NATIONAL DISASTER MANAGEMENT AGENCY
NDMA
SWAZILAND

"A safer,adptive, more resilient Swaziland to all hazards,for all generations"

RESILIENCE STRATEGY AND ACTION PLAN SWAZILAND

May 2017

KINGDOM OF SWAZILAND

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ACRONYMS AND ABBREVIATIONS

ACMAD	African Centre for Meteorological Applications to Development, Niger
ADRA	Adventist Development and Relief Agency
AfDB	African Development Bank
AGRHYMET	Regional Centre for Training and Application in Agro-meteorology and Operational Hydrology, Niger
AIDS	Acquired Immuno-deficiency Syndrome
ARC	African Risk Capacity Center
ART	Antiretroviral Therapy
AU	African Union
BSRCS	Baphalali Swaziland Red Cross Society
CAADP	Comprehensive Africa Agricultural Development Programme
CANGO	Coordinating Assembly of NGOs
CBD	Convention on Biological Diversity
CFSAM	Crop and Food Security Assessment Mission
CILSS	Permanent Inter State Committee against Drought in the Sahel
COP	Conference of the Parties
CRED	Centre for Research on the Epidemiology of Disasters
CSENs	Children with Special Educational Needs
CSO	Central Statistics Office
CSOs	Civil Society Organizations
CST	Committee on Science and Technology, UNCCD
DMC	Drought Monitoring Centre
DPMO	Deputy Prime Ministers Office
DRAPA	Drought Resilient and Prepared Africa
DRM	Disaster Risk Management
DRMFSS	Disaster Risk Management and Food Security Sector, Ethiopia
DRR	Disaster Risk Reduction
EDE	Ending Drought Emergencies
EMS	Emergency Management Services
EM-DAT	CRED's International Disaster Database
ENSO	El Nino Southern Oscillation
EPR	Emergency Preparedness and Response
ERS	Economic Recovery Strategy
EW	Early Warning
EWS	Early Warning System
FAO	Food and Agriculture Organization
FEWS NET	Famine Early Warning Systems Network
FPE	Free Primary Education
GBV	Gender Based Violence
GDP	Gross Domestic Product
GFDRR	Global Facility for Disaster Reduction and Recovery
GIEWS	Global Information and Early Warning System on Food and Agriculture

GIS	Geographic Information System
GRIP	Global Risk Identification Programme
GWP	Global Water Partnership
HAART	Highly Active Antiretroviral Therapy
HACT	Harmonized Approach to Cash Transfers
HDI	Human Development Index
HFA	The Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters
HHAFI	Harvest Help – African Food Issues
HIV	Human Immuno-deficiency Virus
HMIS	Health Management Information Systems
HMNDP ICPAC	High-level Meeting on National Drought Policy
HTC	HIV Testing and Counselling
IDDRISI	IGAD drought disaster resilience and sustainability initiative
IDMP	Integrated Drought Management Programme
IGAD	Intergovernmental Authority on Development
ILO	International Labour Organization
IPCC	Intergovernmental Panel on Climate Change
ITCZ	Inter-Tropical Convergence Zone
LVIP	Lined Ventilated Improved Pit latrines
MDGs	Millennium Development Goals
MICT	Ministry of Information Communication and Technology
MHA	Ministry of Home Affairs
MHUD	Ministry of Housing and Urban Development
MNRE	Ministry of Natural Resources and Energy
MOA	Ministry of Agriculture
MEPD	Ministry of Economic Planning and Development
MOET	Ministry of Education and Training
MHCP	Multi Hazard Contingency Plan
MOH	Ministry of Health
MOTEA	Ministry of Tourism and Environmental Affairs
MPWT	Ministry of Public Works & Transport
NAPs	UNCCD National Action Programmes
NASA	National Aeronautics and Space Administration, U.S.A.
NDMA	National Disaster Management Agency
NDMP	National Drought Management Policies
NDS	National Development Strategy
NERMAP	National Emergency Response Mitigation and Adaptation Plan
NEPAD	New Partnership for Africa's Development
NEWFIS	Namibia Early Warning and Food Information System
NERCHA	National Emergency Response Committee on HIV and AIDS
NGoS	Non-governmental Organizations
NMHCP	National Multi Hazard Contingency Plan
NOAA	National Oceanic and Atmospheric Administration, U.S.A.

PEPFAR	President's Emergency Plan for HIV/AIDS Relief
PLWHA	People Living With HIV and AIDS
PRSAP	Poverty Reduction Strategic and Action Plan
RCMRD	Regional Center for Mapping of Resources for Development
RDAR	Rapid Drought Assessment Report
RSSC	Royal Swaziland Sugar Corporation
RWSS	Rural Water Supply Scheme
RVAA	Regional Vulnerability Assessment and Analysis
RVAC	Regional Vulnerability Assessment Committee
SADC	Southern Africa Development Community
SADC-CSC	SADC Climate Services Centre
SDGs	Sustainable Development Goals
SDHS	Swaziland Demographic and Health Survey
SHIES	Swaziland Household Income and Expenditure Survey
SFA	Sendai Framework for Action
SFDRR	Sendai Framework for Disaster Risk Reduction
SNL	Swazi National Land
SPEI	Standardized Precipitation-Evapotranspiration Index
SSA	Swaziland Sugar Association
SWAP	Sector Wide Approach
SWMR	Swaziland Water Mapping Report
SWSC	Swaziland Water Services Corporation
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNECA	United Nations Economic Commission for Africa
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund
UNICEF	United Nations Children Emergency Fund
UNISDR	United Nations International Strategy for Disaster Reduction
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
USAID	United States Agency for International Development
VAA	Vulnerability Assessment Analysis
VAC	Vulnerability Assessment Committee
WASH	Water, Sanitation and Hygiene
WB	World Bank
WBG	World Bank Group
WFP	World Food Programme
WHO	World Health Organization

EXECUTIVE SUMMARY

This document presents the *Swaziland Resilience Strategy and Action Plan (**SRSAP**)*, which is aimed at making the country safer, adaptive and more resilient to all hazards for all generations. Against the history of regular, devastating, hazardous impacts on the country, the SRSAP represents the nucleus of the interventions aimed at reducing current and future exposure, vulnerability, damage and losses.

The SRSAP has **five (5)** distinct yet mutually reinforcing **pillars**, namely:

- Governance;
- Risk Assessment and Monitoring;
- Knowledge Management and Awareness;
- Risk Reduction; and
- DRM AND CCA Preparedness, Response and Rehabilitation Measures

The Plan is consistent with the five important national frameworks: The National Development Strategy (NDS) Vision 2022; The Poverty Reduction Strategic and Action Plan (PRSAP): The Swaziland Environment Action Plan (SEAP); The National Disaster Management Policy (2010) and the National Emergency Response, Mitigation and Adaptation Plan (NERMAP) 2016-2022, which all serve as an integrated framework for resilience building in Swaziland. The SRSAP is also aligned to two hemisphere/regional initiatives, namely; the strategic framework called "Drought Resilience and Prepared Africa (DRAPA)" and the Regional Inter-Agency Standing Committee for Southern Africa (RIASCO) Action Plan. It is also linked to the Sendai Framework for Disaster Risk Reduction 2015-2030, which was adopted at the Third UN World Conference in Sendai, Japan on March 18, 2015. The SRSAP envisions a "*Safer, Adaptive and More Resilient Swaziland to All Hazards for All Generations*". The SRSAP encompasses a paradigm shift from a reactive emergency response emphasis to a proactive one of reducing the country's vulnerability and increasing resilience.

Outlined in the Plan are the Expected Outcomes, Outputs, Activities, Indicators, Lead Agencies, and Timelines under each of the five (5) distinct yet mutually reinforcing pillars. The objective of each pillar leads to the attainment of Swaziland's overall SRSAP vision, the framework of which is summarized below.

There are four (4) cross cutting issues that are an integral part of all the priority actions contained in the Plan. These issues are:

- Capacity development;
- Knowledge and communication
- Strategic Partnerships; and
- Gender Equity

The Plan is guided by good governance principles within the context of poverty eradication and sound environmental management. It depends on collaboration and cooperation and complementation of resources, through the establishment of strategic partnership, to deliver services effectively. The goal is to be achieved through five (5) pillars, five (5) objectives, twenty-eight (28) outcomes, eighty-six (86) outputs, and two hundred and seventy-nine (279) activities.

The five (5) pillars are:

- Governance - Institutional and Technical Capacities for Disaster Risk Management (DRM) and Climate Change Adaptation (CCA) at All Levels;
- Risk Assessment and Monitoring;
- Knowledge Management and Awareness;
- Risk Reduction; and
- DRM and CCA Preparedness, Response and Rehabilitation Measures.

PILLAR 1 – GOVERNANCE- Institutional and Technical Capacities for Disaster Risk Management (DRM) and Climate Change Adaptation (CCA) at All Levels

OBJECTIVE	**OUTCOMES**	**Lead Agency**
To ensure that clear vision, plans, competence and coordination in place within the Kingdom, that foster collaboration among institutions in the implementation of disaster risk management and climate change adaptation measures.	***1.1*** Institutional mechanisms for the efficient and effective coordination of DRM and CCA tasks within Swaziland strengthened at the national, regional and local/community levels	**NDMA**
	1.2 Technical Units strengthened and provided with mandates for DRM and CCA management at the national, regional and local/community levels	**NDMA**
	1.3 DRM and CCA main-streamed and integrated into national sectoral, regional and local development policies, strategies, plans and budgets	**NDMA**
	1.4 DRM and CCA considerations integrated into cross cutting issues such as environmental management and gender equality	**NDMA/ SEA**

PILLAR 2 – RISK ASSESSMENT AND MONITORING

OBJECTIVE	**OUTCOMES**	**Lead Agency**
Improve climate risk and vulnerability assessment tools and methods, and ensure that climate information products and early warning systems are	**2.1** Climate impact, risk and vulnerability assessment methodologies improved and derived outputs from the enhanced processes are transferred to relevant sectors, departments and communities for application	**NEWU/ Swazi-Met/ NDMA**
	2.2 Institutional and technical capacities of Weather and Climate Services strengthened to improve the provision of necessary forecast products obtained from the early warning systems for application at appropriate levels	**NEWU/ Swazi-Met/ NDMA**

customized to the needs of dependent communities, including farmers.	**2.3** National technical capacities to apply need based climate and weather information products derived from early warning systems strengthened	**NEWU/ Swazi-Met/ NDMA**
	2.4 Livelihood based damage and loss assessments procedures and baseline database formats developed and tested	**NEWU/ Swazi-Met/ NDMA/ VAC**

