METEOROLOGICAL SERVICES DEPARTMENT

REVIEWED STRATEGIC PLAN 2024-25

13– 15 SEPTEMBER 2023

1.0 Introduction

This document provides the reviewed roadmap of the Meteorological Services Department of Zimbabwe (MSD) for the period 2024-2025 in line with the National Development Strategy 1 (NDS1: 2021-2025), and the National Vision 2030.The strategic plan articulates the direction(vision, mission, core values, outcomes), defines key priorities and specific strategic actions for delivery of customer and stakeholder-driven quality seismological, meteorological as well as climatological products and services through efficient exploitation of the Department's expertise and engagement of relevant stakeholders. The strategic plan is built on the RBM concept established by the government of Zimbabwe as fundamental for managing the planning, budgeting, implementation, monitoring and programmatic work for the department. The strategic plan communicates MSD strategic intent to relevant stakeholders and provides a framework for assessment of delivery of its mandate.

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1.1 Director's Remarks

The MSD 2024-2025 Strategic Plan Review is set to take stock of past performance, achievements, challenges and sets the tone for 2024 in line with the National Development Strategy 1(NDS1: 2021-2025) and the 2030 horizon. The NDS1 recognize climate and weather services as key to nation preparedness contributing to reduction in loss of lives and damage to property. The country is not spared from the effects of extreme weather events such as drought, floods and cyclones. As a department our mandate is to provide timely, accurate, accessible, understandable, actionable, seismic, weather and climate information to every citizen. I therefore encourage staff members to continue working tirelessly towards achieving the mandate of the department to avert the impact of hydro-meteorological disasters, hence contributing to targets set in our socio-economic blueprints.

We are appreciative of the financial support from the Government through Treasury which led to the achievements of major projects in the department. This support has enabled us to digitalize and modernize our meteorological equipment in our observational network nationwide leading to the strengthening of the national early warning systems. We are also grateful to the continued support we continue to receive from development partners is support to the attainment of our strategy.

The year under review saw the department achieve various milestones which includes installation various equipment including Radars, Automatic Weather stations, Debt recovery among others , In summary, as we get into the 4th year of the NDS1 implementation, our department should upscale efforts in key priority areas Infrastructure development, Investment in Technology, Research and Development, Human capital development and Quality Control among others

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2.0 Overview of Strategic Framework

2.1 Vision:

A world-class provider of meteorological, climatological and seismological products and services by 2025.

2.2 Mission Statement:

To provide customer and stakeholder driven quality seismological, weather and climate services for socio economic development.

2.3 Core Values

- **Teamwork:** We value unity of purpose
- **Equality:** We offer equal status, rights and opportunities to all
- **Customer focus**: We prioritize and address customer needs.
- **Transparency:** We are open to scrutiny
- **Integrity**: We have strong moral principles
- **Creativity**: We focus on innovation and continuous improvement.
- **Accountability:** We take responsibility for one's own actions.

3.0 2023 Program Performance Review

What was achieved?

During the year under review the department managed to access funding from the Government of Zimbabwe for recapitalization of Meterological stations across the country, this support together with development partners support managed to complete various programs and major achievements for the year includes,

a) Installation of AWOS at Masvingo, Buffalo range and Kariba Airports, AWS (30 by GOZ, 18 CAWEP, 1 CARE INT)

b) Installation of the Hydrogen plant and ground sonding equipment for Upper Air Ascents at Bulawayo (Goetz Observatory)

c) Establishment of a Radar Network in JMN, Kariba, Buffalo Range and Victoria Falls

d) Refurbishment of buildings at Nyanga, Rusape, Chisumbanje and Chipinge

e) Recovery of debt from SA Airways of US$800,000

f) Production and dissemination of the 2022/23 seasonal forecast.

g) Capacity development of the meteorological personnel, 3 Graduated with BSc Meteorology and Climate Science in September 2023.

h) Recruitment of 15 Meteorologists, 1 Quality Assurance Officer, 1 Marketing and External Relations Officer .

i) Securing of graduate intern funding from stakeholders

j) Exhibited at Zimbabwe International Trade Fair (ZITF), Agricultural Shows and conducted outreach programs.

k) .Development of Equipment Maintenance Manual

What is still Outstanding?

