2 NATIONAL ADAPTATION PLAN IMPLEMENTATION FRAMEWORK

The National Climate Policy provides an overarching framework for climate governance which is spearheaded by the Ministry responsible for climate change. Furthermore, the Ministry responsible for Local Government provides an entry point for mainstreaming climate change adaptation into the development processes along the lines of devolution.

There is need to integrate considerations of climate change adaptation and mitigation into the various stages of the policy cycle at the national and sub-national level and across sectors. The national level provides the overall national priorities and guiding policy framework within which various sectors and sub-national levels operate. Incorporating climate risk and impact analysis into sector and national as well as sub-national development objectives will increase recognition of the need for adaptation. This increasing recognition of climate change adaptation 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 as well as its inclusion in budgeting.

The Adaptation Implementation Framework follows the National Climate Policy Implementation Framework as presented in Figure 4.1.

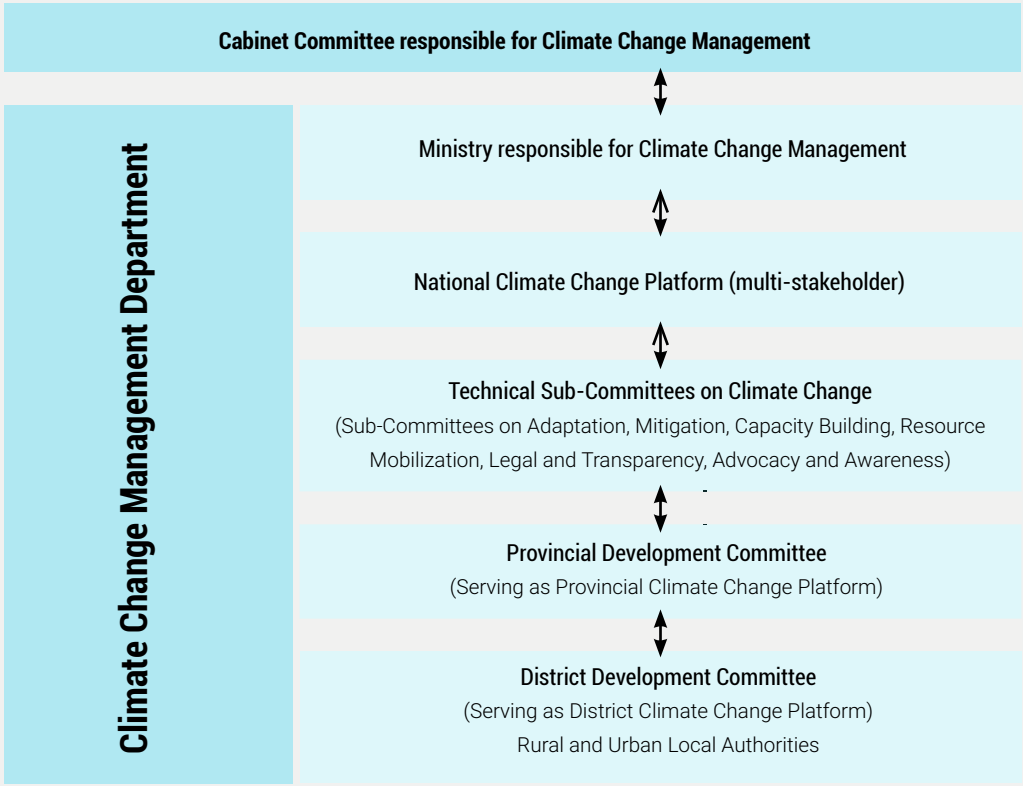


Figure 4.1: Adaptation Implementation Framework

At national level, the structure is comprised of the following:

- *Cabinet Committee responsible for Climate Change Management;*
- *Ministry responsible for climate change Management;*
- *National Climate Change Platform (multi-stakeholder, for both adaptation and mitigation);*
- *Technical Sub-committees on Adaptation, Mitigation, Capacity Building, Resource Mobilization, Legal and Transparency, Advocacy and Awareness.*

The Technical Sub-Committees provide recommendations to the National Climate Change Platform on issues under their purview.

At sub-national levels, the framework will consist of Provincial and District Development Committees serving as climate change mainstreaming working groups chaired by the Secretaries for Provincial Affairs and Devolution and District Development Coordinators, respectively. Rural and Urban Local Authorities implement climate change related programmes using locally generated resources and devolution funds in accordance with decisions made at the local level.

4.3 STAKEHOLDER ENGAGEMENT AND AWARENESS RAISING

The level of stakeholder engagement will be informed by the different roles and impacts that stakeholders experience from adaptation. Engagement will occur at sub-national and national levels to inform policy formulation, programming and implementation. The Communication Strategy for the NAP was designed to inform effective stakeholder engagement in the adaptation processes.

Zimbabwe has taken a strategic approach to promoting adaptation by prioritizing audiences, developing key messages, identifying communication channels and measuring the impact of the communication activities. This involves the creation of long-term, continuous and overlapping strategies as well as shorter-term communication campaigns on specific topics through the NAP Communication Strategy. Identified communication campaigns will be used to engage and raise awareness at different levels of geographies, actors and stakeholders

4.3.1 Roles and Responsibilities of Key Stakeholders

4.3.1.1 The Cabinet Committee Responsible for Climate Change Management

The Cabinet Committee responsible for Climate Change Management provides oversight on all climate change activities at all levels. The Office of the President and Cabinet (OPC) has the overall responsibility of all decisions relating to national climate change programming. The Cabinet Committee enhances cross-ministerial coordination of climate action as provided for in the National Climate Policy and leveraging on finance.

4.3.1.2 Ministry responsible for Climate Change Management

The Ministry responsible for climate change management through its Climate Change Management Department (CCMD) plans, formulates and coordinates climate change policies and strategies as well as implementation of adaptation and mitigation programmes and projects in collaboration with other ministries, departments, agencies, local authorities and other relevant stakeholders at all levels. The Ministry serves as the secretariat of the Cabinet Committee.

4.3.1.3 The National Climate Change Platform

The National Climate Change Platform is a multi-stakeholder platform responsible for both climate change adaptation and mitigation and includes all relevant ministries, departments, agencies and other relevant stakeholders at all levels.

The National Climate Change Platform has the following roles and responsibilities:

- *Provide technical advice to government ministries on climate change during the regular review and update of policies, programmes and plans.*
- *Ensure that the NAP aligned projects and programmes address the national circumstances as well as future projected changes in climate.*
- *Promote resource-use efficiency in adaptation programming.*
- *Ensure that climate change adaptation is mainstreamed into national, sub-national and sectoral development plans.*
- *Guide and coordinate national and sub-national adaptation activities including facilitating the sharing of lessons and success stories.*
- *Assist national and sub-national development structures with resource mobilization for climate change adaptation, action for climate empowerment and technology development and transfer.*
- *Provide technical backstopping in the implementation, monitoring and evaluation of the NAP.*

4.3.1.4 Technical Sub-Committees

The Technical Sub-Committees provide technical support and guidance in the implementation of adaptation initiatives. The Adaptation Technical Sub-Committee is central to the implementation of the National Adaptation Plan and is supported by other Technical Sub-Committees (Mitigation, Capacity Building, Resource Mobilization, Legal and Transparency Advocacy and Awareness).

The roles and responsibilities of the Adaptation Technical Sub-Committee include:

- *Ensuring effective implementation of adaptation activities.*
- *Ensuring that the proposed adaptation activities are aligned with the national climate change vision of attaining a climate resilient and low carbon nation.*

- *Reporting on progress made towards mainstreaming climate change in each sector.*
- *Ensuring that the Adaptation component of Zimbabwe's Nationally Determined Contributions (NDC) is implemented.*
- *Guide and contribute to the development of proposals.*
- *Providing technical support and guidance in the implementation of adaption initiatives.*
- *Working as the Adaptation technical think-tank.*
- *Ensuring that the proposed adaptation activities are aligned with the national aspirations and meet the communities'/sectors' needs especially of contributing to increased resilience and/or with mitigation co-benefits as well as strengthening national capacities to adapt to current and projected changes in future climate.*
- *Ensuring effective implementation of adaptation activities.*
- *Reporting on progress made towards mainstreaming climate change in each sector, identifying achievements, work in progress and gaps that still need to be addressed, as well as providing recommendations on the way forward.*

4.3.1.5 Provincial and District Development Committees and Local Authorities

Climate change mainstreaming is an integral part of the Provincial and District Development Committees' roles together with the Local Authorities serving under them. Their roles and responsibilities are to:

- *Integrate climate change adaptation into the provincial and district development plans, and sub-plans such as the Disaster Risk Management Plan, Provincial and District Environmental Action Plan, among other plans and strategies.*
- *Facilitate and monitor the implementation of climate change adaptation and mitigation actions within provincial, district and local authority plans.*
- *Ensure that provincial and district budgets include costs for the climate proofing of socio-economic infrastructure.*
- *Guide and coordinate provincial and district adaptation activities including facilitating the sharing of lessons and success stories.*
- *Coordinate vulnerability assessments undertaken within their respective province/ district.*
- *Assist provincial and district authorities with resource mobilization for climate change adaptation, education and awareness.*

4.3.2 Key Stakeholders for Implementing the National Adaptation Plan

Key stakeholders in the implementation of the National Adaptation Plan include; private sector, civil society organizations, media, community-based organizations, academia, researchers, vulnerable groups, unions, associations, faith-based organisations, development partners and donors. While most of these stakeholders have a responsibility to implement and monitor adaptation actions, they are also affected by the impacts of climate change differently. Therefore, adaptation planning and response should be all inclusive.