PILLAR 3 – KNOWLEDGE MANAGEMENT AND AWARENESS

OBJECTIVE	**OUTCOMES**	**Lead Agency**
Use knowledge to build a culture of innovation and resilience, and institutionalize training on climate change adaptation and disaster risk management in the country	***3.1*** Awareness creation strategy for climate change adaptation and disaster risk management designed and applied at the national, regional and local levels	**NDMA**
	3.2 Enhanced knowledge, innovations and good practices for climate change adaptation and disaster risk management	**NDMA**
	3.3 Local communities and local institutions mobilized for climate change adaptation and disaster risk management interventions	**NDMA**
	3.4 Knowledge on key reports and information material related to climate change adaptation and disaster risk management shared and disseminated strategically	**NDMA/ NCC**

PILLAR 4 – RISK REDUCTION

OBJECTIVE	**OUTCOMES**	**Lead Agency**
To facilitate long term adaptation processes and related technology development and transfer for enhancing the country's resilience to disaster and climate change, especially in the most vulnerable sectors and communities	***4.1*** Integrated production systems and economic diversification promoted to build resilience of communities to climate change impacts	**MEPD**
	4.2 Disasters' impact on poverty, income volatility and food and nutrition insecurity is mitigated by making agriculture more resilient	**MEPD/ MOA**
	4.3 Increased value to the society of ecosystem services through reduction in erosion and sedimentation of water bodies, improvement in water quality, limited flooding, and regularity of water flows	**MNRE**
	4.4 Decision makers and the general public more receptive to the need for adequate zoning and building codes in the reducing vulnerability of human settlements	**MHUD**
	4.5 Increased disaster resilience of infrastructure systems	**MPWT**
	4.6 Reduced vulnerability to water-related hazards and water shortages resulting from hazards	**MNRE/ DWA**

	4.7 Increased disaster resilience of health sector through the integration of CCA and DRM measures	**MOH**
	4.8 Enhanced social protection program to build resilience to disasters and climate change	**DPMO/ SWD**
	4.9 Strengthened existing school feeding program for better learning and lifelong healthy food choices	**DPMO/ SWD/ MET**
	4.10 Strengthened risk sharing and transfer mechanisms	**MEPD**
	4.11 Strengthened Long Term Low Carbon Development Pathway/Strategy to reduce vulnerability to climate change impacts	

PILLAR 5 – DRM AND CCA PREPAREDNESS, RESPONSE AND REHABILITATION MEASURES

OBJECTIVE	**OUTCOMES**	**Lead Agency**
Enhance the national and local capacities for disaster preparedness, response and rehabilitation and ensure that disaster risk management and climate change adaptation measures are integrated in the planning and implementation of relevant interventions	***5.1*** Comprehensive national, regional and local preparedness and response policies, plans and systems established and operational	**NDMA**
	5.2 Disaster response operational plans developed and managed to preserve life and meet the basic subsistence needs of the affected population	**NDMA**
	5.3 Well coordinated, integrated system for recovery implemented at the national, regional and local levels	**NDMA**
	5.4 Disaster risk reduction (DRR) and climate change adaptation (CCA) measures are incorporated into post disaster recovery and reconstruction processes	**NDMA**
	5.5 Regional/ hemisphere and global cooperation and coordination promoted in pre-event preparedness post disaster recovery and reconstruction processes	**NDMA**

The SRSAP has a lifespan of thirteen (13) years, which is phased over three (3) timelines: Short term, 2017-2018; Medium term, 2019-22; and Long term, 2023-2030. The end of the Medium term coincides with the end of the NDS and NERMAP.

The National Disaster Management Agency (NDMA), which was established to provide overall coordination of the national disaster risk reduction and management programmes, will have the main responsibility for providing the leadership in facilitating the overall coordination and management of the SRSAP. In the context of the redefined responsibility of the NDMA, the institutional structure of the agency will be strengthened in several dimensions.

The Board of Directors - strengthened to ensure representations from the Private Sector, as well as policy makers and technical experts in CCA and DRM. Representations on the Board should be selected at the highest level from each sourced institution.

A Technical Management Advisory Committee (TMAC) is established, comprising experts from relevant local and international institutions to provide technical and managerial support and guidance in the implementation of the SRSAP. The membership should include key disaster management and donor institutions, representatives from the scientific and academic institutions and the private sector.

Within the TMAC are five Thematic Committees - established to represent the five pillars of the SRSAP. Each Committee will be the" Technical Think Tank" on the determination and implementation of technical options for the respective pillar. To ensure an organic relationship between the TMACs and the Board of Directors of NDMA, the lead of each Thematic Committee under the TMAC should report to a designated Vice-Chair of the Board having that portfolio responsibility. The possibility of placing more emphasis on thematic clusters as a more effective implementation approach, instead of sectoral clusters should be examined.

The **capacities of the sectoral clusters** - strengthened to more effectively coordinate the development and implementation of cluster plans along the entire CCA/DRM chain, instead of just 'cluster emergency response plans'.

The **institutional capacity of the NDMA** should be strengthened for effective coordination of CCA and DRM related tasks to include additional staff with specific Terms of Reference and required logistic support in four technical areas, namely, thematic coordinators (5) for the pillars, climate change specialist, resource mobilization specialist, and information, education and communication specialist. The information, education and communication specialist should be the thematic coordinator for Pillar 3. The thematic coordinators should liaise closely with the respective thematic committee.

The **Regional Disaster Management offices** – should be strengthened by providing additional logistic support. At this regional level, the Regional Disaster Management Council (RDMC) should have oversight responsibility for ensuring that SRSAP-sensitive regional development plans contribute to and are aligned to the SRSAP as well as the implementation of resilience building initiatives, including the allocation of requisite budgets. At the regional level the DMC chairperson should lead the process.

At local government and community level it is the primary responsibility of the Community Disaster Management Council (CDMC) to ensure that the SRSAP is main-streamed into the respective community development plans, programmes and budgets as part of the local level strategy on sustainable development and poverty reduction. The NDMA should serve to provide overall guidance to the CMDC secretariat in formulating the local component of SRSAP.

At the national, regional and local levels, the following sources can be tapped and/or proposed to fund the various SRSAP programmes and projects:

- Swaziland Resilience Strategy and Action Plan (SRSAP) Fund.
- Priority Development Assistance Fund (PDAF).
- Disaster Management Fund, equivalent to 1% of national budget.

Linkages with international and regional disaster risk reduction institutions and networks and other donor institutions should be enhanced to increase access to technical and financial resources. As such, NDMA in consultation with the MEPD should, as soon as practicable, convene a donor's conference to create awareness and general understanding by donors of the SRSAP and funding requirements. The newly created capacity of Resource Mobilization Officer within the NDMA should immediately take on the responsibility and:

- Prepare project proposals to address specific SRSAP objectives and actions contained, therein; and

- Prepare profile of possible funding institutions and facilities at the national, regional and international levels relevant to the implementation of the SRSAP.

The communication strategy for the SRSAP in particular, and CCA/DRM in general should be addressed through a two-pronged approach:

- Overall communication and awareness creation of the SRSAP and its intended outcomes, particularly in relation to the focus on making Swaziland a more resilient country; and

- Communication and awareness creation of the specific objectives and related actions and activities of the SRSAP.

The M&E process will utilize the Results-based Logical Framework Matrix, which is presented in **Section 5** of this SRSAP. It represents an integrated modified version of critical elements of two main frameworks: The UNISDR Resilient Scorecard for Cities, 2015 and the Sendai Framework for Disaster Risk Reduction 2015-2030. The indicators, targets and activities identified in each of the five pillars of the SRSAP will be used in the Monitoring and evaluation process. The indicators established will be applicable at the local, regional and national levels.

1.0 INTRODUCTION

This document presents the context, purpose, process, strategic framework and elements of the ***Swaziland Resilience Strategy and Action Plan (SRSAP)***, which is aimed at making the country safer by being more resilient and adaptive to all hazards. Against the history of regular, devastating, hazardous impacts on the country, the SRSAP is the nucleus of interventions aimed at reducing current and future exposure, vulnerability, damage and losses for Swaziland.

Awareness of the importance of disaster risk reduction has become stronger since the 1990s, with the proclamation and introduction of several instruments[1]. Countries of the world were urged to prepare an integrated disaster risk reduction mechanism that was to be supported by a proper institutional basis and adequate resources. Regrettably, these issues have yet to become high priorities in Swaziland. Existing disaster management agencies in the country have yet to be vested with sufficient authority, mechanisms, and resources to deal with problems larger than mere emergency response.

Notwithstanding the challenges faced, several efforts have been made by Swaziland over the past several years to build the people's capacities and resilience to disasters. These efforts have been grounded by the country's commitment to the implementation of the Hyogo Framework for Action (HFA) and its successors, the Sendai Framework (2015-2030) and the United Nations Framework Convention on Climate Change (UNFCCC) - the international frameworks for building the resilience of nations and communities to disasters and reducing vulnerabilities and risks to hazards. The Sendai Framework for Action (SFA) is built on elements which ensure continuity with the efforts by Countries and other stakeholders under the HFA and introduces a number of innovations. The significant shifts identified include: a strong emphasis on disaster risk reduction as opposed to disaster management; the definition of seven (7) global targets; the reduction of disaster risk as an expected outcome; a goal focused on preventing new risk; reducing existing risk and strengthening resilience; and a set of guidelines, including primary responsibility of states to prevent and reduce disaster risk, all of-society and all of-State institutions engagement. In addition, the scope of disaster risk reduction has been broadened significantly to focus on both natural and man-made hazards and related environmental, technological and biological hazards and risks. Health resilience is strongly promoted throughout. The SFA has four priority areas:

- Priority 1: Understanding disaster risk;
- Priority 2: Strengthening disaster risk governance to manage disaster risk;
- Priority 3: Investing in disaster risk reduction for resilience; and
- Priority 4: Enhancing disaster preparedness for effective response and to 'Build Back Better' in recovery, rehabilitation and reconstruction.

[1] International Decade for Natural Disaster Reduction (IDNDR) in 1990; Yokohama World Conference on Natural Disaster Reduction in 199; International Strategy for Disaster Reduction (ISDR)" in 2000; and Hyogo Framework for Action 2005-2015

In this context, over the last two decades, several policies, plans, programmes and projects have been implemented to build national resilience to disasters, with varying results achieved.

The National Development Strategy (NDS) – Vision 2022 articulates the country's development vision and aspiration for 25 years, from 1997 until 2022. It focuses on improving the standard of living in the country, particularly poverty eradication, employment creation, gender equality and environmental protection. Since its adoption in 1999, the NDS is serving as the overarching framework that guides all socioeconomic interventions, which seeks to advance the lives of the Swazi populace. Within the umbrella of the NDS, the government has produced the Poverty Reduction Strategy and Action Programme - PRSAP (2007-2015), the Economic Recovery Strategy (ERS), and Sector Wide Approach (SWAP).

The Disaster Management Act (2006) provides the mandate and leadership role of the National Disaster Management Agency (NDMA) to coordinate and lead disaster reduction, emergency preparedness and response activities in collaboration with other key stakeholders. The Act clearly defines structures to be established at national, regional and local levels to support the national DRM institutional framework. It also determines the roles and responsibilities of various stakeholders before, during and after emergencies and disasters. Procedures for State of Emergency declaration and the establishment of the Disaster Management Fund are well captured in the Act.