The department still has various pending priorities to support the success completion of recapitalization project. Most of the equipment installed needs back up of cutting edge technologies to enhance processing and utilisation of data generated. The seismic station upgrades has been not been supported for a while hence the continuous reappearance under the strategic period. The department notes that with the increase in frequency and intensity of seismic disaster within the region and beyond, the nation's preparedness in dealing with such disasters is limited if resuscitation and upgrading of seismic stations is not prioritized. Major outstanding issues in the department includes

1. Upgrading of Seismic station network
2. Digitalization of all Meteorological Stations

3. Development of meteorological services department (MSD)'s website and Weather App.
4. Launch and operationalization of the National framework for Water, Weather and Climate Services.
5. Procurement all-terrain vehicles and mini buses
6. Security for meteorological equipment and meteorological offices.
7. Accreditation of the Training School.
8. Installation of the Weather Broadcasting Television Studio.
9. Construction of provincial centers starting with Manicaland and Masvingo
10. Renovations of staff houses.
11. Training of meteorological technicians and meteorologist
12. Updating the climate database.
13. Filling in of critical vacant posts. (2 Seismologists, 2 Record and Information Assistants, 1 Engineer, 1 Database Administrator and 1 Maintenance Technician)

What are key challenges?

The most apparent challenge is the harsh macro-economic environment which is characterized by high inflationary pressures. The macroeconomic uncertainty has limited the ability the department to collect revenue from major airlines, Inadequate and late disbursement of appropriated financial resources. Owing to macro-economic issues the department still has mobility challenges due to limited off terrain vehicles, limited tools of trade also resulting in limited capacity to provide sector specific weather and climate services. The department is not spared of brain drain of highly skilled technical staff and has become a training ground for other nations. However, efforts were made for retention allowances for critical staff which is still to be paid by PSC to technical staff. Critical shortages of staff as a result of high skill flight has led to excessive overtime hours and abnormal affecting morale as the payment of overtime allowances is overdue owing to delays to review procedures by the PSC.

The department is at high risk of vandalism of meteorological and seismological equipment by both human and wildlife. The challenge of station security remains high priority area to safeguard high quality equipment installed across our stations. Whilst the National Framework for Water, Climate Framework Services has been developed, its launch and Operationalisation is being challenged by Non-Alignment of legal frameworks in particular the National Adaption Plan which

is still under the process of approval. Central procurement of specialized technical equipment has remained a challenge for the department for the strategic period affecting the efficiency of MSD operations. The department recommends that to enhance efficiency in its delivery of a critical mandate, the MSD should have a procurement unit that can facilitate swift procurement of equipment and services.

2024 Key Priorities

In pursuit of strategic vision, the department's key focus priority areas for improving access to reliable weather, climate and seismology information are mentioned below.

i. Infrastructure development

- Investment in infrastructure under the recapitalization project is key pillar to successful delivery of the MSD mandate. The 2024 performance years priorities completion of various projects as well as new projects for the department.
    - Securing Met and Seismological stations (Security fence, burglar bars and screen doors, electricity)
    - Improving Met Stations density
    - Construction of provincial centres
    - Modernization of Met and Seismology Stations and engineering and ICT workshops
    - Setup of calibration lab
    - Modernization of data strong rooms
    - Construction of Met Museum

ii. Technology

- The department continues to harness cutting- edge science and technology to provide the best observation and dissemination of reliable and accurate weather, climate and seimology services. To achieve this the key priorities includes
    - Setup of Management Information System
    - Development of a website
    - Develop alternative platforms for information sharing
    - Resuscitation of Numerical Weather Prediction
    - computerization of all Met Stations
    - Integration data from all sections

- Setting up of WAN
- Updating of CLIMSOFT database
- Modernization of Met registry and library

iii. Human Capital Development and Management

- Retention and Investment in the workforce for the future remains critical for sustainability of Met operations.to this end the high priorities under this pillar for 2024 are as follows,
  - Accreditation of the training school
  - Training and development of personnel
  - Availing Tools of trade

iv. Quality Management

- To enhance accurate and quality of data compliance and adherence to ISO standards will remain critical to achievement of set targets, key priorities under quality control includes;
  - Maintaining ISO certification
  - Increasing QMS scope
  - Conducting QMS awareness campaigns

v. Research and development

- The department targets prioritized research that support new products and services and improves weather data and forecasting as well as through
  - MOUs with various Universities
  - Engaging graduate interns
  - Publishing of papers

3.1 Environmental Strategic analysis

The Department's environmental scan focused mainly on the emerging and thematic issues that demand attention of various programs to assess impact on strategic choices for driving program performance.