4.3.2.1 The Private Sector

Zimbabwe's NAP endeavours to harness the potential of the private sector to support adaptation and reduce climate risks, recognizing their role. The private sector can contribute to climate change adaptation in Zimbabwe through strengthening market value chains and access to markets, designing and deploying innovative financing instruments and technologies including climate related insurance, promoting corporate social responsibility for improved adaptation action, enhanced investments into climate resilient infrastructure, and research and development.

4.3.2.2 Civil Society, Community, and Faith Based Organizations

These organizations are strategic partners for development and are actively engaged in planning, resource mobilisation, implementation, advocacy, education and awareness raising, evidence-based research as well as monitoring and evaluation of adaptation actions at various levels in the country. These organizations play a pivotal role in providing

evidence-based knowledge to inform sub-national level development planning.

4.3.2.3 Unions and Associations

Unions and associations play a pivotal role in their respective areas of interest. For instance, the Institute of Engineers is a key stakeholder in the design and development of climate resilient infrastructure and farmers unions are critical in promoting climate smart agriculture practices.

4.3.2.4 Academia and Researchers

Academia and researchers are responsible for generating evidence-based knowledge and innovation to inform adaptation policy, strategies and interventions including provision of adaptation education and training. They also ensure climate change related technology development, transfer and promotion.

4.3.2.5 Women, Youth, Children and other Vulnerable Groups

The NAP recognizes the unique vulnerabilities of women, youth, children and people living with disabilities, amongst other marginalized and vulnerable groups to climate change. These special groups bear the brunt of climate change and should be the key beneficiaries of adaptation information, technologies and innovations which help them build resilience. Vulnerable groups have the potential to bring to the fore adaptation innovations, create green jobs, generate income, and contribute to policy and sustainable development. Therefore, they should be recognised and empowered as agents of change.

4.3.2.6 Development Partners

Strategic partnerships and international collaborations are key to successful adaptation actions in any country. The international community, especially development partners and donors are critical for resource mobilization, technology development and transfer, and human capacity building. Through the NAP, Zimbabwe will harness support from multilateral agencies, bilateral donors and south–south cooperation for in-country and regional adaptation actions and resilience building. The development partners also play an important role in monitoring and evaluation of financial flows, and how they are used.

4.4 POLICY AND LEGAL FRAMEWORK FOR THE IMPLEMENTATION OF ADAPTATION ACTIONS

The National Adaptation Planning process builds on the existing policy frameworks that include the National Climate Policy, Child friendly Climate Policy, the National Climate Change Response Strategy, and the Revised NDC. The National Climate Policy provides the strategic direction and coordination on climate change issues in Zimbabwe, including climate change adaptation. In addition, the Long-term Low Greenhouse Gas Emission Development Strategy (LEDS) (2020-2050) provides 38 mitigation actions with some of them having adaptation co-benefits.

Table 4.1 highlights related policies and legislation that are critical to promote climate change adaptation in the seven prioritized sectors namely; Agriculture, Water, Health, Forestry and Biodiversity, Tourism, Infrastructure, and Human Settlement.

The Ministry for Local Government provides an entry point for mainstreaming climate change adaptation into the development processes along the lines of devolution

Table 4.1 Zimbabwe's sectoral policies and legislation that address climate change

Sector	Policy or legislation	Relevance to climate change
Agriculture	Draft National Agriculture Policy Framework (2018-2030)	Promotes climate smart agricultural practices.
	Comprehensive Agriculture Policy Framework (2012-2032)	Promotes food security and sustainable agriculture. It aims to increase productivity as well as minimize risks from crop losses through the application of improved technologies to enhance national food security.
	Zimbabwe Climate Smart Agriculture Framework (2018-2028)	Facilitates and coordinates large scale adoption of climate smart agriculture as a national response to climate change.
	Food and Nutrition Security Policy (2012)	Identifies irrigation development as one pillar in fostering long term food and nutrition security in Zimbabwe. It prioritizes improvement in dam construction and WASH. It also provides for access to information on nutrition security and strengthening national capacity.
	The National Policy on Drought Mitigation	Promotes integration of drought preparedness, mitigation and response activities into development programmes and projects at community, district, provincial and national level. It provides a guide for local level structures to obtain financial assistance from development partners for early warning and drought monitoring.
	The Zimbabwe Drought Risk Management Strategy and Action Plan (2017–2025)	Provides a framework and guidance to support the implementation of suitable drought response practices and interventions.
	Meteorological Services Act [Chapter 13:21]	Promotes the provision of early warning information for informed decision making to the end-users.
Water	The National Water Policy (2013)	Recognizes climate change as a cross-cutting issue in water resources management. It also recognizes the potential impact of climate change on planning for future investments and ensuring the resilience of existing investments. It mentions how research and analytical work needs to be carried out to understand the effects of climate change on water resources. It states that the Zimbabwe National Water Authority and Catchment Councils will integrate climate change into all water resources planning and design activities.
	The Water Act [Chapter 20:24]	The Act acknowledges the impacts of climate change on water resources.
	The Zimbabwe National Water Authority Act [Chapter 20:25]	Establishes catchment and sub-catchment councils which can be utilized to advance water and climate change related programming.
Health	The Public Health Act [Chapter 15:17]	Creates a legal framework for the protection of public health in Zimbabwe under the changing climate conditions and associated impacts.

Sector	Policy or legislation	Relevance to climate change
Forestry and Biodiversity	The Forest Act [Chapter 19:05] and the Forest Amendment Act No 4 of 2021.	Recognizes the role of forests and trees in climate change and highlights their unique ability to contribute to both climate change adaptation and mitigation.
	The Draft Forest Policy	Provides for climate change adaptation and recognizes the role of trees and forests in climate change adaptation and mitigation.
	The Wildlife Policy (1999)	Promotes climate change adaptation programmes through CAMPFIRE.
Infrastructure	The Renewable Energy Policy (2019)	Recognizes the growing threat of water shortages on hydropower potential and the need to adapt. Provides an enabling environment for the implementation of the NDC, time bound targets for development of renewable energy alternatives and promotes incentives for renewable energy adoption.
	Biofuel Policy of Zimbabwe (2019)	Promotes the agricultural production of feedstock as alternative cash crops by farmers thereby diversifying their livelihood option.
Human settlement	The Draft Disaster Risk Management Policy	Recognizes the need to incorporate disaster preparedness and disaster risk reduction and management as a priority issue in climate change adaptation.
	The Civil Protection Act [Chapter 10:06]	Provides an institutional framework for disaster risk management.
	The Rural District Councils Act [Chapter 29:13]	Provides for sustainable management of the environment within the district by the local authorities.
	Environmental Management Act [20:27] (2002)	The Act provides for sustainable natural resource management through Environmental Impact Assessments; formulation of Local Environmental Actions Plans; and financing environmental protection conservation programmes. The Act established the Environment Fund which supports environmental management programmes and projects.
	Zimbabwe Wetland Policy and Guidelines (2021)	The Policy outlines the key challenges in wetland management and defines objectives and guiding principles to inform sustainable wetland management including their functions and services which also contribute to climate change adaptation.
	Human Settlements Policy (2021)	The Policy promotes sustainable and climate resilient settlements.

4.5 OPERATIONALIZATION OF THE NATIONAL ADAPTATION PLAN

1. Zimbabwe has made strides in its adaptation response to the impacts of climate change. To operationalize the NAP, the following key actions are required: Implement adaptation actions.
2. Raise awareness and lobby all relevant stakeholders to participate in the NAP implementation.
3. Strengthen the institutional arrangements, policy and legal frameworks.
4. Mobilize climate finance resources to implement adaptation actions.
5. Sustain capacity building and climate change mainstreaming in sectoral, national and sub-national (provincial, district and local) development planning.
6. Build capacity to generate and utilize data to inform adaptation analysis and costing.
7. Strengthen planning, implementation, monitoring, review, evaluation and reporting of adaptation programmes and projects.

4.6 KEY MESSAGES

1. There is need for a climate change legislation, in order to effectively mainstream climate change in development planning.

2. For the successful implementation of the NAP, there is need for a multi-stakeholder approach inclusive of government, private sector, development partners, and the target beneficiaries amongst others.

The National Climate Policy provides an overarching framework for climate governance which is spearheaded by the Ministry responsible for climate change.

CHAPTER
05

THE CLIMATE CHANGE ADAPTATION FINANCE STRATEGY

5.1 INTRODUCTION

The Adaptation Finance Strategy (AFS) aims to maximise public, private and external financial resources towards adaptation to catalyse implementation, innovation and impact. The AFS seeks to mobilize financial and related resources from public and private, domestic and external finance sources, and improve access to innovative financing mechanisms to fill in the adaptation financing gap required to implement the priority adaptation programmes and projects. Climate finance is central to enhancing Zimbabwe's adaptive capacity, which is constrained by limited alternative livelihood options for the majority of the population, inadequate ability to withstand or absorb climate related shocks, and its socio-economic status.