Other major efforts of the Government of Swaziland include the development and implementation of the following policy instruments and plans:

- Disaster Management Bill and National Disaster Management Plan, 2000;
- Swaziland Environment Action Plan, Swaziland Environment Authority (now the responsibility of the Ministry of Tourism, Environment and Communications), 2001;
- National Disaster Management Policy (2010);
- Southern Africa Regional Climate Change Programme, 2009-2014, DFID/SIDA, a Regional Project; and
- National Emergency Response, Mitigation and Adaptation Plan (NERMAP 2016-2022), NDMA.

In addition, several international organizations and civil society have and continue to support disaster resilience building in Swaziland.

The United Nations System: The focus is very much on risk reduction and emergency preparedness and response within the framework of a well-established coordination mechanism, the UN Technical Working Group (UNTWG). The UN was successful in mobilizing resources to provide support to vulnerable groups affected by emergencies and natural disasters (floods, drought) at the request of the Government of Swaziland. Some of the major projects implemented by the various institutions to build resilience are presented in Annex I.

Despite the success achieved to date in building resilience to disasters through the implementation of the various policy instruments, plans, programmes and projects, several gaps as well as challenges exist. The nature and scope of the challenges faced and gaps identified suggest that much more concerted efforts are required in the building of the resilience of Swaziland to natural hazards and other shocks. It also suggests the need for a paradigm shift in historical efforts in three important aspects:

- Instead of focusing merely on emergency response, efforts must now be focused on resilience building in all aspects of risk disaster management and climate change adaptation;

- Protection against hazards and disaster threats must be provided for by the government, not out of obligation but for the fulfilment of the basic human rights of the people; and

- Responsibility for resilience building must no longer be the domain of the government alone, but a shared responsibility of all elements of the society. A shared understanding and commitment of all relevant stakeholders, particularly decision makers, will be required in the process.

Importantly, the development of the Resilience Strategy and Plan of Action for the country must address the contributing factors and processes leading to disaster risk, including:

- Changing environmental drivers (climate change and variability);
- Causes and consequences of poverty and inequality, including the existing land policy;
- Unplanned and rapid urbanization, poor land management and compounding factors such as demographic change, weak institutional arrangements, disempowered local actors, lack of regulation (or its enforcement);
- Cultural beliefs and experiences;
- Lack of (or contextually inappropriate) tools and methods; and
- Barriers to uptake of new technologies and the intersections with issues such as cultural beliefs, social practices and historic experiences.

It is against this background the **Swaziland Resilience Strategy and Action Plan** (**SRSAP**) is developed and proposed.

2.0 PURPOSE, OBJECTIVE, SCOPE, AND PLANNING PROCESS OF THE SRSAP

2.1 *Purpose and Objective*

The primary motivation of the Government of Swaziland (GoS) is the formulation of a Resilience Strategy and Action Plan as a framework for resilience building in the country in order to reduce the vulnerability of its people, especially the poor, to the effects of natural, environmental and human-induced hazards. This can best be achieved by strengthening the climate change adaptation (CCA) and disaster risk management (DRM) system in the country and by integrating disaster risk reduction and CCA measures into the policies, strategies and plans of government and the private entities in all sectors and at all levels. The SRSAP was therefore conceived and formulated to serve as the "road map" or 'guide' for strengthening and undertaking resilience building in Swaziland through the integration of CCA and DRR measures in all processes and systems in the country. The implementation of the activities and project areas identified in the strategy and plan can contribute significantly to the attainment of two important government's objectives - poverty reduction and food and nutrition security.

The SRSAP's overall objective is to support policy making and monitor and evaluate resilience building activities. It has the following specific objectives:

- Contribute to a common understanding, knowledge and awareness of disaster risk reduction;
- Provide a comprehensive framework to guide and monitor the implementation of disaster risk reduction initiatives in the country;
- Create an environment that is conducive for mainstreaming disaster risk reduction and CCA measures into development plans, policies and projects at the governmental and non-government levels;
- Enhance coordination and cooperation among resilience building stakeholders;
- Improve the efficiency of resource allocation and utilization in resilience building by avoiding the duplication of efforts; and
- Orient donor support in resilience building for national-identified priorities.

2.2 *Scope*

The SRSAP is a national document specifying platforms, priorities, strategies, actions and mechanisms pertaining to the implementation and institutional basis of resilience building in Swaziland. It describes interests and responsibilities of all stakeholders which were identified through a participatory coordination process based on "Lessons Learnt" on progress in the implementation of **NERMAP (2016-2022)**. The targets established in the SRSAP can be viewed through the international lens of the four priorities set out in the ***Sendai Framework for Disaster Reduction 2015-2030***, and the 25 targets identified in ten (10) of the seventeen (17) Sustainable Development Goals (SDGs) related to disaster risk reduction in the **UN Agenda for Sustainable Development, 2015-2030.** The SRSAP has also been adapted to fit in with hemisphere/regional resilience priorities, plans and programme such as the SADC Climate Change Strategies.

The SRSAP first of all describes the disaster context of Swaziland, including factors contributing to disaster risks; international, hemisphere/regional and national context of the strategy and action plan; and priorities, strategies, efforts and actions for building resilience to disasters. It will also feature a complementary section describing mechanisms and sources of funding for the implementation of the strategy and plan.

2.3 Planning Process

The SRSAP was developed through the United Nations-led participatory process that involved getting the views and opinions of different resilience building stakeholders in the country, including disaster management officials from the government (national, regional and commune levels), local and international NGOs, and institutional donor agencies and development partners. The participatory process in the development of the SRSAP was extremely important, as it was premised on the logic that the sustainability of intervention outcomes that are aimed at building resilience to droughts, floods and other future shocks within the national development agenda was hinged on participation and partnerships at the national, regional and community levels. The process was facilitated under the leadership of UNTWG in close collaboration with the NDMA, government ministries, NGOs, and relevant organizations/stakeholders.

The development of the SRSAP gave due consideration to methodological approaches and best practices of previous and current initiatives of other countries and organizations in addressing issues related to the main-streaming of DRM/CCA in development planning for resilience building at the national and sectoral levels.

The first phase of the planning process was the conduct of a situational analysis to identify the broad resilience building issues and best practices in the international, hemisphere/regional arenas and at the national level through the conduct of a SWOT Analysis.[2] In this context, a stock-taking exercise was first undertaken to compile data on past and current resilience building initiatives. This was done through a desktop literature review of various documents and secondary information sources, which included:

- The review of best practices adopted internationally, regionally and in Swaziland;
- A review and analysis of resilience related policies and programmes relevant to climate change adaptation and definition of the scope of resilience for the country;
- A review of the NERMAP 2016-2022 and other key national development documents, tracking the disaster occurrences and recovery trends and identifying the barriers to resilience in the country;
- Review of ongoing projects and initiatives currently supporting resilience building of the vulnerable populations from a social, technical and financial perspective; and
- Review of past and current best practices in supporting resilience building that would need to be captured in the programme/framework.

[2] Strengths, Weaknesses, Opportunities and Threats

A series of extensive consultation meetings were then conducted with the various resilience building stakeholder groups to validate findings of the stock-taking exercise, to discuss perceived policy and operational gaps identified, and to gather suggestions and recommendations on the way forward. The stakeholders met included: UN, NDMA, USAID, Swaziland Vulnerability Assessment Committee (SVAC), Department of Water Affairs (DWA), Social Welfare Division of the Office of the Deputy Prime Minister, Swazi MET, Baphalali Swaziland Red Cross Society (BSRCS), and World Vision.

The consultative process was enriched by the discussions, key considerations, recommendations and conclusions that emanated from the NDMA Review of Lessons Learnt Workshop. The Workshop reviewed in a very constructed manner the successes and failures of 2016 in the implementation of NERMAP (2016-2022), a response to the 2014-2016 El Nino induced drought in the country. The prioritized multi-sectoral clusters framework[3] utilized in the coordination of the National Emergency Response and Mitigation Plan (NERMAP) 2016-2022 implementation process was examined to benchmark the levels of effectiveness, and the coherency in and systematic approach to the process.

The elaboration of the M&E Framework was informed by a number of existing relevant frameworks which were reviewed to provide guidance, including the:

- Pilot Program for Climate Resilience (PPCR);
- Global Facility for Disaster Reduction and Recovery (GFDRR);
- Global Environment Facility Least Developed Countries Fund and the Special Climate Change Fund (LDCF/ SCCF);
- Tracking Adaptation and Measuring Development (TAMD);
- Tear-fund: Mainstreaming Disaster Risk Reduction;
- Caribbean Disaster Emergency Agency (CDEMA): Performance Monitoring Framework for the Caribbean Disaster Management (CDM) Strategy 2014-2024
- Vulnerability Benchmarking Tool for the Caribbean;
- UNISDR[4]: Disaster Resilience Scorecard for Cities; and
- Sendai Framework for Disaster Risk Reduction, 2015-2030.

A Quantitative Strategic Planning Matrix (**QSPM)**[5] analytical technique was designed to determine the relative ranking of the nine (9) Frameworks/Instruments above. The technique objectively indicates which one of the alternative instruments is best.

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[3] National response coordination structure for the NERMAP was adapted from the national Multi Hazard Contingency Plan (MHCP) (2015), and has six (6) prioritized clusters, namely : Agriculture & Food Security Cluster, Health & Nutrition Cluster, Education Cluster, WASH Cluster, and Social Protection Cluster; with NDMA the Inter Cluster Coordination Lead Agency: NDMA.

[4] UNISDR: United Nations International Strategy for Disaster Reduction

[5] Key components of the QSPM are: Strategic Alternatives (Frameworks/Instruments) to be evaluated; Key factors/pillars to be assessed; Weights (**W**) assigned to each critical issue within each pillar; Attractiveness Scores (**AS**) determined by examining each critical issue under each pillar; Total Attractiveness Scores (T**AS**), defined by the product of the **W** and the **AS;** and Sum **TAS** for each Framework/Instrument determined by adding the TAS for all the pillars under each Framework/Instruments

The results of the analysis of the instruments indicated some limitations in all of the frameworks evaluated, but highlighted a strong preference for both the UNISDR Disaster Resilience Scorecard and the Sendai Framework. While the UNISDR Disaster Resilient Scorecard was developed to provide cities with a set of assessments that would allow them to understand how resilient they are to natural hazards it was considered to be highly adaptable to the national context of Swaziland. Finally, an integrated, modified version of the Disaster Resilient Scorecard and the Sendai Framework will be utilized as the framework for the M&E of resilience building in Swaziland.

With inputs from the reviews and consultations guiding the analysis, a draft framework document on the strategic direction in the development of the Strategy and Plan was presented to and discussed in separate meetings with the UN and the NDMA to decide on national strategies and priorities for action.