3.1.1 PESTLEG

Factor	Issue	Impact
POLITICAL	• Sanctions • Engagement and Re-engagement policies	• Delays in procurement of specialized meteorological and seismological equipment. • Exorbitant bank charges due to use of a third party in processing payment. • Selective exclusion from fund benefits by donor organizations. • Increased donor support eg skills, funding, technical etc.
ECONOMIC	• Fiscal constraints • Inflation • Economic reforms	• Inadequate and delayed funding from the fiscus • Erosion of allocated budgetary support and failure to procure budgeted goods and services (equipment, assets, consumables). • Exchange rate loss on funds collected. • Improved availability of goods and services
SOCIAL	• Pandemics and Epidemics • Cultural and religious beliefs • Gender mainstreaming	• Increase in cost of doing business • Low uptake and resistance to early warnings and alerts • Increased participation and response to weather and climate information for decision making
TECHNOLOGICAL	• High cost of communication/internet • Digital divide • Paperless office • Adoption of virtual platforms	• Data gaps and delays in real time data transmission • Delays in communities receiving early warning information • Cost reduction and cleanliness in the office environment • Improved and quick way of sharing information.

LEGAL	• Harmonisation of Policy framework delays	• Delays in the implementation of programs and projects • Reduction in revenue collection
ENVIRONMENTAL	• Natural disasters • Increased awareness of climate related issues	• Destruction of meteorological and seismological infrastructure • Increased response by government and stakeholders to Meteorological issues
GOVERNANCE	• Bureaucratic red tapes (centralized buying) • Favourable polices	• Delays in procurement of goods and services • Ease of doing business. .

3.1.2 SWOT ANALYSIS

INTERNAL	
Strengths	**Weaknesses**
▪ Membership to WMO, ICAO, IPCC, CTBTO and SADC presents opportunities to benefit from programmes ▪ Supporting legislation in place ▪ Skilled and committed human capital. ▪ Quality Management System (QMS). ▪ Extensive meteorological and seismological observational networks. ▪ 100% retention and authority to invest cost recovery funds. ▪ Modern technological equipment (AWOS, Radars and AWS)	▪ Bureaucracy - (Procurement and recruitment) ▪ Limited ICT Infrastructure and security ▪ Climate data management system compatibility problems. ▪ Non-functional website. ▪ Inadequate tools of trade. ▪ Absence of legal framework to enforce seismic hazard assessments in the mining and construction industry ▪ Delayed implementation of devolution. ▪ Inadequate budgetary support.
EXTERNAL	
Opportunities	**Threats**
▪ Growing demand for a broad range of weather, climate, and seismological products and services. ▪ Development partners as a potential source of funding of meteorological projects. ▪ New technologies available. ▪ Amendment of the Met Services Act. ▪ Increased awareness in climate change and climate variability. ▪ Collaboration with research institutions, universities and developing partners.	▪ Rapid technological advancement. ▪ Late release of funds by treasury. ▪ Brain drain. ▪ Silo mentality ▪ Global pandemics ▪ Liquidity crunch ▪ Natural Disasters. ▪ Vandalism. ▪ Delayed policy reviews.

4.0 Clients and Stakeholder Analysis

MSD recognizes the importance of fulfilling client and stakeholders needs and expectations hence the review sought feedback on achievements and expectations from its various stakeholders.