It is in this regard that the AFS estimates the amount of money needed for adaptation, identifies potential funding sources and strategies to mobilize funding for the implementation of adaptation actions in Zimbabwe.

5.2 THE NEED FOR THE ADAPTATION FINANCE STRATEGY

In view of Zimbabwe's high levels of vulnerability, the country has identified adaptation options and prioritized them across seven sectors namely: agriculture, water, health, tourism, forest and biodiversity, infrastructure and human settlements. However, resources to implement climate action remain a challenge and need to be mobilized from various sources. Article 9 of the Paris Agreement, requires developed country parties to support developing country parties to undertake adaptation actions. However, current support available is far from adequate. Zimbabwe's NAP cost estimate for adaptation is USD 10.310 billion for the period 2023 to 2030, translating to an annual requirement of USD 1.288 billion. The AFS seeks to explore innovative funding sources to support implementation of Zimbabwe's adaptation priorities.

The goal of the Adaptation Finance Strategy is to address the climate change adaptation funding gap in Zimbabwe. The objectives of the Strategy are to guide:

a) Mobilization of funding from public and private sources; and
b) Development and promotion of innovative financing mechanisms.

5.3 COSTING FOR CLIMATE CHANGE ADAPTATION

Climate change adaptation costing refers to the estimation of costs related to the implementation of the proposed adaptation actions, in order to build resilience across the country. A mixture of tools and methods, both quantitative and qualitative, were used to estimate the adaptation costs for prioritized adaptation options of vulnerable sectors. In addition, the costing was informed by the National Climate Change Response Strategy, studies under the NAP development process, and current cost realities.

The cost of adaptation actions is estimated at USD 10.3 billion for the period of 2023 to 2030, translating to an estimated annual requirement of USD 1.288 billion. Table 5.1 presents the adaptation actions and their respective implementation costs.

Table 5.1 Estimated cost of Adaptation Interventions per Sector

Sector	Adaptation Outputs	Adaptation Actions	Costing USD
Agriculture	Improved access to weather and climate information services	• Increase the density of hydro-meteorological network and early warning infrastructure	150 million
		• Upscale training of extension workers, farmers and other stakeholders in weather and climate information access and use	
	Climate Smart Agriculture (CSA) practices adopted	• Enhance Conservation Agriculture through initiatives such as *Pfumvudza /Intwasa*	1.1 billion
		• Enhance training of farmers and other stakeholders in climate smart crop and livestock production systems including crop and livestock diversification	
	Agriculture technologies promoted	• Invest in climate smart agricultural equipment/ mechanization	3 billion
		• Upscale research, development and uptake of drought tolerant crop and livestock varieties.	
		• Rehabilitate and develop new climate proofed irrigation schemes	
	Frameworks for sustainable intensification and commercialization of agriculture developed	• Promote the uptake of appropriate mechanization and technologies such as low cost/ efficient irrigation systems, energy efficient systems	20 million
	Efficient value chains and markets for crop and livestock established (including drought tolerant crops)	• Strengthen and enhance implementation of policies, plans and strategies on crop and livestock production systems through diversification, use of fertilizers and use of climate smart agriculture practices	500 million
		• Promote the uptake of climate related insurance across the agriculture sectors	
		• Establish and promote efficient value chains and sustainable markets	
		• Develop and promote uptake of appropriate agricultural technologies for agro-processing	
Subtotal - Agriculture Sector			**USD 4.77 Billion**

Sector	Adaptation Outputs	Adaptation Actions	Costing USD
Water	Water sources developed and sustainably managed including catchment management and wetlands protection	• Upscale water harvesting (rooftop, weirs, dams among others)	2.5 billion
		• Sustainable exploitation of ground water resources	
		• Strengthen institutions in water resource management	
		• Establish a water accounting system	
	Water use efficient systems adopted	• Enhance water use efficiency (efficient irrigation – drip etc.)	50 million
		• Enhance wastewater recycling	
		• Implement stepped tariff and prepayment systems	
	Potable water infrastructure developed and maintained	• Maintain and upgrade water infrastructure	1 billion
		• Develop/rehabilitate potable water infrastructure	
Subtotal - Water Sector			**USD 3.55 Billion**
Health	Integrate climate change, weather and climate information into the health surveillance and information system	• Facilitate and promote the integration of climate change, weather and climate information into the health surveillance and information system.	500 million
	Improved research and response to climate related diseases	• Enhance the capacity of research institutions to conduct research on climate related vector-borne and pathogenic diseases	
Subtotal - Health Sector			**USD 500 million**
Infrastructure	Climate resilient infrastructure standards developed and adopted	• Develop and promote climate resilient infrastructure standards (buildings, roads, dams, irrigation, telecommunications, bridges, power lines, etc.)	160 million
		• Update existing building guidelines and standards to integrate climate change considerations	
		• Increase the density of the hydro-meteorological network	
Subtotal - Infrastructure Sector			**USD 160 million**
Human settlements	Increased integration of climate in spatial planning	• Capacity building in climate responsive spatial planning and development	1 billion
		• Develop capacity on climate resilient human settlement infrastructure	
	Populations at risk from climate related hazards relocated	• Relocate and regularize settlements at risk from climate related hazards	
Subtotal - Human Settlement Sector			**USD 1 billion**
Forestry and Biodiversity	Enhanced alternative natural resource-based livelihoods options	• Enhance community led conservation initiatives (Communal Areas Management Programme for Indigenous Resources such as CAMPFIRE, non-timber forest products, apiculture, aquaculture, ecotourism)	120 million
	Improved biodiversity and reduced habitat loss	• Initiate and promote recovery of highly threatened ecosystems and species through integrated research on impacts of, and adaptation to climate change	

Sector	Adaptation Outputs	Adaptation Actions	Costing USD
Subtotal - Forestry & Biodiversity Sector			**USD 120 million**
Tourism	Climate smart infrastructure products and facilities promoted	• Develop and implement plans and strategies for climate proofing the tourism and hospitality sector	210 million
		• Integrate climate change into the tourism policy and strategies	
		• Climate proof tourism infrastructure	
	Eco-tourism enterprises established/ supported	• Develop and promote eco-tourism	
		• Promote community-based tourism enterprises	
	Circular economy practices adopted by hospitality industry	• Train tourism authorities in sustainable tourism	
		• Adopt the principles of circular economy in the sector	
Subtotal - Tourism Sector			**USD 210 million**
GRAND TOTAL			**USD 10.31 Billion**

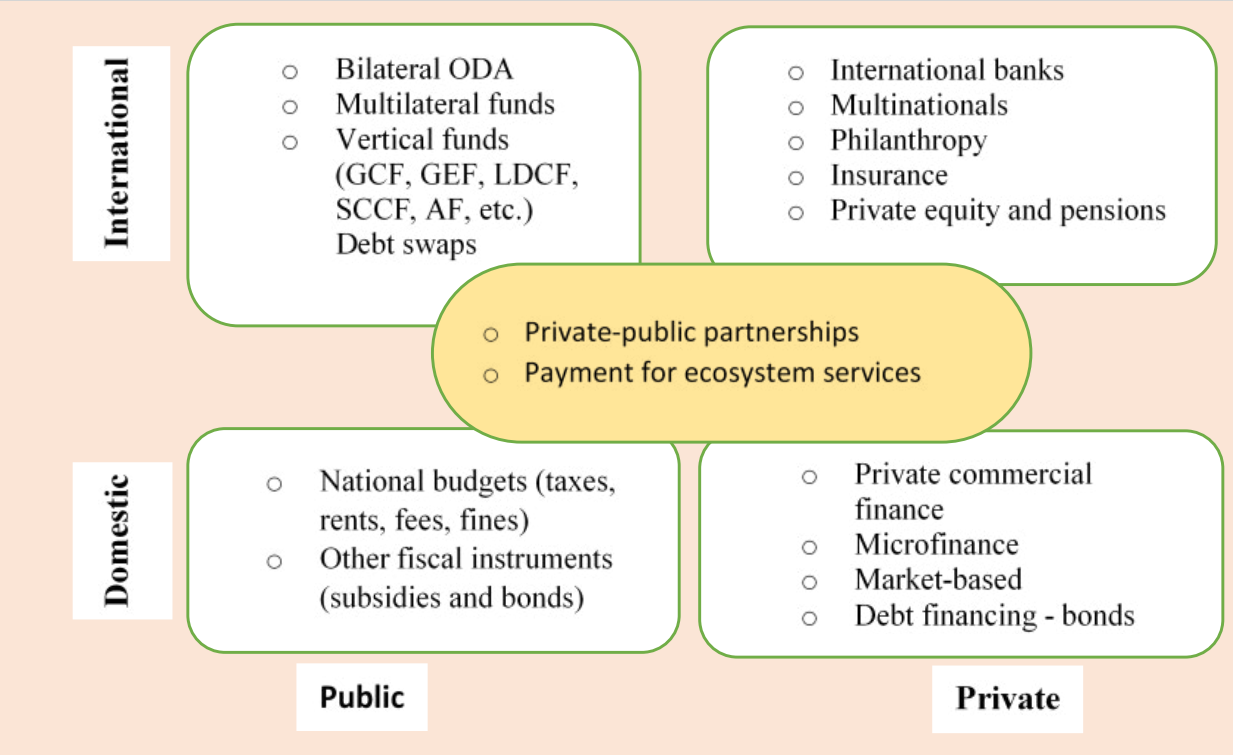
Table 5.2 Estimated adaptation cost per province (2023-2030)