The draft of the SRSAP was submitted to and reviewed by the UNTWG, with recommendations and comments submitted for consideration. A final consultation was conducted through a National Validation Workshop conducted on the 29th of March, 2017 followed by the final review by the UNTWG. The SRSAP document was formally endorsed by the national government in May 2017.

2.4 Linkages with National Development Policies and Plans

The SRSAP is linked to a number of national development policies and plans including the NDS, the PRSAP, Disaster Risk Reduction National Action 2008-2015, Swaziland Environment Action Plan (SEAP), the United States President's Emergency Plan for AIDS Relief (PEPFAR), the National Food and Nutrition Security Policy and Action Plan, Swaziland UNDAF 2016-2020, and the NERMAP 2016-2022.

The GoS has formulated several policies, strategies and action plans aimed at achieving sustainable development in the country. Among these are the NDS, the Economic and Social Reform Agenda and the PRSAP.

The NDS – Vision 2022 serves as the overarching framework that guides all socio-economic interventions, which seek to advance the lives of the Swazi populace. In a broad context, it focuses on improving the standard of living in the country, particularly as it relates to poverty eradication, employment creation, gender equality and environmental protection. While the NDS does not directly address resilience building to disasters, it is incorporated in the strategic areas related to physical infrastructure, agriculture, land and rural development, education and training, health and social welfare, and gender and disadvantaged groups.

Within the umbrella of the NDS, the government has produced the Poverty Reduction Strategy and Action Programme -PRSAP (2007-2015), Economic Recovery Strategy (ERS), Sector Wide Approach (SWAP). These tools are all tailor-made to implement the NDS.

The PRSAP (2007-2015) was aimed at facilitating sustainable economic growth and poverty reduction. It explicitly identifies natural disasters, particularly flood and drought, as critical factors that have, and continue to increase socioeconomic vulnerabilities of the rural poor. This includes placing a disproportionate burden of coping with the effects of disasters on women.

There was also the Swaziland Disaster Risk Reduction National Action Plan 2008-2015, the vision of which was to establish a functional natural disaster risk management system that minimizes community vulnerability to hazards and effectively prevents and mitigates the impact of disasters within the context of sustainable development. This was to be achieved through the application of innovative approaches and technologies to enhance community resilience to disaster risks through effective coordination, facilitation and implementation of all disaster risk management initiatives in Swaziland.
The priorities of the National Action Plan could be categorized into five (5) main areas, namely:

- Creation of an effective and functional legal and institutional framework on DRR;
- Improvements in risk identification mechanisms in the country;
- Enhancement of information and knowledge management for DRM;
- Improvements in national risk management applications for poverty and disaster reduction; and
- Establishment/strengthening of disaster preparedness and emergency response practices.

One of the main priorities identified in the NDS was environmental management, which is viewed as an important and necessary condition for the attainment of sustainable development. The **Swaziland Environmental Authority (SEA)** is responsible for the management of the Swaziland Environmental Action Plan (**SEAP**), 2011. The SEAP provides a framework for the management of the environment in a sound and sustainable manner. It comprises both an action plan and a policy and strategy framework. The SEAP has priorities in hydrology and water resources (fresh water), forestry and agriculture. The national plans for mitigation and adaptation are considered as priorities for the country, as well as vulnerability assessments for the identification of adaptation options.

Swaziland has the world's highest prevalence rate of HIV (26 percent), which is recognized as the major source of vulnerability to disaster risk in the country. For example, extreme droughts and related food shortages impact heavily on people living with HIV, who cannot take Anti-Retroviral Treatment (ART) without food. Most recently, the country has experienced exogenous economic shocks, which taken jointly, have a multiplication effect. Indeed, these hazards have exacerbated conditions/levels of food insecurity and poverty, especially vulnerable groups such as the rural and urban poor, elderly, orphaned and vulnerable children and people living with disabilities. As mentioned earlier, the **USAID**, under the framework of the President of the United States of America Emergency Plan for HIV/AIDS Relief (**PEPFAR**), is working in partnership with the GoS to address HIV and AIDS in the critical areas of sexual transmission prevention, male circumcision, institutional capabilities and capacities strengthening, appropriate health care and the establishment of Neighbourhood Care Points (NCPs).

The UN System has supported and continues to support the GoS' resilience building efforts through several initiatives, especially in the priority areas identified under the United Nations Development Assistance Framework (UNDAF), which is the main strategic document that will guide the UN and the Government of Swaziland's engagement in enhancing the economic and social development of the people of Swaziland.[6] The **UNDAF** process ensured that some of the resilience challenges were addressed in its core programme of activities over the period 2011-2015 and are also captured in the 2016-2020 programme.

The Constitution provides for gender equality, and according to the 2007 Progress Report on the MDGs for Swaziland, there are signs that positive progress is being registered. In the Sustainable Development Goals (SDGs) 2015-2030, the successor to the MDGs, direct references to disaster risk reduction can be seen in the Declaration and Goals and Targets sections, in particular those related to poverty, ending hunger, ensuring healthy lives, education, sustainable management of water, building resilient infrastructure, resilient cities, climate change and marine and terrestrial ecosystems. These references represent a significant step forward for disaster risk reduction in comparison with previous development frameworks such the Millennium Development Goals, which largely overlooked the importance of reducing the impacts of disasters on society and the economy.

Notwithstanding the registered progress, several challenges to gender equality remain and include the following:

- There is still inequitable access to education; the participation of boys outweighs that of girls;
- Women are worse-off in terms of poverty prevalence due to their low participation in formal sector employment - A significant proportion of women are employed in the informal sector;
- Women continue to be considered minors to a large extent by some laws and in general day to day living, and access to Swazi Nation Land (SNL) by women remains a challenge. Access to Title Deed Land (TDL) is equally challenging for women; and
- Gender-based violence is a major problem affecting mainly women and children.

With the support of the UN system, the country developed a Gender Policy, which was submitted for Cabinet approval in 2009. Strategies for the implementation of the policies and programmes in the gender area include several pieces of legislation that include the Marriage Act; the Sexual Offenses and Domestic Violence Bill; and the draft Land Policy and the Deeds and Registry Act. Swaziland is also a signatory to a number of international conventions and agreements that have a bearing on gender equality and equity. These include the United Nations Covenant on Civil and Political Rights; United Nations Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment; The Universal declaration of Human Rights; The Covenant on Economic,

[6] See ANNEX I for details.

Social and Cultural Rights; the Convention on Elimination of all forms of Discrimination Against Women; the Convention on Child Rights and the International Conference on Population and Development Plan of Action.

Finally, the SRSAP is intimately linked to the goal, objectives, outcomes and activities of the National Emergency Response, Mitigation and Adaptation Plan (NERMAP),[7] 2016-2022, which was developed and is now being implemented in response to the devastating 2014-2016 El Nino induced drought. The NERMAP is being coordinated by the NDMA, and establishes the foundation for adaptation to drought. It utilizes a sectoral approach which ensures that each sector develops a plan and participates in its implementation.

2.5 Monitoring and Evaluation System

It was concluded that the Monitoring and Evaluation (M&E) system should be carefully framed for it to serve as an effective template for monitoring the performance of SRSAP. Particular attention was given to the identification of indicators in the M&E Framework to allow for more effective tracking of performance.

3.0 RESILLIENCE BUILDING SITUATIONAL ANALYSIS - SWAZILAND

3.1 The External Environment

3.1.1 The Global Context

Since the adoption of the Hyogo Framework for Action in 2005, significant progress has been achieved in reducing disaster risk at local, national, hemisphere/regional and global

[7] National Emergency, Response and Mitigation Plan (NERMAP), February 2016, NDMA.

levels by countries and other relevant stakeholders, leading to a decrease in mortality and economic losses in the case of some hazards. The international community has recognized that reducing disaster risk is a cost-effective investment in preventing future losses. International mechanisms for strategic advice, coordination and partnership development for disaster risk reduction, such as the Global Platform for Disaster Risk Reduction and the hemisphere/regional platforms for disaster risk reduction, as well as other relevant international and regional forums for cooperation, have been instrumental in the development of policies and strategies and the advancement of knowledge and mutual learning. Overall, the Hyogo Framework for Action was an important instrument for raising public and institutional awareness, generating political commitment and focusing and catalysing actions by a wide range of stakeholders at all levels.

Notwithstanding the efforts made, disasters continued to exact a heavy toll on the world, compromising the well-being and safety of persons, communities and countries as a whole. During the last decade, over 700 thousand people have lost their lives, over 1.4 million have been injured and approximately 23 million have been rendered homeless as a result of disasters. Overall, more than 1.5 billion people have been affected by disasters in various ways, with women, children and people in vulnerable situations disproportionately affected. The total economic loss was more than $1.3 trillion. Evidence indicates that exposure of persons and assets in all countries has increased faster than vulnerability has decreased, thus generating new risks and a steady rise in disaster related losses, with a significant economic, social, health, cultural and environmental impact in the short, medium and long term, especially at the local and community levels. The situation suggests the urgent and critical need to anticipate, plan for and reduce disaster risk in order to more effectively protect persons, communities and countries, their livelihoods, health, cultural heritage, socioeconomic assets and ecosystems, and thus strengthen their resilience.

This required enhanced work to reduce exposure and vulnerability, thus preventing the creation of new disaster risks. Accountability for disaster risk creation is, therefore, needed at all levels. Also, more dedicated action needs to be focused on tackling underlying disaster risk drivers, including the consequences of poverty and inequality; climate change and variability; unplanned and rapid urbanization; poor land management and compounding factors such as demographic change; weak institutional arrangements; non-risk-informed policies; lack of regulation and incentives for private disaster risk reduction investment; complex supply chains; limited availability of technology; unsustainable uses of natural resources; declining ecosystems; and pandemics and epidemics.
Moreover, it is necessary to continue strengthening good governance in disaster risk reduction strategies at the national, hemisphere/regional and global levels and improving preparedness and national coordination for disaster response, rehabilitation and reconstruction. It is also necessary to use post-disaster recovery and reconstruction to "Build Back Better", supported by strengthened modalities of international cooperation.

The year 2015 proved to be a watershed year for the environment and for development. Three parallel but interacting United Nations processes took place: (i) The pursuit of a long-term agreement on dealing with greenhouse gases and climate change impacts; (ii)

targeting the finalization and adoption of the SDGs; and (iii) striving for the development of a successor to the HFA as a global disaster risk reduction plan.

As highlighted by Kelman, Gaillard and Mercer,[8] the opportunity was provided to embrace, promote, and deepen the approach to vulnerability and resilience in order to move beyond standard approaches that have proven counterproductive. However, this important opportunity was not exploited. Notwithstanding the opportunity missed for the integration of the three processes, the examination of the links between disaster risk reduction and development in the context of ***2030 Agenda for Sustainable Development*** and ***the Sendai Framework for Disaster Risk Reduction 2015-2030*** is pertinent. Additionally, opportunities existing to reduce risks, build a resilient future and achieve the goals and targets established through the implementation of both the 2030 Agenda for Sustainable Development and the Sendai Framework can identified and exploited.