4.1 **CLIENT NEEDS/PROBLEMS ANALYSIS:**

Direct Clients	Needs/Problems	Extent(*Magnitude/seriousness)*
Farmers	**Needs** ● Severe weather alerts and warnings ● Area specific agro-met forecasts ● Capacity building	● High (100% of the farmers require agro-met area specific information) ● Regularly
General public	**Needs** ● Timely, accessible and translated weather forecasts. ● Advisories and warnings **Problems** ● Limited access to dissemination platforms	● High(Information required daily) ● As and when it happens ● 60% rural and remote areas not sufficiently covered by dissemination platforms
Miners	**Needs** ● Weather and climate information. ● Seismic hazard assessments	● Medium (40% of miners require awareness on seismic prone areas)
Aviation and Transport Sector	**Needs** ● Weather & route forecasts and warnings. ● Training	• Hourly, Daily and as and when imminent • All pilots and air traffic controllers
Insurance Sector	**Needs** • Lightning confirmation certificates • Weather data	• As and when requested
Tourism Sector	**Needs** ● Weather forecasts, advisories, alerts and warnings	● High (90% of tourists have limited access to weather and climate information)

STAKEHOLDERS ANALYSIS

Direct Stakeholders	Demands/ Expectations	Extent *(Magnitude/seriousness)*
Ministry of Finance and Economic Development	**Demands** - Submission of expenditure targets - Financial reports - Weather and climate information	 - High (Mandatory) - High (Monthly, quarterly and annually) - High (policy planning & decision making)
Government Departments	**Demands** - Weather and climate & seismic information - Capacity building on meteorological, seismological and climatological information. - Collaboration	 - High (regulatory compliance planning & decision making) - Medium (awareness) - High(national disaster preparedness)
Parliament	**Demands** - Weather, Climate and Seismic information - Accountability - Compliance	 - High (planning data) - High - High
Media	**Expectations** - Weather, Climate and Seismic information - Responsiveness	 - High - High
Local and International partners	**Expectations** - Compliance with international obligations - Weather, Climate and Seismic data and information	 - High

Civil Society groups	**Expectations** - Policy information - Inclusion - Weather , climate and seismic information	 - High - - high
Minister of Environment	**Demands** - Cabinet brief (weekly) - Departmental performance information	 - High - high

5 . Meteorological Services Department Programmes and Outcomes:

Prog. Ref	Programme Name	Programme Outcome/s	Weight	Responsible Department	Contributing MDAs/ Other Partners	Type of Contribution	Sector Outcome Ref.	National Outcome Ref	SDG Ref
1	**Weather, Climate and Seismology**	1.Increased access to reliable weather, climate and seismological information	100%	Aviation Public Weather QMS Marketing and External Relations ,Accounts, HR, Admin Engineering and ICT Research, Training, Agro-met, Seismology and NWP.	MoFED, MoLAFWRR	Financial Support, Data collection, dissemination of information.	1	3	13, 1,2,5,17
					UNOPS, UNDP, CTBTO, WMO, Christian Blind Mission,Higher Life Foundation, WFP, CAWEP, CARE, World Vision	Technical support , Financial support, Fellowship/Scholarship			
					ICAO, International Seismological Center, Council for Geo-science South Africa	Technical support			

6.0 Strategies, Assumptions, Risks and Mitigation

The key strategies to drive achievement of outcomes across all sub-programmes has been identified as well as associated risks and mitigation strategies to enhance strategic success..

Period	Strategies	Assumptions	Risks	Mitigations
Programme 4: WEATHER, CLIMATE AND SEISMOLOGY				
Outcome 4: INCREASED ACCESS TO WEATHER, CLIMATE AND SEISMIC INFORMATION				
Budget Year	Operationalization of radar station networks.	- Established LAN and WAN	- Unreliable power source	- Solar backup at all stations - Installation of a dedicated power line from ZETDC
	Increasing dissemination platforms for weather, climate and seismological products and services	- Availability of technical support through Public Private Partnerships (PPP)	- Donor fatigue	- Persistently engaging the treasury for more resources.
	Technical and user training for effective use of meteorological and seismological systems	- Availability of expertise - Ongoing technical support - Availability of resources	- Skills flight - Technological changes	- Incentivize - Continuous upgrading of systems
	Alignment of legal Framework for Weather and Climate Services.	- Financial and technical support - Stakeholder buy-in	- Delays in approval of legal frameworks	- Lobby for the setting up of NFCS Ministerial steering committee
	Resuscitating, modernizing and expanding observation station network.	- Adequate resources - Development partners support	- Delayed release of funds	- Continuous lobbying for the early release of funds from the Treasury.