Province	Amount (USD)
Bulawayo Metropolitan	224.8 million
Harare Metropolitan	222.7 million
Manicaland	1.1495 billion
Mashonaland Central	1.058 billion
Mashonaland East	1.0265 billion
Mashonaland West	997.5 million
Masvingo	1.3695 billion
Matebeleland North	1.3865 billion
Matebeleland South	1.472 billion
Midlands	1.403 billion
Grand Total	10.31 billion

5.4 POTENTIAL SOURCES OF CLIMATE CHANGE ADAPTATION FINANCE

The sources and channels of climate finance can be categorized broadly as public or private as elaborated in Figure 5.1. Public climate finance constitutes financial resources raised through taxes and other government revenue streams for climate change projects, whether international or domestic. Private finance typically refers to capital provided by the private sector; that is, the sector of the economy not controlled by the state such as individuals, small and medium enterprises, cooperatives, corporations, investors, financial institutions, and philanthropy.

Figure 5.1 *Schematic diagram of climate funding sources*



The sources and nature of finance and opportunities for financing implementation of the NAP are presented in Table 5.3

Table 5.3 Summary of sources and instruments of finance for National Adaptation Plan implementation

Sources of finance	Description	Advantages of source of finance
Sources of finance for climate change adaptation		
Domestic public finance National and sub-national government	Public sector financial resources, raised and managed by the government through establishing an enabling economic and political environment.	• Predictable and consistent implementation of NAP • Enhances national ownership of climate actions. • Leverages other sources of financing for adaptation and mitigation actions

Sources of finance	Description	Advantages of source of finance
International public finance **Bilateral and Multilateral finances**	Public funds provided from developed countries to support climate change adaptation and mitigation actions, these include: 1. Official Development Assistance (ODA) 2. Bilateral grants, loans (concessional and non-concessional), guarantees, insurance and equity. 3. Multilateral funds such as Green Climate Fund (GCF), Adaptation Fund (AF) and Global Environment Facility (GEF); Financing instruments may include grants, loans (concessional and non-concessional), insurance, guarantees and equity. 4. Multilateral development banks (MDBs) such as AfDB, World Bank, IMF etc.	Flexible funding source that presents significant amount of money to fund transformative NAP priority actions. • Particularly useful for innovation • Supports enabling activities such as capacity development, policy formulation and strengthening of institutions. • Leverages private sector and domestic public sector investments.
Private sector finance	Includes enterprises such as companies, private foundations, and financiers including commercial banks, insurance companies and investment funds.	• Financing of transformative priority adaptation actions. • Investment in new business opportunities that support adaptation and reduce climate risk. • Results in lasting development impact, shared risks and rewards to all parties.
Financing instruments		
Grants	Grants are accessed from multilateral and bilateral funds, philanthropists, Faith Based Organizations (FBOs), international non-governmental organizations, intergovernmental organizations, financial institutions, among others. Grants are additional to government financing since they are not paid back to the provider.	• Grants leverage funds from the treasury and can be used as seed money to pilot and demonstrate adaptation actions, and also to de-risk investments in adaptation financing.
Loans	Mostly given on concessional basis. Concessional loans have more favorable terms and conditions (interest rates and repayment period) than the market.	• Such loans are useful in financing adaptation options that are profitable in agriculture, food production, infrastructure, tourism, renewable energy, water among others.
Other innovative financing instruments	These include: • Bonds – green bonds, infrastructure bonds • Carbon trading • Payment for ecosystem services • Equity • Guarantees • Venture capital/crowd funding • Public private partnerships	• Funds of this nature assist in project startups and recapitalization of ongoing projects which deliver environmental benefits and more sustainable economy.

5.4.1 Multilateral Climate Finance Sources

The Convention on climate change and other Multilateral Environmental Agreements (MEAs) provide financial mechanisms for the implementation of their provisions including climate change mitigation and adaption. Table 5.4 summarizes potential multilateral funding sources for climate change adaptation.

Table 5.4 Multilateral sources of finance

NAME OF FUND	DESCRIPTION & OBJECTIVE	ACCESS MODALITIES	APPLICABLE ADAPTATION SECTORS
Green Climate Fund (GCF)	It aims to promote a paradigm shift and transformation towards low carbon and climate resilient development pathways in developing countries.	Zimbabwe can receive funding from the GCF through accredited direct access entities such as Infrastructure Development Bank of Zimbabwe (IDBZ) and accredited international access entities such as United Nations Agencies, Regional and Multilateral Development Banks among others. Project proposals to the GCF should be endorsed by the Nationally Designated Authority (NDA) in order to be considered for funding approval by the GCF board. The Climate Change Management Department serves as the GCF NDA for Zimbabwe. GCF offers support in the form of Project Preparation Facility of up to USD 1.5 million, grants, loans, concessional loans, equity, guarantees and results-based finance of up to USD 250 million. To access GCF funding it is important for the project proponent to ensure significant co-financing	All seven priority sectors
Adaptation Fund (AF)	Finances adaptation projects and programmes in developing countries to reduce the adverse impacts of climate change.	Supports projects of up to USD 20 million per country. Funds can be accessed through national, regional and multilateral implementing entities. In Zimbabwe, currently the Environmental Management Agency (EMA) serves as a National Implementing Entity (NIE). To assist accreditation of NIEs, the AF offers Enhanced Direct Access of up to USD 5 million per country. The AF also disburses its funds through project scale up grants (up to USD 100,000), small innovation grants (up to USD 250,000), and large grants up to USD 5 million.	Water, agriculture, human settlements, forestry and biodiversity, early warning and disaster risk management

NAME OF FUND	DESCRIPTION & OBJECTIVE	ACCESS MODALITIES	APPLICABLE ADAPTATION SECTORS
Global Environment Facility (GEF)	GEF supports the implementation of multilateral environmental agreements in developing countries.	GEF has a 4-year replenishment cycle through the System for Transparent Allocation of Resources (STAR) which addresses biodiversity, land degradation and climate change. It also directly funds small grants programs and medium to large grant projects. GEF also utilises non-grant instruments such as debt, equity and de-risking. GEF works through the GEF Operational Focal Point within the Ministry responsible for Environment. Funding is disbursed through approved GEF implementing entities such as UNEP, UNDP, FAO, WWF, and World Bank amongst others.	All, sectors subject to the priority focus area for a given replenishment cycle.
Climate Technology Centre and Network (CTCN)	The CTCN is the technical arm of the UNFCCC providing technical assistance.	Provides technical assistance of up to USD 250,000 to developing countries for technology development and transfer.	All, subject to availability of funds.
Loss and Damage Fund	Parties to the UNFCCC and its Paris Agreement decided to establish a financing mechanism and a fund to address Loss and Damage associated with adverse impacts of climate change at COP27 (2022)	Not yet operationalized	All sectors
Africa Adaptation Accelerator Programme (AAAP)	A joint initiative of the African Development Bank and the Global Centre on Adaptation.	Aims to mobilise USD 25 billion by 2026 to accelerate and upscale climate adaptation action across the continent. Upstream financing facility to be housed at the Global Centre on Adaptation to support evidence-based technology, project design and preparation and policy work. Downstream investment facility to be housed at the Africa Development Bank, will use resources to unlock financing from African National Governments, impact investors and other innovative sources such as resilience bonds and debt for climate adaptation.	Agriculture, water, infrastructure, human settlements, forestry and biodiversity

NAME OF FUND	DESCRIPTION & OBJECTIVE	ACCESS MODALITIES	APPLICABLE ADAPTATION SECTORS
Global Fund	Global fund was established to fight HIV/AIDS, Tuberculosis and Malaria. It is an international financing and partnership organisation that aims to attract, leverage and invest additional resources to end the epidemics.	There is scope to leverage finance from the Global Fund to support disease surveillance and research on climate related diseases such as malaria. The access modalities are detailed on the Global Fund website.	Health
International Fund for Agricultural Development (IFAD)	IFAD is an international financial institution and a specialized agency of the UN, dedicated to eradicating poverty and hunger in rural areas of developing countries.	Provides support through grants and low interest loans.	Agriculture, water, human settlements and rural development
Africa Climate Change Fund (ACCF)	AfDB multi-donor Trust Fund focusing on climate finance readiness and preparatory activities for adaptation and mitigation projects and strategies in the context of NDCs, institutional capacity building, gender equality and climate resilience.	Calls for proposals and demand driven window of between USD 250,000 to USD 1 million per grant. Eligible beneficiaries include regional member countries, regional institutions, African funds, research institutions and NGO's.	All sectors
Climate Investment Fund (CIF)	CIF is a multi-lateral fund established to finance climate pilot projects in developing countries. The CIF administers a collection of programmes that help resource-strapped nations fight the impacts of climate change and accelerate the shift to a low-carbon economy.	For more information kindly visit the CIF website.	All sectors

5.5 ROLE OF PRIVATE SECTOR IN ADAPTATION FINANCING

The private sector in Zimbabwe can be classified under banking and insurance, manufacturing and industry, retail, mining, tourism among others. Private sector can contribute towards climate action through corporate social responsibility and providing finance facilities that can support climate sensitive sectors such as agriculture, water, health, infrastructure, settlements, forestry, biodiversity and tourism.