'**Transforming Our World: The 2030 Agenda for Sustainable Development**' recognizes and reaffirms the urgent need to reduce the risk of disasters. As discussed in a reflection paper prepared by the UNISDR,[9] there are several ways that disaster risk reduction is recognized and advanced in the Agenda Document including the direct references to the outcomes of the Third UN World Conference on Disaster Risk Reduction and the Sendai Framework as well as the specific opportunities to achieve the SDGs through reducing disaster risk.

In fact, there is much to be gained from viewing the 2030 Agenda for Sustainable Development through the lens of disaster risk reduction and the Sendai Framework in particular. Direct references to disaster risk reduction can be seen in the Declaration and Goals and Targets sections in particular, related to poverty, ending hunger, ensuring healthy lives, education, sustainable management of water, building resilient infrastructure, resilient cities, climate change and marine and terrestrial ecosystems. These references represent a significant step forward for disaster risk reduction in comparison with previous development frameworks such the Millennium Development Goals, which largely overlooked the importance of reducing the impacts of disasters on society and the economy.

There are 25 targets related to disaster risk reduction in ten (10) of the seventeen (17) SDGs, firmly establishing the role of disaster risk reduction as a core development strategy.[10]

Goal 1: End poverty in all its forms everywhere:
Target 1.5, which relates to building the resilience of the poor, further strengthens the position of disaster risk reduction as a core development strategy for ending extreme poverty.

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[8] Climate Change's Role in Disaster Risk Reduction's Future: Beyond Vulnerability and Resilience.
[9] Disaster Risk Reduction and Resilience in the 2030 Agenda for Sustainable Development, October 2015.
[10] This section borrows heavily from a 2015 reflection paper prepared by the UNISDR: Disaster Risk Reduction and Resilience in the 2030 Agenda for Sustainable Development

Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture:
Target 2.4 supports the immediate need to advance actions in mainstreaming disaster risk reduction and climate adaptation into agriculture sector planning and investments in order to promote resilient livelihoods, food production and ecosystems.

Goal 3: Ensure healthy lives and promote well-being for all at all ages:
Target 3.d, which relates to strengthening early warning and risk reduction of national and global health risks presents an opportunity to further actions to promote resilient health systems.

Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all:
Target actions 4.7 and 4.a, focusing on building and upgrading education facilities and promoting education for sustainable development; contribute significantly to resilience-building in the education sector.

Goal 5: Achieve gender equality and empower all women and girls:
Despite the absence of an action target that emphasizes strengthening the role of women and girls in the context of disaster risk reduction, it is evident that this is critical to achieving the goal of gender equality and empowerment and building disaster resilience of communities.

Goal 6: Ensure availability and sustainable management of water and sanitation for all:
Target 6.6, which relates to protecting and restoring water-related ecosystems, will significantly contribute to strengthening the resilience of communities to water-related hazards.

Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all:
Measures to achieve the energy goal require strengthening and promoting the resilience of new and existing critical infrastructure to ensure they remain safe, effective and operational during and after disasters in order to provide life-saving and essential services.
Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation:
Targets 9.1 and 9.a relate to developing sustainable and resilient infrastructure development and are vital not only to protect existing infrastructure but also future infrastructure investments.

Goal 10: Reduce inequality within and among countries:
As is the case of Goal 1 for ending poverty in all its forms everywhere, achieving this goal could substantially contribute to building the resilience of poor populations.

Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable:
Action targets under this goal (11.1, 11.3, 11.4, 11.5, 11.b and 11.c) are focused on upgrading urban slums, integrated urban planning, reducing social and economic impacts of disaster risk, building the resilience of the urban poor, adopting and implementing urban policies.

Goal 12: Ensure sustainable consumption and production patterns:
Although target actions under this goal are not specific to disaster risk reduction, the sound management of chemicals and substantial reduction in waste generation can significantly contribute to reducing disaster risk.

Goal 13: Take urgent action to combat climate change and its impacts:
(**Targets 13.1 to 13.3 and 13.a to 13.b)** provide opportunities to strengthen the integration between disaster and climate resilience to protect broader development paths at all levels.

Goal 14: Conserve and sustainable use the oceans, seas and marine resources for sustainable development:
Target action 14.2, focusing on the sustainable management and protection as well as strengthening resilience of marine and coastal ecosystems, can contribute to reducing disaster risk and increasing the demand for healthy marine and coastal ecosystems.

Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss:
Target actions 15.1 to 15.4 and 15.9, focusing on managing and restoring forests, combating land degradation and desertification, conserving mountain ecosystems and their biodiversity and integrating ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies, all contribute to resilience building.

Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels:
Conflict and disaster damage and losses destroy livelihoods, safety nets, health and infrastructures, which perpetuate vulnerabilities that put people and communities at risk, further entrenching poverty and inequality.[11]

Goal 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development:

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[11] International Alert, May 2015: Compounding Risk: Disasters, Fragility and Conflict. London, United Kingdom.
<http://reliefweb.int/sites/reliefweb.int/files/resources/ClimateChange_DisastersFragilityConflict_EN_2015.pdf>

Opportunities for partnership building are presented in the implementation of SDGs outcome document.

The Sendai Framework for Disaster Risk Reduction (2015-2030) provides countries such as Swaziland with the roadmap and opportunity to address existing challenges and prepare for future ones by focusing on monitoring, assessing and understanding disaster risk and sharing such information on how it is created; strengthening disaster risk governance and coordination across relevant institutions and sectors and the full and meaningful participation of relevant stakeholders at appropriate levels; investing in the economic, social, health, cultural and educational resilience of persons, communities and countries and the environment, as well as through technology and research; and enhancing multi-hazard early warning systems, preparedness, response, recovery, rehabilitation and reconstruction. It is recognized in the Sendai Framework that to complement national action and capacity, there is a need to enhance international cooperation between developed and developing countries and between States and international organizations.

3.1.2 The Hemisphere/Regional Context

Africa is a continent prone to a wide variety of natural and human-induced hazards and disasters. Phenomena such as floods, hurricanes, earthquakes, tsunamis, droughts, wildfires, pest plagues, and air and water pollution cause extensive losses to livelihoods and property, and claim many lives. Africa is the second-largest and second most populous continent on earth with an estimated population in 2016 of 1.2 billion people. The population of the continent (which is projected to reach 2.4 billion people by 2050), is growing at a rate of approximately 2.47 % per annum. The number of people exposed to natural and human-induced hazards and disasters will therefore continue to increase. Mitigation measures are a relatively low priority for African decision-and policymakers, however, as hazards and disasters are often not accorded high significance when compared to other pressing issues such as poverty and HIV and AIDS. The fact that most of the African countries are poor makes this continent the one that is least equipped and least prepared to cope with the impacts of hazards and disasters.

However, the 2014–15 Ebola epidemic in West Africa and the 2016 droughts-induced by El Niño in parts of Eastern and Southern Africa have brought to the fore the economic and social costs posed by natural disasters in sub-Saharan Africa. The significant international spill-overs and scale of humanitarian relief needs emphasised the point that the challenges are a concern on the global as well as regional scale.

Sub-Saharan Africa experienced about 18% of the global total disaster.[12] Epidemics and floods accounted for the bulk of disasters, at 39% and 37%, respectively.[13] Droughts accounted for 8% of disasters, twice the share globally. Countries across sub-Saharan Africa exhibit different levels of vulnerability to droughts, epidemics, floods, and storms.

[12] EM–DAT disaster database (http://www.emdat.be),
[13] Natural disasters starting from 1990 -2014

The reduction of disaster risk through preventive measures is a central concern for Africa's sustainable development.

Overall, there are some serious challenges to resilience building in Sub-Saharan Africa, which are also heavily reflected in the context of Swaziland, as the sub-region exhibits structural characteristics that exacerbate vulnerabilities, in four main areas:

***Weak adaptation capacity*:** Sub-Saharan African countries have shown limited financial and institutional capacities for effective adaptation to reduce exposure and vulnerability. As a result, many countries are among the most exposed and vulnerable in the world. With a few exceptions, the countries lack the capacity to conduct research on natural and human-induced hazards and disasters, or to apply the knowledge and deploy technologies to mitigate disasters. The region lacks data, information, knowledge, skills, and human resources in this field. There is therefore a need to improve training and to build capacity to facilitate the capture and effective use of research in policy-and decision-making.

High share of rain-fed agriculture in GDP: A large share of agriculture in GDP and employment adds to vulnerability, as do other weather-sensitive activities, such as herding and fishing. Sub-Saharan Africa has the highest share of rain-fed agriculture globally at 95%. These vulnerabilities contribute to short term income losses and increased food and nutrition insecurity.

High levels of absolute poverty: Sub-Saharan Africa has the world's largest share of population living under the range of US$1.90 to US$3.10 a day. This segment of the populations tend to be among the most vulnerable, as a small shock can often result in an increase in the number of people living below the poverty line and unable to meet their basic needs.

Limited financial sector development: Low levels of access to credit and especially insurance, both domestic and international markets, reduce the scope both for risk transfer and for financing preparedness, and post-disaster relief and reconstruction. Agricultural insurance coverage in sub-Saharan Africa is lagging compared with other regions, with hemisphere accounting for only 0.5 % of the total agricultural insurance premiums in the world. The trend also applies to private insurance. Together, these vulnerabilities exacerbate the impact of natural disasters in sub-Saharan Africa relative to other economic integration blocks.

The situation of Swaziland, relative to the four main issues of adaptive capacity, share of rain-fed agriculture to GDP, the level of poverty and the capacity of the financial sector to support risk transfer instruments is detailed below, under the national context (**Section 3.1.3**).

The international community has responded to Africa's disaster impact challenge in several ways, albeit mainly on a humanitarian basis. However, there has been a paradigm shift from crisis management to a drought risk management concept, where many international organizations are now working with African governments, private sectors,

and NGOs to promote a proactive approach. The UN and its organizations and specialized agencies and World Meteorological Organization (WMO) are making efforts to accomplish this paradigm shift through the implementation of several resilience building initiatives.

Generally, as food security in Africa is one of the biggest challenges, the international community and UN agencies such as Food and Agriculture Organization (FAO) and the World Food Programme (WFP) have been involved in the eradication of hunger, food insecurity, and malnutrition; the elimination of poverty; the promotion of economic and social progress; and the sustainable management and utilization of natural resources through disaster management for the benefit of society in Africa and other parts of the world.

The lack of a unified geodetic reference frame for Africa is a serious hindrance to the cross-border, hemisphere/regional, and continental mapping of natural resources, planning of agricultural projects, and development of supporting infrastructures such as dams, roads, and railways. This situation is being addressed with the implementation of the Africa Geodetic Reference Frame project (AFREF).

The African Union (AU) seeks to improve the resilience of the peoples of Africa that are faced with disasters, and to support disaster risk reduction and management activities. It also promotes actions that seek to reduce the impact of disasters and other threats, particularly those affecting the environment, agriculture, and health.