	Maintenance and calibration of meteorological and seismological equipment	- Adequate resources	- Technological shifts.	- Keep abreast with technological changes.
	Securing of all meteorological stations	- Availability of technical expertise	- No release of funds	- Seek donor funding
	Accreditation of the Training school	- Availability of technical expertise - Stakeholder support	- Brain drain	- Incentivize workers - Engage private lecturers - Seek for donor funding
	Increasing QMS scope	- Availability of funds - Availability of personnel	- Loss of key personnel	- Training of other members
	Development of a website	- Timely release of resources - Committed staff	- Bureaucracy - Failure to secure a reliable hosting company	- Early submission of requests to PMU for processing - Engaging a hosting company with traceable reference
	Carry out awareness campaigns and seismic intensive surveys in earthquake-prone areas.	- Funds will be readily available from Treasury.	- Endanger life and property.	- Continuous lobbying for the early release of funds from the Treasury
	Resuscitate non-functional seismic stations.	- Stakeholder and development partner support	- Unfavorable conditions for support	- Keep re-engaging the government.
2 - 3 years	Construction and operationalization of provincial centers	- Availability of technical expertise - Devolution agenda drive	- Late release of funds - inflation	- Early engagement of treasury for timeous release of funds.
	Development of new products and services	- Availability of technical expertise	- Delayed resuscitation of NWP section	- Lobby for funds from treasury
	Resuscitate non-functional seismic stations.	- Stakeholder and development partner support	- Unfavorable conditions for support	- Keep re-engaging the government.

	Maintaining an updated climate database	• Computerization • Dedicated Internet connectivity	• Limited capacity • Cyber attack	• Firewall and antivirus • Training in cyber security

7.0 Results Framework

The tables below indicate the reviewed performance indicators in some outcomes and also targets to reflect on the milestones achieved and ambitions for the coming year as informed by the opportunities in the operating environment as well as budgetary support.

7.1 Outcome Matrix

Ref	Outcome Description	KPI:	Measurement Criterion (time;$;rate ; etc)	Baseline		TARGETS									
						2021		2022		2023		2024		2025	
				Year	Value	T	ALV	T	ALV	T	ALV	T	ALV	T	ALV
1	Increased access to reliable weather, climate and seismic information	Client satisfaction index	%	2018	60	**65**	+-1	**70**	+-1	**80**	+-1	**80**	+-1	**82**	+-1
		District community radios disseminating information	Number	2023	1[4]	-	-	-	-	-	-	5			
		Sector Access to information: a) Aviation	%	2018	100							100		100	
		b) Agriculture	%	2018	60							100[2]		100	

[1] To establish correct baseline as at 2023 the four recorded radio Kalanga, NMCRS radio station and one each for Manicaland and Masvingo province
[2] There is need to establish correct baseline information

7.2 Outputs Matrix

No. &Prog. Code	Outputs	4 year target	MC	Baseline		Previous Year			Current Year					Targets							
						2020			2021			2022			2023			2024		2025	
				Value	Year	T	A	AV	T	A	AV	T	AP	AV	T	AP	AV	T	AV	T	ALV
Programme: Weather, Climate and Seismology																					
OUC 4 Increased access to reliable weather, climate and seismic information																					
OP 4.1	Seismic station upgraded	4	No	4	2019	1			1	0	0	1	0	0	1	0	-1	3	±1	1	±1
OP 4.2	Radars network established	8	No	0	2019	0			1	0	-1	1	1	0	1	4	+3	-	-	-	-
OP 4.3	Meteorological station upgraded	50	No	10	2019	10			1	0	-1	10	8	-2	20	27	+7	40	±3	7	±3
OP 4.4	Meteorological Station expanded	50	No									15	24	8	20	18	-2	10	±1	10	±1
OP 4.5	Seasonal forecasts produced and disseminated	10	No	2	2018	2	2	0	2	2	0	2	0	-2	2	2	0	2	0	2	0
OP 4.6	Warnings and advisories issued	100	No	100	2020	100			100	100	0	100	100	0	100	100	0	100	0	100	0
OP 4.6	Seismic Bulletins Produced		No	12	2019	12	12	-1	12	11	-1	12	12	0	12	12		12	0	12	0
OP 4.5	Dissemination platforms established	4	No			1	1	0	1	0	-1	1	0	-1	2	1	-1	2	0	2	
OP 4.5	ICT network established: LAN	16	#															8	±1	8	±1
			#															1	0	1	0