Zimbabwean banks offer a wide range of services relating to climate change adaptation financing such as agro-based loans, lines of credit, sector specific packages, guarantees, advisory services and weather-based insurance that can cushion the society from climate change related loss and damage. They also offer climate finance facilities that can support adaptation and mitigation actions.

The agro-industry sector provides finances through contract farming agreements, where farmers receive inputs, working capital, insurance, advisory support and guarantee markets for the produce.

Generally, the private sector provides funding through Corporate Social Responsibility that can be tailored to support climate action.

5.6 THE FINANCE STRATEGY FOR THE NATIONAL ADAPTATION PLAN

Zimbabwe can access a range of finance to support the implementation of priority programmes and projects identified from the NAP process from domestic public, private sector and external sources. The need to combine these diverse sources to meet the country's financing needs is imperative, taking into account national capacities and circumstances. The prospects for this financing could be enhanced by blending public sector finance to de-risk private sector investment. Unlike mitigation, climate change adaptation actions require complementary public financing to incentivize private sector and leverage international investment because of the limited opportunity for a business case.

Table 5.5 presents the potential sources of finance, and strategic actions for tapping into the funds for National Adaptation Plan implementation.

Table 5.5: Potential sources of finance and strategic actions for tapping into the funds for National Adaptation Plan implementation

Source of finance	Strategic actions for tapping into the sources of finance
National Treasury	• Capacitate and mandate Government Ministries, Departments and Agencies (MDAs) to mainstream climate change in budgeting and activity implementation. • Develop financial instruments for financing climate actions (e.g., green bonds, targeted treasury bills, grants and subsidies). • Sensitize and lobby policy and decision makers (Cabinet Ministers, Parliament and Accounting Officers) and treasury officials on the need to allocate adequate resources towards climate action. • Institute relevant taxes and levies to support climate action. • Avail co-financing for tapping into multilateral and bilateral institutions. • Enact a Climate Change legislation to support climate action. • Operationalize the National Climate Change Fund to be used as financing vehicle to channel funds. • Align finance related legislation and policies to the climate change agenda. • Climate finance tracking and reporting for accountability and transparency. • Mainstream climate priority actions in the short, medium and long-term development plans.
Local Authorities	• Capacitate and mandate local authorities to mainstream climate change in budgeting and activity implementation. • Sensitize and lobby policy and decision makers (councilors, traditional leaders, council officials, government departments and agencies operating at local levels) on the need to allocate adequate resources towards climate action. • Develop/review and align by-laws to the climate change agenda. • Institute and ring fence levies (e.g., levies on water, forestry).

Source of finance	Strategic actions for tapping into the sources of finance
Private Sector	• Mandate companies listed on the national stock exchange to report on resources allocated to climate change adaptation (amendment of SI on sustainability reporting). • Sensitize and mandate all companies to direct corporate social responsibility towards climate action. • Open up private sector to participate in climate action (e.g., irrigation value chain and technology). • Incentivize blended finance mechanisms between the private sector, government and development partners. • Sensitize and facilitate private sector development of mechanisms to finance climate action (e.g., agri-business loans, contribution to National Climate Change Fund). • Accreditation of national implementing entities.
Individual/ Community Financing	• Sensitize and encourage individuals and communities to participate in climate action including investment in appropriate adaptation interventions (e.g., water efficient irrigation, conservation agriculture, afforestation and solar water pumping). • Design mechanisms to pool individual remittances into supporting adaptation actions.
Multilateral (e.g., GCF, GEF, Adaptation Fund)	• Avail co-financing for tapping into multilateral institutions. • Build capacity in developing bankable projects towards accessing climate finance. • Sensitize and raise awareness on various multilateral funding windows available. • Develop and regularly review and update project pipelines. • Accreditation of national implementing entities. • Provide national resources for project preparation and feasibility studies. • Improve political and economic relations with other countries.
Bilateral	• Improve political and economic relations with other countries. • Avail co-financing for tapping into multilateral and bilateral institutions. • Build capacity in developing bankable projects towards accessing climate finance. • Strengthen the capacity of the Ministry of Foreign Affairs and International Trade to be able to lobby and facilitate for climate change related investments and opportunities. • Promote ease of doing business.
International cooperating Agencies (UN Agencies)	• Avail co-financing for tapping into multilateral and bilateral institutions. • Build capacity in developing bankable projects towards accessing climate finance. • Promote ease of doing business.
Carbon Trading	• Develop a framework and legislation for carbon trading. • Sensitize and capacitate sectors to operationalize the Carbon Trading Framework. • Ensure a fair share of proceeds from carbon trading is directed towards adaptation actions. • Encourage corporate social responsibility by investors.
Payment for ecosystem services	• Developing a framework for natural capital accounting and payment for ecosystem services.
Venture Capital (e.g., Pension funds, insurance funds etc.)	• Sensitize and raise awareness on the available financial instruments and investment options for climate action. • Sensitize and capacitate the sector to operationalize innovative climate finance. • Development of climate risk reduction and pooling of financial products.
Finance Sector (e.g., climate finance facility, local and international banks)	• Promote the development of climate change related financial products (e.g., green loans, insurance, grants). • Encourage and facilitate accreditation with multilateral climate financing windows. • Encourage banks to provide tradable certificates or guarantees to support climate change adaptation interventions.
Regional and International Economic Commissions (e.g., COMESA, SADC, African Union and European Union)	• Fully participate and fulfil commitments in regional initiatives (e.g., Africa Risk Capacity). • Lobby for establishment of regional adaptation finance mechanisms (e.g., regional loss and damage facility). • Develop project proposals and apply for resources offered by regional economic commission (e.g., European Union).

Source of finance	Strategic actions for tapping into the sources of finance
Philanthropy	• Engage philanthropists on climate action. • Enhance marketing and awareness raising of climate change adaptation initiatives. • Promote ease of doing business. • Strengthen transparency and accountability on climate change programming and governance. • Establish a mechanism to handle funds from philanthropists.
Civil Society Organizations (CSOs), Faith Based Organizations (FBOs), Trusts and Community Based Organizations (CBOs)	• Involvement in the formulation of policies, strategies and plans on climate action. • Build capacity for CSOs, FBOs and CBOs in developing bankable proposals, project implementation, monitoring and evaluation reporting and accountability. • Develop a framework for government support to CSOs such as co-financing and grants for climate change adaptation.

The Adaptation Finance Strategy implementation will be monitored through the National Adaptation Plan Monitoring and Evaluation Framework.

5.7 KEY MESSAGES

1. The estimated cost of adaptation actions is USD 10.310 billion for the period of 2023 to 2030, translating to an annual requirement of USD 1.288 billion.

2. Mobilization of funding to meet the adaptation costs requires coordination at all levels. It requires the contributions from all key stakeholders that include government, private sector, development partners, multilateral and bilateral entities, individuals, civil society, people with disabilities, community and faith-based organizations and youths, among others.

3. Instruments that make up blended finance such as guarantees, insurance, currency hedging, technical assistance, among others, can be used to reduce risks of certain adaptation options.

4. There is need to strengthen the enabling environment for climate action to enhance private sector participation in financing and implementing adaptation actions.

5. There is need to operationalize the climate finance tracking tool at national and subnational level and across all sectors for adaptation finance monitoring.

6. The establishment of the National Climate Change Fund and enactment of the legal instrument which provides for transparency and accountability is critical for the successful implementation of the NAP.

7. There is need for Treasury to increase allocation and disbursements towards climate action.

CHAPTER
06

NATIONAL ADAPTATION PLAN MONITORING AND EVALUATION

6.1 INTRODUCTION

The NAP Monitoring and Evaluation (M&E) system aims to track progress achieved in implementing adaptation interventions, and evaluate their effectiveness. The system tracks progress on achievement of outputs and outcomes, feeding into relevant stakeholders such as the GoZ and its partners to inform decision making. At the national level, the information generated through tracking and measuring the impact of adaptation processes can also help to build broader political and financial support in addition to supporting continuous learning in all sectors. In addition, national level M&E of adaptation will contribute to reporting national contributions towards meeting the goals of the UNFCCC and its Paris Agreement, as well as the 2030 Agenda for Sustainable Development.