There are several organizations operating in the hemisphere/region, focusing on efforts directed at combating drought in sub-Saharan Africa, including the Economic Community of West African States (ECOWAS), SADC Drought-monitoring Centre, SADC Regional Early Warning Unit (REWU), and the African Centre of Meteorological Application for Development (ACMAD). The Inter-Governmental Authority on Development (IGAD) operates a Regional Early Warning System (REWS) as a key component of national drought and flood preparedness in the SADC region, known as SARCOF. The services of these technical institutions are limited, however, due to lack of resources and capacity.

Other relevant resilience building institutions that need mentioning include:

SADC Climate Services Centre (SADC-CSC): This center provides operational regional services for monitoring and predicting extremes in climatic condition.

Regional Centre for Mapping of Resources for Development (RCMRD: The RCMRD's primary undertaking is to promote sustainable development in its member states through generation, application, and dissemination of Geo-information and associated information and communications technology, products, and services.

The Famine Early Warning Systems Network (FEWS NET) is one of the providers of early warning and analysis on food insecurity. It provides objective, evidence-based analysis on more than 36 of the world's most food-insecure countries (including

some African countries) to help government decision-makers and relief agencies plan for and respond to humanitarian crises.

In response to the devastating impacts of the recent 2015/2016 El Nino induced droughts across continent, African Member States and Parties to the United Nations Convention to Combat Desertification (UNCCD) met at the High Level Meeting of the first African Drought Conference (ADC), in Namibia from the 15 - 19 August 2016, and concluded by adopting the Windhoek Declaration for Enhancing Resilience to Drought in Africa.[14]

The Windhoek Declaration adopted the Strategic Framework for Drought Risk Management and Enhancing Resilience in Africa, which proposed that a Drought Resilient and Prepared Africa (DRAPA) initiative be implemented at each national level and be guided by the following six principles: Drought policy and governance for drought risk management; Drought monitoring and early warning; Drought vulnerability and impact assessment; Drought mitigation, preparedness, and response; Knowledge management and drought awareness; and Reducing underlying factors of drought risk.

3.1.3 National Macroeconomic Context

The International Monetary Fund (IMF) **2014 Article IV Consultation** provides a comprehensive analysis of, and outlook of and recommendations for the Swaziland economy, as contained in the Consultation Report.[15] The report indicates that Swaziland's economic performance has improved since the fiscal crisis of 2010–11, underpinned by the recovery of revenues from the Southern African Customs Union (SACU). Real GDP growth in 2013 was estimated at 2¾ percent, recovering from –½ percent in 2011. The enhanced performance was driven mainly by communication, manufacturing, and construction (as a result of large capital spending). Meanwhile, inflation rose slightly, reaching 5.3 percent in April 2014, owing to increases in food and some administered prices (e.g., electricity and fuel).

Despite the slight recovery in economic performance, Swaziland continues to face serious development challenges, including high unemployment, poverty, and the prevalence of HIV and AIDS. Unemployment (particularly for youth) stays high.[16] The high prevalence of HIV/AIDS (at about 26% for adults aged 15–49) has significantly lowered life expectancy (UNAIDS, 2012). Although there has been some progress in poverty reduction, an estimated 63 percent of the population remained poor. This level is generally higher than other countries at the same income level, suggesting that there is room to enhance the inclusiveness of growth. Protracted weak growth performance contributed to the lack of progress in social developments.

Though growth rebounded after the fiscal crisis of 2010-11, as indicated earlier, Swaziland has suffered from sluggish growth performance, with average real GDP growth over

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[14] The Windhoek Declaration for Enhancing Resilience to Drought in Africa, 2016 (https://goo.gl/uEcOmj)

[15] IMF Swaziland Country Report No. 14/223.

[16] The overall unemployment rate stood at 28.5 percent in 2010, while the youth unemployment reached 52.4 percent. No newer figures are available, but indications are that unemployment stays high.

2004–13 at about 2 % per year. This modest growth—less than half of the level of its neighbouring countries (Botswana, Lesotho, and Namibia) — was also associated with high unemployment and limited progress in social developments (with widespread poverty and high inequality). The main near-term risks identified were the uncertain external environment (developments in South Africa, in particular) and the high volatility of the SACU revenue.

In the context of the above, the IMF suggested that a regime of enhanced reform measures, combined with prudent fiscal policy, would improve Swaziland's growth potential and strengthen its resilience to shocks. Such a reform scenario envisages structural reforms to stimulate private sector-led growth and a prudent fiscal policy (with the fiscal deficits of less than 2 percent of GDP over the medium-term) to secure fiscal and external sustainability.

The context of the above suggests that while Swaziland has been recovering from two years of fiscal crisis (2010–2011), it remains highly vulnerable to exogenous shocks. Furthermore, Swaziland continues to face serious development impacts on its exports and the economy. Protracted slower growth in Europe would also adversely affect Swaziland's sugar exports. Against the background of the above, the IMF highlighted the need for Swaziland to strengthen its resilience to exogenous shocks, while meeting critical social and development needs, and addressing its sluggish growth performance and promote inclusive growth.

The Fund emphasized the need to strengthen the economy's resilience to exogenous shocks through securing a sufficient international reserve cushion and maintaining debt sustainability. Specific recommendations on this issue include:

- Further increasing the international reserves to five to seven months of imports over the medium-term, in order to respond to exogenous shocks (such as a significant fall in the SACU revenue); and
- Maintaining the public debt at below 30 percent (30%) of GDP, to create a sufficient buffer to address future shocks.

The Fund implored that a prudent fiscal policy stance is necessary going forward, with a fiscal deficit ceiling of 2 percent (2%) of GDP over the medium term, to help maintain adequate international reserves and ensure debt sustainability. To achieve the target, the IMF recommended the implementation of policy measures to improve revenue administration; rationalize recurrent expenditures (focusing on spending on goods and services and compensation of employees), while safeguarding critical social expenditures; effectively implementing planned public sector reforms (including the payroll and skill audits); and strengthen public financial management (PFM).

3.1.4 Summary of Opportunities and Threats in the External Environment

<u>Opportunities afforded by the Sendai Framework for Reducing Disaster Risk and Building a Resilient Future</u>

As the first major agreement of the post-2015 development agenda, the Sendai Framework and its implementation is an important catalyst to influence and complement the achievement of the goals and targets set forth in the 2030 Agenda for Sustainable Development Discussed below), as well as in the Addis Ababa Action Agenda on financing for development, agreed in July 2015, and in the COP21 climate agreement at the end of 2015. However, the implementation of all the post-2015 development agreements needs to rely strongly on measures to reduce disaster risk and loss and build resilience to preserve current and future development gains.

Addressing Risk Factors through the 2030 Sustainable Development Goals

The 2030 Agenda for Sustainable Development provides a significant opportunity to address underlying risk drivers of vulnerability, including poorly planned urbanization, climate change, environmental degradation and poverty, all of which contribute to the increase in disaster risk.

Coherence in monitoring and reporting: The development of indicators to monitor the SDGs and the Sendai Framework currently under consideration, can support the coherence and align implementation through setting shared qualitative and quantitative targets.

Co-benefit partnerships: The 2030 Agenda for Sustainable Development encourages a revitalized global partnership echoing the inclusive and all-of-society approach called for in the Sendai Framework, which promotes building disaster risk reduction partnerships across sectors and stakeholders to meet the post-2015 international agreements. The 2015 processes have engaged civil society, the private sector and science in joint efforts to identify solutions and have created new opportunities for multi-stakeholder partnerships. Throughout the processes, stakeholders have been challenged to articulate, with greater specificity, how various stakeholders can support implementation. The cross-fertilization between stakeholders working on disaster risk reduction, sustainable development and climate change has helped to reinforce coherence among the international instruments.

It is evident that increasing disaster risks present an immense challenge to the success of the outcome Agenda Document particularly the SDGs and target actions. At the same time the application of disaster risk reduction measures and building resilience offers a strategic opportunity to ensure its success. Unless disaster risks are effectively managed, increasing disaster loss and impacts will continue to undermine efforts to reduce poverty and achieve sustainable development.

The Sendai Framework will have an important role in the implementation and achievement of the 2030 Agenda for Sustainable Development and vice versa. Both have the capacity to shape public and private sector efforts and build partnerships to address the underlying drivers of risk and future levels of risk and resilience if implementation is concerted. Moreover, ongoing discussions to develop the indicators framework for both the outcome document and the Sendai Framework need to be coherent to ensure and demonstrate how progress and achievements can mutually contribute to each other.

Macroeconomic environment: At the national macro-economic level the main near-term risks identified for Swaziland are the uncertain external environment (developments in South Africa, in particular) and the high volatility of the SACU revenue.

3.2 *The Internal Environment*

3.2.1 Hazard Profile

The Kingdom of Swaziland is a small landlocked country located in south-eastern Africa, and is bordered by Mozambique to the east and the Republic of South Africa on all other sides. It has a total area of 17,360 km² and an estimated population of 1.287 million.[17] The country is mostly mountainous and hilly, with some moderately sloping plains. The country is divided into the following four administrative districts, each of which is administered by a Regional Administrator:

- Hhohho in the north, with its administrative headquarters in Mbabane;
- Manzini in the center, with headquarters in Manzini;
- Shiselweni in the south, with headquarters in Nhlangano; and
- Lubombo in the east, with headquarters in Siteki

Geographically, Swaziland comprises four agro-ecological zones, based on elevation, landforms, geology, soils and vegetation: The Highveld, Middleveld and Lowveld occupy about one-third of the country each, while the Lubombo Plateau occupies less than one-tenth of the country. **Figure 1** presents a geographic map of Swaziland.

Figure 1: Geographic Map of Swaziland

[17] World Bank data, 2015

Swaziland has a sub-tropical climate where, the climatic conditions range from sub-humid and temperate in the Highveld to semi-arid in the Lowveld. The national long-term average rainfall estimated at 788 mm/year, with approximately 75%of the precipitation falling between October and March. **Figure 2** presents the average monthly rainfall and temperature for Swaziland for the period 1900-2012, while **Table 1** gives the rainfall distribution for the four ecological zones.