No. &Prog. Code	Outputs	4 year target	MC	Baseline		Previous Year			Current Year					Targets							
						2020			2021			2022			2023			2024		2025	
				Value	Year	T	A	AV	T	A	AV	T	AP	AV	T	AP	AV	T	AV	T	ALV
	:WAN																				
OP 4.6	Clouds Seeded	1200	#	30	2019	400		±40	400	0	±40	200	100	-100	100	150	+50	100	±10	100	±10
OP 4.7	Trainings conducted	50	#	8	2020	-	-	-	5	3	+/-1	5	8	+3	15	14	-1	10	±1	12	±1
OP 4.8	Awareness campaigns conducted	60	#	12	2019	-	-	-	15	11	+/-1	15	13	-2	20	23	+3	20	±1	20	±1
OP 4.9	NFCS launched	1	#	0	2020	-	-	-	-	-	-	-			1	0	-1	1	0	-	-
OP 4.10	Provincial centers constructed	2(100%)	%															25	±3	50	±5
OP 4.11	Training school accredited	1	%															100	0	-	-
OP 4.12	QMS scope expanded		no	5	2019													3	±1	3	±1

8.0 Programme Budget

Programme		Programme Outputs	Budget Last Year	Budget Current Year	Budget Year 1	Budget Year 2	Budget Year 3	Budget Year 4	Budget Year 5
Programme 4	Sub Prog 1: Seismology	Seismic Station Network upgraded,	49, 079, 000	62 942 000.00					
		Dissemination Platforms Established,							
		Meteorological Stations Installed,							
		Meteorological Stations Upgraded,							
		Seismic Bulletins Produced,							
		ICT Infrastructure systems installed,							
		Equipment calibrated,							
	Sub Prog 2. Weather and climate Services	Seasonal forecast produced and disseminated, radar network established,	832,444,000	786364000					
		meteorological station network upgraded,							
		seismic bulletins produced,							

		dissemination platforms established,							
		ICT Infrastructure Installed, cloud seeded, training conducted,							
		equipment calibrated							
Total Programme Budget			**881,523,000**	**849326000**					
TOTAL MDA BUDGET			**881,523,000**	**849326000**					

9. Human Resources for the Strategic Period.

No.	Category	Programme 4	DET Total Personnel Requirements By Category
1	Top Management	3	0
2	Middle Management	6	9
3	Supervisory Management	9	0
4	Operational and Support staff	254	6
5	Total	272	15

10.0 Other Resources

10.1 Materials, Equipment and ICTs

Materials/ Equipment /ICT	2023		2024		2025	
	Quantity	Cost	Quantity	Cost	Quantity	Cost
Motor Vehicle	12	zwl 650M	15	USD 975000	5	USD 475000
Office Equipment	270	zwl 271m	270	250 000	270	250000
Furniture and fittings	210	zwl 310m	200	300 000	200	300 000
Workshop machinery and Equipment	35	zwl 3 150m	9	500000	35	500000
Buildings construction	3	zwl 400m	3	2M	1	1.5M
Fencing	17	zwl 150m	4	500 000	4	500 000
Infrastructure maintenance	4	zwl 60m	5	1M	5	1M
Technical Equipment	12	zwl 30m	12	1M	12	1.2M
Office equipment maintenance	16	zwl 15m	30	500 000	20	500 000
Air charters	2	zwl 500m	2	600 000	2	600000

10.2 Space Requirements

Location	2021		2022		2023		2024		2025	
	Quantity (m2)	Cost	Quantity (m2)	Cost	Quantity (m2)	Cost	Quantity (m2)	Cost	Quantity (m2)	Cost
Masvingo	24 000	12mil								
Lupane	25 000	12.5mil								
Manicaland	25 000	12.5mil								
Mash Central					25000	12.5mil				
Mash East							25000	12mil		

Mash West									25000	12.5 mil