6.2 IMPLEMENTATION OF THE NATIONAL ADAPTATION PLAN MONITORING AND EVALUATION SYSTEM

Using the M&E templates, the Climate Change Management Department will coordinate the collection of information and review and consolidation of draft progress reports from all priority sectors. The Adaptation Technical Sub-Committee will recommend possible solutions to address the challenges and facilitate the drawing of lessons learnt and sharing of emerging good practices. This information will also be used to inform, review or development of national policies and planning for resilience building.

The review of the national and sub-national development planning process provides a platform for identifying gaps, challenges and opportunities for climate change implementation that also forms a basis for policy review. The NAP implementation will be monitored yearly and reviewed biennially. The National Adaptation Plan M&E system will be

institutionalized by aligning it to the current Integrated Results Based Management System identified in the National Monitoring and Evaluation Policy (2020). It will be aligned with the Whole of Government Monitoring & Evaluation System superintended by the Office of the President and Cabinet.

6.3 METHODOLOGY FOR THE MONITORING AND EVALUATION SYSTEM

The M&E system is divided into two sections namely: the M&E plan for strategic priorities (Table 6.1) and the M&E plan for sector-based actions (Table 6.2). The methodology adopted in monitoring and evaluation of the NAP is based on the Logical Framework Analysis (LFA), where activities for the strategic priorities and priority adaptation actions have been developed with objectives, key indicators, sources of data and means of verification and responsible institutions. Data collected through the various line ministries, departments and agencies including Zimbabwe National Statistics Agency, Food and Nutrition Council, among others will be input into the M&E system. These entities will be responsible for tracking the implementation sector specific adaptation actions using the M&E template attached in appendices I and II.

6.3.1 National Adaptation Plan Strategic Priorities Logical Framework

Strategic priorities outlined in this NAP are crucial in the successful implementation of adaptation priorities. Table 6.1 presents the two strategic priorities underpinning the NAP and their outcomes and strategic objectives. The Logical Framework Analysis is meant to monitor and evaluate the strategic priorities presented in Chapter 3.

The system tracks progress on achievement of outputs and outcomes, feeding into relevant stakeholders such as the GoZ and its partners to inform decision making.

Table 6.1 Logical Framework Analysis for the Implementation of the Strategic Priorities Framework

Strategic Priority	Outcome	Strategic Objective	Target
Strategic Priority 1: Climate Change Adaptation Mainstreamed and Sustained	1.1: Climate change adaptation mainstreamed into sectoral, national and sub-national development policies, strategies, plans and activities	1. To mainstream climate change adaptation into development policies, strategies, plans and activities	1. All ministries, provinces, districts and local authorities mainstream climate change adaptation by 2025
	1.2: Climate finance for adaptation mobilized	1. To identify and mobilize sustainable financing and investments for climate change adaptation from domestic and international sources 2. To strengthen national capacity to secure funding for climate change adaptation	1. 50 percent of Adaptation funds mobilized locally by 2030 2. 50 percent of Adaptation funds mobilized from external sources by 2030 3. All MDAs trained on Climate finance resource mobilization 4. 100 individuals with capacity in climate finance
	1.3: Efficient, sustainable and transparent investment facility for adaptation created.	1. To establish a Climate Change Fund	1. Climate Change Fund established and operationalized by 2025 2. At least 50 percent of investment for adaptation raised from domestic sources by 2030

Output Indicators	Data Sources	Assumptions/Risks
1. Number of Ministries, departments and agencies (MDA) that have mainstreamed climate change adaptation in their policies, strategies, plans and programmes 2. Number of sub-national plans and budgets that have mainstreamed climate change adaptation (Provincial, Districts and Local Authorities)	1. MDAs 2. Provinces, Districts and Local Authorities 3. Parliament of Zimbabwe	1. Climate Change Bill enacted 2. Capacity to mainstream climate change by MDAs, Provincial and District Development Committees, and Local Authorities
1. Amount of adaptation funding mobilized locally 2. Amount of adaptation funding mobilized externally 3. Value of signed funding/cooperation agreements to support climate adaptation action 4. Proportion of national and sub-national budget disbursed for climate change adaptation 5. Number of individuals trained in climate finance	1. Ministry of Finance Reports 2. National Budget Statements 3. Climate Financing Tracking tool reports 4. Donor Agencies Financial Reports 5. Reports to the UNFCCC 6. MDAs reports	1. Implementation of the Climate Adaptation Finance Strategy 2. Establishment and Operationalization of the Climate Change Fund 3. Climate change remains a priority funding area for development partners 4. Geo-political relationships are improved and maintained
1. Climate Change Fund established and operationalized 2. Amount of funds mobilized	1. Ministry of Finance 2. Zimbabwe Investment Development Authority 3. Ministry responsible for climate change management 4. Attorney General's Office 5. Reserve Bank of Zimbabwe	1. Models for engaging investment in climate action are viable for business 2. Good economic performance 3. Climate Change Bill enacted

Strategic Priority	Outcome	Strategic Objective	Target
	1.4: Enhanced climate change adaptation research, innovation and technology development and transfer	1. To strengthen climate change adaptation research 2. To improve local understanding of climate risks for better adaptation and resilience innovation leading to adaptation and resilience solutions that meet local needs and demands 3. Increased access to adaptation technologies	1. All relevant research institutions integrate climate change adaptation by 2030 2. Five adaptation innovations adopted in the market
Strategic Priority 2: Effective and Efficient Climate Risk Management	2.1: Institutional arrangements and capacities of institutions involved in climate change adaptation and climate risk management strengthened	1. To Strengthen structures and capacities that support the coordination, mainstreaming and implementation of climate change preparedness and response	1. All Relevant MDAs and institutions trained on climate risk management by 2025 2. National Framework for Climate Services established and operationalized
	2.2: Enhanced climate risk information generation, utilization and management	1. To enhance systematic observation network for hydro-meteorological information 2. To enhance appropriate technologies and communication channels for effective dissemination of early warning information from national to household level 3. To raise awareness on climate risk management	1. Density of weather stations according to WMO Guide to Climatological Standards 2. All community radios stations capacitated to disseminate climate information 3. At least 25 media personnel trained annually 4. All community information centers capacitated and resourced to disseminate climate information 5. Relevant MDAs, institutions and communities capacitated

Output Indicators	Data Sources	Assumptions/Risks
1. Number of institutions doing research on climate change adaptation 2. Number of adaptation technologies produced by the research institutions/ innovation hubs	1. Higher education and research institutions annual reports 2. Database searches 3. Programme Evaluation reports. 4. Private sector production reports.	1. Availability of funds for research. 2. Commercial uptake of innovation technologies. 3. Public trust in climate information is at least fair to good
1. Number of capacity building programmes implemented for institutions involved in climate change preparedness and response actions 2. Number of stakeholders trained on climate risk management 3. National Framework for Climate Services	1. Department of Civil Protection 2. Government ministries and Civil Society Organizations 3. Development partners 4. Meteorological Services Department (MSD)	1. Adequate funding for disaster risk management 2. Staff retention 3. Improved coordination
1. Number of weather stations installed 2. Number of hydrological stations installed/ rehabilitated 3. Number of community radio stations personnel capacitated 4. Number of information centers capacitated and resourced to disseminate climate information 5. Number of media personnel trained 6. Number of awareness campaigns and training on climate risk management	1. Meteorological Services Department 2. Department of Civil Protection 3. Ministry responsible for Information 4. Ministry responsible for Environment 5. Ministry responsible for water resources	1. Reliability of tele-communication infrastructure 2. Quality weather and climate forecasts 3. Availability of adequate funding 4. Adequate security for installed equipment

Strategic Priority	Outcome	Strategic Objective	Target
	2.3: Improved disaster preparedness, response and management of climate related hazards	1. To strengthen climate change related disaster preparedness, response and management 2. To promote the use of indigenous knowledge systems in disaster risk management	1. All local authorities to have improved disaster risk management systems by 2030. (Incorporate indigenous knowledge systems where possible)
	2.4: Climate risk management mechanisms adapted and implemented	1. To establish and operationalize a climate risk management mechanism for loss and damage	1. Climate risk management mechanism in place by 2026 2. At least one climate related insurance package developed and operationalized by 2025 3. At least 25 percent of farmers depending on rain-fed agriculture are covered by climate related insurance by 2030

Output Indicators	Data Sources	Assumptions/Risks
1. Updated local disaster risk management plans 2. Number of local Disaster Risk Management plans incorporating Indigenous Knowledge System (IKS) 3. Contingency plans resourced and implemented	1. Department of Civil Protection Reports 2. Meteorological Services Department Reports 3. Ministries responsible for Local Government, Agriculture, Health reports 4. National surveys Reports 5. Academia	1. Reliable climate information for disaster risk management 2. Adequate resources from the national budget
1. Climate risk management mechanism 2. Number of climate related insurance package developed 3. Number of farmers adopting climate related insurance	1. Ministry of Finance 2. Insurance companies 3. IPEC 4. Ministry responsible for agriculture 5. Ministry responsible for Local Government reports	1. Operationalization of the Loss and Damage mechanism of the Paris Agreement 2. Growing climate change related insurance industry 3. Willingness and ability to adopt climate related insurance packages 4. Affordability of insurance packages

6.3.2 Sector based actions Logical Framework

Table 6.2 presents the Sector based actions Logical Framework. The Logical Framework Analysis is meant to monitor and evaluate the implementation of the Priority Actions of the NAP presented in Chapter 3.