Figure 2: Swaziland Average Monthly Rainfall and Temperature[18]

(1900-2012)

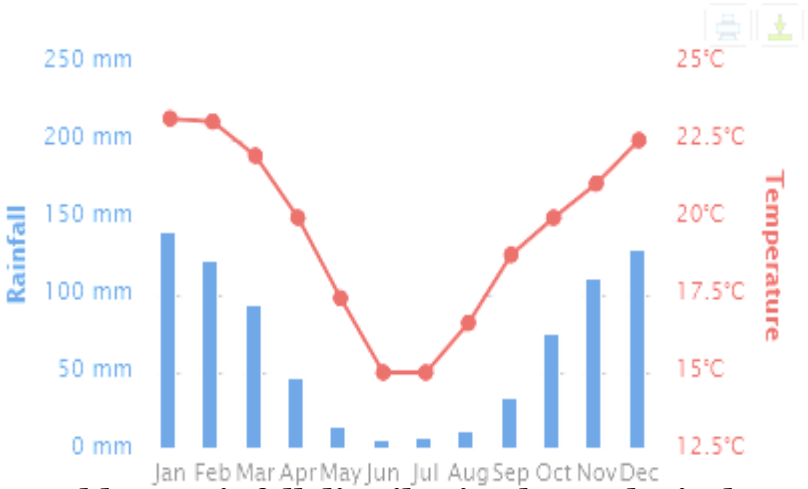


Table 1: Rainfall distribution by Ecological Zones

Ecological Zone	Rainfall (mm)
High-veld	700-1550
Middle-veld	550-850
Low-veld	400-550
Lubombo Plateau	550-850

There are two major systems of land tenure in existence in Swaziland: (i) Title Deed Land (TDL) which is privately owned land and is used mainly for ranching, forestry or estate production of crops such as sugar cane, citrus and pineapples. It covers 46% of the country; and (ii) Swazi Nation Land (SNL), which is land held in trust by the King for the Swazi people, covers the remaining 54 %of the country.

The country is mostly affected by natural and man-made hazards such as drought/dry spells, heavy rains, flash floods, cyclones, storms (wind and hail), wildfires, chemical contamination, extreme temperatures, and epidemics compounded by climate change. These have become more frequent and intense posing serious threats to livelihoods, environmental resources, agriculture production and food security. Climate and weather

[18] Source: World Bank Climate Change Knowledge Portal

experts have predicted that the country, like other countries in the world, will experience climate change that will inhibit human development and food security in the short and longer terms. **Table 2** presents a profile of the major hazards that have impacted Swaziland between 2000 and 2016.

Table 2: Profile of Hazard Events 2000-2016

Hazard	Period 2000 - 2016		Population Affected	
	No. of Events	Frequency Event/No. of Years	Total	Average per Event
Hydro Meteorological Hazards				
Drought	7	1 per 2.43 years	2,197,679	313,954
Strong winds/ Windstorms	4	1 per 4.25 years	9,685	2,421
Hailstorms, thunder and Lighting	2	1 per 8.50 years	500	250
Floods	1	1 per 17 years	272,000	272,00
Epidemiological Hazards				
A/H1N1/ Avian Influenza/ Cholera/ MDR and XDR TB	4	4.25	17,493	4,373
Man-made Hazards				
Wildfires	2	1 per 8.5 years	2,730	1,365

Sources: (i) National Multi Hazard Contingency Plan 2012 to 2013 (May 2012), Kingdom of Swaziland; (ii) National Emergency Response, Mitigation and Adaptation Plan (NERMAP) 2016-2022 ((2015), NDMA; (iii) Midterm Review of NERMAP.

Since the 1980's, levels of disaster risk have been on the increase, due mainly to the erosion of household assets; increased morbidity and mortality levels associated with HIV and AIDS; deepening food and nutrition insecurity resulting from as a result of erratic rainfall; economic shocks; poverty; and the declining capacity of national institutions to effectively respond to hazard events.[19]

The profile of hazard events is reflective of the Index for Risk Management (INFORM)[20] of the country, as measured by European Commission Joint Research Center Institute for the Protection and Security of the Citizen and presented in **Table 3** below.

[19] Disaster Risk Reduction, Emergency Preparedness and Response Capacity Assessment Report: The Kingdom of Swaziland: GOSZ/UNDP, 2013.

[20] The Index for Risk Management - INFORM - is a way to understand and measure the risk of a humanitarian crisis. INFORM is a composite indicator, developed by the JRC, combining 53 indicators into three dimensions of risk: hazards (events that could occur) and exposure to them, vulnerability (the susceptibility of communities to those hazards) and the lack of coping capacity (lack of resources that can alleviate the impact). The index results are published once every year. They give an overall risk score out of 10 for each country, and for each of the dimensions, categories, and components of risk.

Table 3: INFORM Risk Profile – Swaziland[21]

Description	Value	Rank	Trend
Inform Risk	3.4	100	-
Hazards and Exposure	1.9	144	-
Vulnerability	3.9	78	-
Lack of Coping Capacity	5.5	63	Down

The highest adverse impact from natural hazards (erratic weather patterns) is associated with droughts. Disaster Risk Reduction, Emergency Preparedness and Response Capacity Assessment Report of August 2013[22] indicates that during the 1980-2000 period, about 90% of disaster mortality was due to drought, compared to 10% of flood. Due to the impact of erratic weather conditions, especially persistent drought, the country has failed to produce enough food to cover domestic requirements, contributing to food insecurity of an estimated 20-25% of the population (UN CCA, 2015; NERMAP, 2015).

Swaziland is one of the countries of Southern Africa that experienced two consecutive years (2014/15) and (2015/16) of below normal rainfall, driven by one of the strongest El Niño episodes on record. The 2014/15 cropping season, which was characterized by long dry spells, uneven rainfall distribution and storm events was followed in 2015/16 by one of the driest season in Swaziland within the last 35 years. Rains that are normally expected from October through April did not arrive until late February 2016. The El Niño was prolonged by the concurrent impacts of climate change resulting in austere drought, prolonged dry spells, poor rainfall and very high temperatures resulting in a poor agricultural harvest especially for the staple crop, maize. Key sectors, namely agriculture, water, sanitation and hygiene (WASH), education, health and protection and energy were adversely affected. A national emergency was declared by the GOS, 18th February 2016.

The drought resulted in hunger and hardship for the poor and vulnerable people with serious consequences that were expected to persist until at least the harvest of 2017. The 2015-16 maize harvest was insufficient to cover the full cereal needs of the country resulting in significant importation. The two (2) consecutive years of inadequate food production inflicted severe hardship on the country, as crop failure and economic contraction impacted both rural and urban livelihoods as it undermined people's capacity to meet their basic social and economic needs. Coupled with increased levels of livelihood stress and unemployment, El Niño inflicted social, economic and political consequences on the Kingdom of Swaziland. The drought conditions also resulted in several environmental impacts, including vegetation loss (due to several factors such as deforestation, loss of forest quality and spreading of exogenous plant species), reduced

[21] European Commission Joint Research Centre Institute for the Protection and Security of the Citizen, version 2016

[22] Disaster Risk Reduction, Emergency Preparedness and Response Capacity Assessment Report: The Kingdom of Swaziland: GOSZ/UNDP, 2013.

water availability and degradation of aquatic systems, extinction of local fauna, ecosystem changes, and soil degradation that could ultimately lead to desertification.

The Vulnerability Assessment Committee (VAC) related reports reveal that a substantial number of the Swazi population required some food assistance mainly due to this hazard. The impact of HIV and AIDS on the population made the situation worse where the need to produce food has increased. It can be concluded, therefore, that droughts caused by poor rains in the last decade as well as a high incidence of HIV and AIDS are both long-term crises that create vicious cycles of vulnerability, poverty and food and nutrition insecurity in the country.

The worst floods that impacted Swaziland were associated with the effects of cyclone "Domonia" and floods in 1984 and 2000, respectively. Some low-lying areas, especially those in the Low-veld and Middle-veld parts of the country experienced incidents of flash-flooding during the events.

The worst storm that affected the country in the last 20 years occurred on January 2005, where about 100,000 inhabitants were affected and widespread damage and loss resulted (OCHA 2005). Lightning accompanied by rainstorms has been also common, often resulting in human deaths. Earth tremors have also occurred, particularly in 1999 and 2000.

The Kingdom of Swaziland also experienced sporadic and runaway fires that were compounded by strong winds resulting in disruption to electricity, telecommunication services, and destruction to homesteads, livestock, and wildlife. This generated severe damage to the natural environment and may have led to the impoverishment of numerous rural households. Moreover, uncontrolled fires contribute directly to climate change due to their increased gas emissions to the atmosphere, which in turn impacts negatively on food security and increases poverty, creating a vicious circle.

Land degradation and soil erosion are also major issues in Swaziland given its territorial restrictions. Swazi National Land (communal land) accounts for 54 per cent (54%) of the total land area and it is estimated that 75 per cent (75%) of this suffers from degradation. The causes of land degradation and soil erosion in Swaziland are numerous, with the major contributing factors being over-grazing of land as a result of the rising cattle population of 2.5 per cent per annum, which understandably places increased stress on grazing land; continuous farming, which restricts regeneration of nutrients and structure in the soil; and the indiscriminate cutting down of trees. Severe drought conditions have resulted in early stages of desertification in some areas which have ultimately led to land degradation and soil erosion.

The major epidemiological hazards experienced by Swaziland have been foot and mouth disease, A/HINI, avian influenza and Multi-Drug-Resistant (MDR) and Extensively Drug-Resistant Tuberculosis (XDR) TB. Environmental disease incidences, including malaria, have been triggered by droughts.

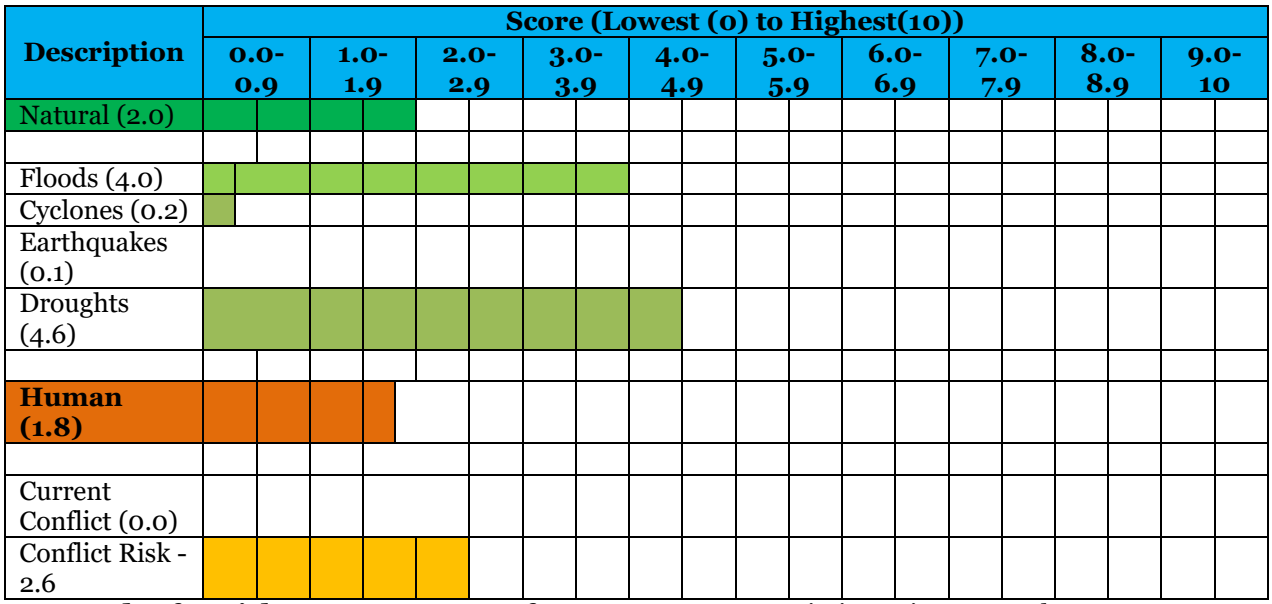
The country has one of the highest HIV prevalence in the world at 26% among the sexually active population with HIV infection higher among women at 31.1% than men at 19% (National Health Sector Strategic Plan 2008-2013 in SDHS 2006-2007). The HIV and AIDS epidemic has given rise to the concurrent TB epidemic in the country, with recorded new cases rising from 1,500 in 1993 to over 8,000 in 2006. As such, TB has become a major health problem. It is estimated that HIV co-infection occurred in about 80% of all TB cases, resulting in a deterioration of life expectancy from 56 years in 1986 to 43 years in 2007. The introduction and subsequent scaling up of Antiretroviral Therapy (ART) has however contributed to an improvement in life expectancy in recent years.[23]

HIV-related illnesses account for 47% deaths among children less than five years old (GOSZ-MOH, 2005). HIV infection could be a contributory factor to pneumonia and diarrheal diseases, whereas limited access to clean water and sanitation, especially in rural and peri-urban areas are indicated as the major direct risk factors. There is an estimate of up to 144, 000 orphans and vulnerable children (OVCs) as a result of the HIV/AIDS epidemics.