Table 6.2 Logical Framework Analysis for the Implementation of Zimbabwe's National Adaptation Plan

Sector	Outcome	Output	National Indicators
Agriculture	Strengthened resilience of the agricultural and food systems to climate change.	Improved access to weather and climate information services	1. Number of farmers accessing weather and information services. 2. Number of functional hydrological stations. 3. Number of functional meteorological stations 4. Density of hydro-meteorological stations in accordance to WMO Guide to Climatological and Hydrological Standards.
		Climate Smart Agriculture (CSA) practices adopted	1. Crop yield 2. Livestock production 3. Proportion of farmers adopting CSA 4. Proportion of farmers using water harvesting techniques 5. Number of farmers practicing CSA
		Agriculture technologies promoted	1. Proportion of farmers using climate smart agriculture technologies 2. Area of land under irrigation 3. Proportion of land area under efficient irrigation systems 4. Number of farmers adopting efficient irrigation systems 5. Proportion of farmers adopting water-use efficient farming practices
		Frameworks for sustainable intensification and commercialization of agriculture developed	1. Number of frameworks for sustainable intensification and commercialization of agriculture 2. Number of programs/projects supporting agriculture intensification and commercialization 3. Number of beneficiaries with enhanced income levels
		Efficient value chains and markets for crop and livestock established (including drought tolerant crops)	1. Proportion of farmers with access to sustainable agriculture markets 2. Number of farmers participating in high value chains 3. Number of value addition centers established 4. Number of farmers on contract with large off-takers for drought-tolerant crop commodities 5. Number of functional value chains

Means of Verification	Responsibility	Assumptions and Risks
• Physical visits • Monitoring reports • Activity reports • Inventory of hydro -meteorological stations. • Development partners (reports)	• Meteorological Services Department (MSD) • Agriculture and Rural Development Advisory Services (ARDAS) (formerly • AGRITEX, Agricultural Technical and Extension Services) • ZINWA	• Enabling environment • Sound macro-economic environment • Quality of products • Availability of financial resources • Availability of appropriate technologies
• Annual Crop and Livestock Assessment Reports • Zimbabwe Vulnerability Assessment Committee Reports (ZimVac Reports)	• Ministry responsible for Agriculture • Food and Nutrition Council - ZimVAC, • Development Partners • Civil Society Organizations • ZIMSTAT	
• Annual Crop and Livestock Assessment reports • ZimVAC Reports • National irrigation status reports	• Ministry responsible for Agriculture • Food and Nutrition Council –ZimVAC • Development partners • ZIMSTAT	
• Crop and Livestock Assessment reports • ZimVac Reports • Zimbabwe Agricultural Development Trust reports • Zimbabwe Investment Development Authority reports • OPC M&E Reports	• Ministry responsible for Agriculture • OPC • ZIMSTAT	
• Food and Nutrition Council/ZimVAC Reports • Crop and Livestock Survey Reports • Zimbabwe's Trade Development and Promotion Organization • ZIDA Reports	• Ministry responsible for Agriculture • Ministry responsible for Finance • Ministry responsible for SMEs • Ministry responsible of Youth • ZIMSTAT	

Sector	Outcome	Output	National Indicators
Water	Improved availability of water resources	Water sources developed and sustainably managed	1. Number of new water sources developed and maintained 2. Number of water sources rehabilitated, upgraded and maintained 3. Proportion of wetland area protected
		Water use efficient systems adopted	1. Percentage of water users with functional efficient water systems e.g. number of houses with prepaid water meters 2. Number of Local Authorities with prepaid meters in their by-laws
		Potable water infrastructure developed and maintained	1. Proportion of population with access to potable water.
Forestry and Biodiversity	Strengthened natural resources-based conservation and sustainable livelihood initiatives	Enhanced alternative natural resource-based livelihoods options	1. Number of households benefiting from natural resource based alternative livelihoods 2. Proportion of wards by district with functional natural resource management committees and plans 3. Income generated
		Improved biodiversity and reduced habitat loss	1. Percent change in forest cover 2. Area of forest and climate sensitive ecosystems under management 3. Biodiversity index 4. Species richness 5. Forest area affected by fire per annum
Tourism	Tourism, Infrastructure, products and facilities climate proofed	Circular economy practices adopted by hospitality industry Climate smart infrastructure products and facilities promoted	1. Number of tourism facilities using efficient technologies and systems (renewable energy and energy efficiency, water, refrigeration and air condition) 2. Number of new enterprises 3. Number of new green jobs 4. Number of tourism facilities using ozone and climate friendly refrigeration as well as air conditioning facilities
	Climate smart community-based tourism enterprises supported and sustained	Eco-tourism enterprises established/supported	1. Number of eco-tourism enterprises 2. Income from eco-tourism

Means of Verification	Responsibility	Assumptions and Risks
• Multiple Indicator Cluster Survey (MICS) • Service Level Bench Marking (urban) • Rural WASH Information Management System (RWIMS) • ZINWA reports • State of the Environment reports	• Ministry responsible for Water • Zimbabwe National Water Authority (ZINWA) • Catchment councils • Environmental Management Agency (EMA) • ZimStat • Rural and Urban Local authorities	• Enabling environment • Sound macro-economic environment • Quality of products • Availability of financial resources • Availability of appropriate technologies
• ZINWA Surveys and reports • Local Authority Reports • Service Level Bench Marking (urban) • Rural WASH Information Management System (RWIMS)	• Ministry responsible for water • Ministry responsible for Health • ZINWA • Rural and Urban Councils • Catchment councils	
• Ministry responsible for water reports • ZINWA Annual reports • ZimVAC • Local authority reports • MICS • Service level benchmarking Reports • Demographic and Health Survey (DHS)	• Ministry responsible for water resources • ZINWA • ZIMSTAT	
• Forestry Commission reports • EMA reports • Development partners (annual reports) • ZimVAC (reports) • Local Authorities reports • Ministry responsible for Environment reports	• Forestry Commission • EMA • Ministry responsible for Agriculture • Ministry responsible for Environment • Local authorities	• Enabling environment • Sound macro-economic environment • Quality of products • Availability of financial resources • Availability of appropriate technologies
• Ministry of Finance data • Tourism Department Reports • Survey of tourism operators • Zimbabwe Tourism Authority reports • Hospitality Associations reports • International Labor Organization reports • Ministry responsible for Labor reports • Reserve Bank of Zimbabwe (RBZ) reports • EMA reports • •ZimParks report	• Ministry responsible for Tourism • Department of Immigration • Civil Aviation Authority of Zimbabwe • Ministry responsible for Transport • Tourism Associations • Zimbabwe Tourism Authority • Zimbabwe Revenue Authority • EMA • ZimParks	
• Ministry of Finance data • Tourism Department Reports • Survey of tourism operators • Zimbabwe Tourism Authority reports • Hospitality Associations reports	• Ministry responsible for Tourism • Zimbabwe Tourism Authority • ZimParks	

Sector	Outcome	Output	National Indicators
Health	Strengthened responsiveness of the health system to climate change	Integrate climate change, weather and climate information into the health surveillance and information system	1. Proportion of districts with functional health surveillance systems that consider climate change impacts 2. Proportion of districts with climate hazard preparedness plans 3. Proportion of health centers using climate forecast information for planning
		Improved research and response to climate related diseases	1. Number of climate smart research projects/products on climate related diseases 2. Number of climate smart response measures on climate related diseases
Human Settlements	Human Settlements Improved capacity to withstand and recover from climate-related hazards	Increased integration of climate in spatial planning	1. Number of local authorities incorporating green building standards in their by-laws 2. Proportion of climate-resilient houses 3. Number of green building standards developed 4. Proportion of settlements regularized 5. Number of settlements regularized
		Population at risk from climate related hazards relocated	1. Number of people relocated
Infrastructure	Enhanced infrastructure resilience to climate change	Climate resilient infrastructure standards developed and adopted	1. Number of capacity building workshops conducted on design and development of climate resilient infrastructure 2. Number of climate resilient infrastructure standard developed 3. Number of climate proofed infrastructure

Means of Verification	Responsibility	Assumptions and Risks
• Demographic Health Information System Report (DHISR) • Demographic Health Survey reports • MSD reports	• Ministry responsible for Health and Child Care • MSD	
• Reports of Civil Society Organizations. (Health sector) • Development partners reports • ZimVAC reports • ZIMSTAT	• Ministry responsible for Health	
• Census and intercensal demographic survey • Local authority building codes • Ministry responsible for National Housing, Social Amenities and Public Construction reports	• ZIMSTAT • Ministry of Local Government • Ministry responsible for National Housing, Social Amenities and Public Construction	
• Ministry of National Housing reports • Ministry of Local Government reports • ZimStat reports • Development partners reports	• Ministry responsible for National Housing • Ministry responsible for Local Government • Traditional leadership • OPC	
• Ministries responsible for Infrastructure, National Housing, Energy, Water, Finance, Public Works, ICT, Agriculture, Transport reports • POTRAZ reports • Zimbabwe National Road Administration Reports and data • ZESA reports	• Ministries responsible for Infrastructure, National Housing, Energy, Water, Finance, Public Works, Agriculture, Transport • Zimbabwe National Road Administration • POTRAZ • ZESA	

APPENDICES

APPENDIX 1: TRACKING TOOL FOR STRATEGIC PRIORITIES

	OUTCOME INDICATORS		BASELINE YR 1- 2023	YR 2-2024	YR 3-2025 Milestone with NDS1	YR 4 2026	YR 5-2027	YR 6-2028	YR 7-2029	YR 8-2030 Target End of Term Review with NDS 2
OUTCOME 1		PLANNED:								
		ACHIEVED:								
		SOURCE:								
OUTCOME 2		PLANNED:								
		ACHIEVED:								
		SOURCE:								
OUTCOME 3		PLANNED:								
		ACHIEVED:								
		SOURCE:								
OUTCOME 4		PLANNED:								
		ACHIEVED:								
		SOURCE:								
OUTCOME 5		PLANNED:								
		ACHIEVED:								
		SOURCE:								
OUTCOME 6		PLANNED:								
		ACHIEVED:								
		SOURCE:								
OUTCOME 7		PLANNED:								
		ACHIEVED:								
		SOURCE:								
OUTCOME 8		PLANNED:								
		ACHIEVED:								
		SOURCE:								

APPENDIX 2: TEMPLATES FOR SECTOR MONITORING AND EVALUATION

Sector	Outcome	Output	National Indicators		BASELINEYR -1 2023	YR 2 2024	YR 3-2025 Milestone with NDS1	YR 4-2026	YR 5-2027	YR 6-2028	YR 7 2029	YR 8-2030 Target End of Term Review with NDS2
Agriculture	Strengthened resilience of the agricultural and food systems to climate change.	Improved access to weather and climate information services	• Number of farmers accessing weather and information services	PLANNED:								
				ACHIEVED:								
				SOURCE:								
			• Number of • Functional • Hydrological stations									
				ACHIEVED:								
				SOURCE:								
			• Number of functional meteorological stations	PLANNED:								
				ACHIEVED:								
				SOURCE:								
		CSA practices adopted	4 Crop yield	PLANNED:								
				ACHIEVED:								
				SOURCE:								
			5. livestock production	PLANNED:								
				ACHIEVED:								
				SOURCE:								
			6. Proportion of farmers adopting CSA	PLANNED:								
				ACHIEVED:								
				SOURCE:								
			7. Proportion of farmers using water harvesting techniques	PLANNED:								
				ACHIEVED:								
				SOURCE:								
			8. Number of farmers practicing CSA	PLANNED:								
				ACHIEVED:								
				SOURCE:								
		Agriculture technologies promoted	• Proportion of farmers using climate smart agriculture technologies	PLANNED:								
				ACHIEVED:								
				SOURCE:								
			6. Area of land under irrigation	PLANNED:								
				ACHIEVED:								
				SOURCE:								

		7. Proportion of land area under efficient irrigation systems	PLANNED:								
			ACHIEVED:								
			SOURCE:								
		8. Number of farmers adopting efficient irrigation systems	PLANNED:								
			ACHIEVED:								
			SOURCE:								
		9. Proportion of farmers adopting water-use efficient farming practices	PLANNED:								
			ACHIEVED:								
			SOURCE:								
	Frameworks for sustainable intensification and commercialization of agriculture developed	• Number of frameworks for sustainable and commercialization of agriculture	PLANNED:								
			ACHIEVED:								
			SOURCE:								
		• Number of programs/ projects supporting agriculture intensification and commercialization	PLANNED:								
			ACHIEVED:								
			SOURCE:								
		• Number of beneficiaries	PLANNED:								
			ACHIEVED:								
			SOURCE:								
	Efficient value chains and markets for crop and livestock established	• Proportion of farmers with access to sustainable agriculture markets	PLANNED:								
			ACHIEVED:								
			SOURCE:								
		• Number of farmers participating in high value chains	PLANNED:								
			ACHIEVED:								
			SOURCE:								
		• Establishment of value addition centers	PLANNED:								
			ACHIEVED:								
			SOURCE:								
	Strengthen linkages to viable chains for drought-tolerant crop commodities **Short term**	• Number of farmers on contract with large off-takers for drought-tolerant crop commodities	PLANNED:								
			ACHIEVED:								
			SOURCE:								

Sector	Outcome	Output	National Indicators		BASELINEYR -1 2023	YR 2 2024	YR 3-2025 Milestone with NDS1	YR 4-2026	YR 5-2027	YR 6-2028	YR 7 2029	YR 8-2030 Target End of Term Review with NDS2
Water	Enhanced water access and sustainable management	Enhanced water access and sustainable management	• Number of new water sources developed and maintained	PLANNED:								
				ACHIEVED:								
				SOURCE:								
			• Number of water sources rehabilitated and maintained	PLANNED:								
				ACHIEVED:								
				SOURCE:								
			• Proportion of wetland area protected	PLANNED:								
				ACHIEVED:								
				SOURCE:								
		Water use efficient systems adopted	• Percentage of water users with efficient water systems	PLANNED:								
				ACHIEVED:								
				SOURCE:								
		Potable water infrastructure developed and maintained	• Proportion of population with access to portable water infrastructure.	PLANNED:								
				ACHIEVED:								
				SOURCE:								
Forestry and Biodiversity	Strengthened natural resources-based conservation and sustainable livelihood initiatives	Enhanced alternative natural resource-based livelihoods options	• Number of households benefiting from natural resource based alternative livelihoods	PLANNED:								
				ACHIEVED:								
				SOURCE:								
			• Proportion of wards by district with functional natural resource management committees and plans	PLANNED:								
				ACHIEVED:								
				SOURCE:								
			• Incomes generated	PLANNED:								
				ACHIEVED:								
				SOURCE:								
		Improved biodiversity and Reduced habitat loss	• % Change in forest cover	PLANNED:								
			• Area of forest and climate sensitive ecosystems under management	ACHIEVED:								
				SOURCE:								
				PLANNED:								
			• Biodiversity index	ACHIEVED:								
			• Species richness	SOURCE:								

			• Forest area affected by fire per annum	PLANNED:									
Tourism	1. Tourism, Infrastructure, products and facilities climate proofed 2. Climate smart community-based tourism enterprises supported and sustained	Circular economy practices adopted by hospitality industry Climate smart infrastructure products and facilities promoted Eco-tourism enterprises established/ supported	• Number of facilities using efficient technologies and systems (RE, water)	ACHIEVED: SOURCE: PLANNED:									
			• Number of eco-tourism enterprises	ACHIEVED: SOURCE: PLANNED:									
			• Incomes from eco-tourism	ACHIEVED: SOURCE: PLANNED:									
			• Number of new enterprises	ACHIEVED: SOURCE: PLANNED:									
			• Number new green jobs	ACHIEVED: SOURCE: PLANNED:									
Health	Strengthened responsiveness of the health system to climate change	Climate change integrated into health surveillance and information system	• Proportion of districts with functional health surveillance systems that consider climate change impacts	ACHIEVED: SOURCE: PLANNED:									
			• Proportion of districts with climate hazard preparedness plans	ACHIEVED: SOURCE: PLANNED:									
			• Proportion of health centers using climate forecast information for planning	ACHIEVED: SOURCE: PLANNED:									
		Improved research and response to climate related diseases	• Number of climate smart research projects/products on climate related diseases	ACHIEVED: SOURCE: PLANNED:									
			• Number of climate smart response measures on climate related diseases	ACHIEVED: SOURCE: PLANNED:									

Sector	Outcome	Output	National Indicators		BASELINEYR -1 2023	YR 2 2024	YR 3-2025 Milestone with NDS1	YR 4-2026	YR 5-2027	YR 6-2028	YR 7 2029	YR 8-2030 Target End of Term Review with NDS2
Human Settlements	Improved capacity to withstand and recover from climate-related hazards	Increased integration of climate in spatial planning	• Infrastructure and spatial planning standards and codes incorporate climate-related risks • Proportion of climate-resilient houses	ACHIEVED:								
				SOURCE:								
				PLANNED:								
		Populations at risk from climate related hazards regularized/ relocated	• Number of people relocated	ACHIEVED:								
				SOURCE:								
				PLANNED:								
			• proportion of settlements regularized / number of settlements regularized	ACHIEVED:								
				SOURCE:								
				PLANNED:								
Infrastructure	Enhanced infrastructure resilience to climate change	Climate resilient infrastructure standards developed and adopted	• Number of capacity building workshops conducted on design and development of climate resilient infrastructure	ACHIEVED:								
				SOURCE:								
				PLANNED:								
			• Number of new infrastructure codes with climate-related considerations developed	ACHIEVED:								
				SOURCE:								
				PLANNED:								
			• Number of new infrastructures adopting climate smart building standards	ACHIEVED:								
				SOURCE:								
				PLANNED:								

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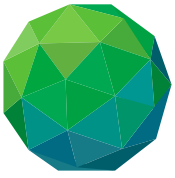

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