Malaria continues to be a public health concern and is more prevalent in the Lubombo Region where more than 50% of the cases occur. It is estimated that 30% of the population is at risk of malaria infection.

Chart 1 presents the risk profile dimension scores for hazards and exposure in Swaziland.

Chart 1: INFORM Scores for Hazards and Exposure –Swaziland



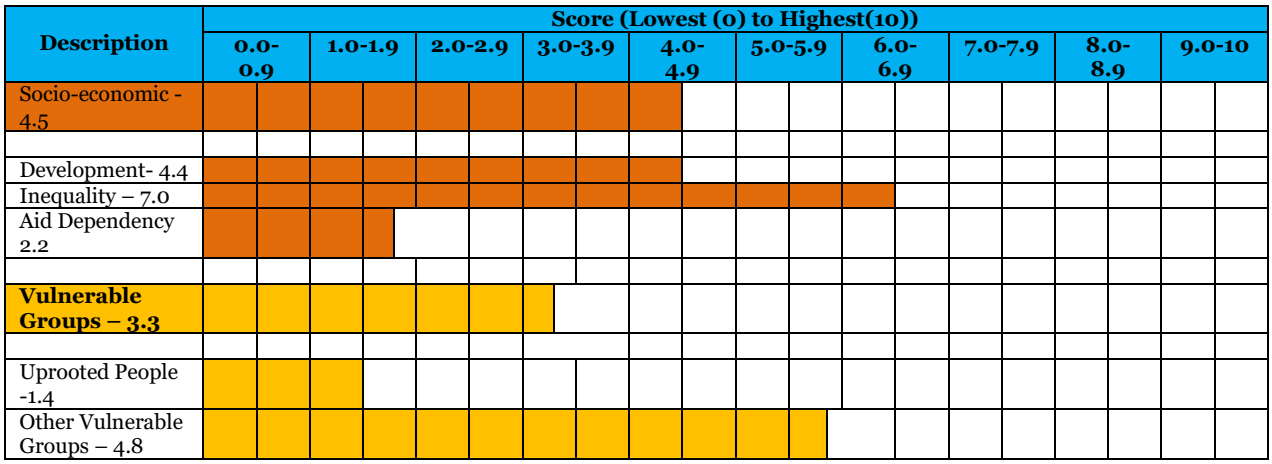
Source: **Index for Risk Management – Inform:** European Commission Joint Research Center Institute for the Protection and Security of the Citizen (2016).

[23] Disaster Risk Reduction, Emergency Preparedness and Response Capacity Assessment Report: The Kingdom of Swaziland: GOSZ/UNDP, 2013.

3.2.2 Vulnerability Profile

The major sources of vulnerability to disaster risk identified in Swaziland are poverty and food insecurity, HIV and AIDS, weakened governance, development-generated factors, and the fragile environment.[24] **Chart 2** presents the INFORM Vulnerability Profile Scores for Swaziland.

Chart 2: Vulnerability Profile of Swaziland



Source: **Index for Risk Management – Inform:** European Commission Joint Research Centre Institute for the Protection and Security of the Citizen (2016)

The vulnerability of the country disaster risk to a large extent reflects its development status. Swaziland is classified as a lower middle income country (MIC), with GDP in current prices estimated at USD 4.06 billion (2015), and an estimated in current prices GNI per capita of USD 3,230 (2015).[25] Income inequality remains high, with a GINI index of 51.5 and a national poverty rate of about 63% of which 30% are living in extreme poverty (SHIES, 2010), with the rural areas having poverty incidence at 73% and food insecurity (29%). Indeed, analysis of the two last rounds of Swaziland Household Income and Expenditures Survey (SHIES) conducted in 2001 and 2010 indicates that the reduction in poverty has been slow and the number of Swazis living in extreme poverty has actually increased over the decade.[26] Swaziland is ranked 150 of 187 countries on the 2015 HDI, and 70 of 104 developing countries on the 2015 Global Hunger Index. The unemployment rate for the country is estimated at 28.1% (2014), compared with 24.0% recorded in 1995. The rise in unemployment adversely impacts the status and depth of poverty. Inflation rate for 2016 is estimated at 8.7%.[27]

The most important features of poverty in Swaziland are its pervasiveness and its homogeneity. The elderly and children are poorer than active-aged adults, but not by as

[24] UN Country Team 2004, Kingdom of Swaziland 2004
[25] World Bank data, 2016
[26] Poverty in a decade of slow economic growth: Swaziland in the 2000s.
[27] Swaziland Vulnerability Assessment Committee Results, 2016

much as in many other medium-income countries. Seventy percent of children aged 15 and younger are poor and 71% of people aged 60 and over are also poor. Poverty and extreme poverty in Swaziland are both overwhelmingly rural phenomena. The incidence of poverty is 73% in rural areas, but only 31 percent in urban areas. Eighty-eight percent of the poor and 95% of the extreme poor live in rural areas. The average food consumption of the urban poor living below the poverty line is 33% that of the national average, while the corresponding figure for the rural poor living below the poverty line is 51%.

School enrolment rates and poverty status are correlated, especially at the secondary level. Fifty-six percent of children in the wealthiest quintile are enrolled in secondary school compared to fewer than 26 of children in the lowest quintile. Keeping children in school is crucial, since poverty is associated with a lack of education in Swaziland. The nutritional status of children and their poverty status are correlated. Six percent of children under the age of 5% in Swaziland are underweight. Thirty-one percent of children are stunted or too short for their age and 3% are wasted or too thin for their height. Children from households that are poor are much more likely to be malnourished than their wealthier counterparts.

Chronic malnutrition is the main nutrition concern in Swaziland. Stunting affects 25.5%of children under five years and child under-nutrition is associated with 8% of child mortality. Micronutrient deficiencies affect pregnant and lactating mothers and children under five years and contribute to stunting and maternal mortality. Stunting is prevalent in the south and eastern parts of the country. Lubombo is the most food insecure and drought prone district. It also has the highest wasting prevalence (3 %) and the second highest HIV and underweight prevalence in the nation.
In light of the above, health expenditures are not only high, but they have been trending upwards over the last decade. **Table 4** presents health expenditure for the country for the period 2005-2014.

Table 4: Health Expenditures for Swaziland 2005 -2014

Description	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total Health Expenditure as % of GDP	6.80	6.81	7.05	8.20	8.46	8.47	8.61	8.76	9.66	9.25
Public Health Expenditure as % of GDP	4.59	4.56	4.81	5.70	5.71	5.97	5'97	6.30	7.37	7.00
Public Health Expenditure as % of Total Expenditure	67.55	66.91	68.34	69.56	68.16	70.43	69.32	71.88	76.35	75.72
Public Health Expenditure as % of Total Government Expenditure	12.95	14.88	12.48	14.53	14.32	15.42	18.07	18.07	19.70	16.58
Total Health Expenditure per Capita ($, International)	340.1	358.5	388.4	463.5	480.2	486.5	503.5	526.6	598.0	586.8

Source: World Bank Database, 2016

The prevailing vulnerability has been compounded by declines in the performance of the country's main economic variables in recent years, after a period of rapid economic expansion and social development. The main variables affected are those impacting the country's fiscal and liquidity situations. As indicated earlier, the economic outlook for 2016 and beyond remains muted, with an expected decline in receipts from the SACU constraining government finances. However, growth in domestic tax receipts is expected to partly compensate for the projected decline. Like the IMF, the World Bank (WB) has projected that the economy will grow slowly in 2016 (1.3%). The tempered outlook also reflects an expected poor performance of the agricultural sector compared to the previous year, while a less favourable outlook in South Africa, which the country is closely tied to, further tones down economic prospects. In fact Swaziland receives more than 90% of its imports from South Africa, to which it sends around 70% of its exports.

Swaziland's economy relies on agriculture, with 77% of the population deriving their livelihoods from subsistence farming. The agricultural activities are highly rain dependent making the sector highly vulnerable to climate shocks. Swaziland has been producing less maize (the staple crop) to meet the national requirements. Livestock also forms an integral component of the livelihood systems in Swaziland, with households deriving both income and food from the animals.

The high dependence on rain-fed maize production in dry areas, very low income levels of rural small holders, inefficient food markets, and high prices of food and agricultural inputs, together with high rates of HIV (26%), impact food and nutrition security in the country. In fact, current rural food insecurity in Swaziland is estimated at 23.5% at the peak of the hunger season (about 200,897persons).[28]

Climate variability, climate change and extreme events pose significant risks to sustainable development and poverty eradication in Swaziland. The challenges posed by climate change in Swaziland, rendered visible through the change in frequency and/or intensity of extreme events or in the average conditions, threaten to heighten existing vulnerabilities to hazards in many areas. The result in the decades to come may be an increase in the burden of weather-related disasters. Urban risk from the effects of climate change and climate variability has been increasing. In recent years, the urban risk profile continues to rise as a result of a combination of threats of man-made hazards resulting from rapid urbanization and land use.

The country is vulnerable to environmental hazards such as deforestation, water resource degradation, declining soil fertility, biodiversity loss, and, invasive alien species whose effects have compounded the country's risk profile.

3.2.3 Governance

Swaziland is an independent sovereign Kingdom that is governed through a system that blends the Swazi traditional system with the modern Westminster system OF governance.

[28] El Nino: Undermining Resilience: Implications of El Nino in South Africa from a Food and Nutrition Security Perspective, WFP (2016)

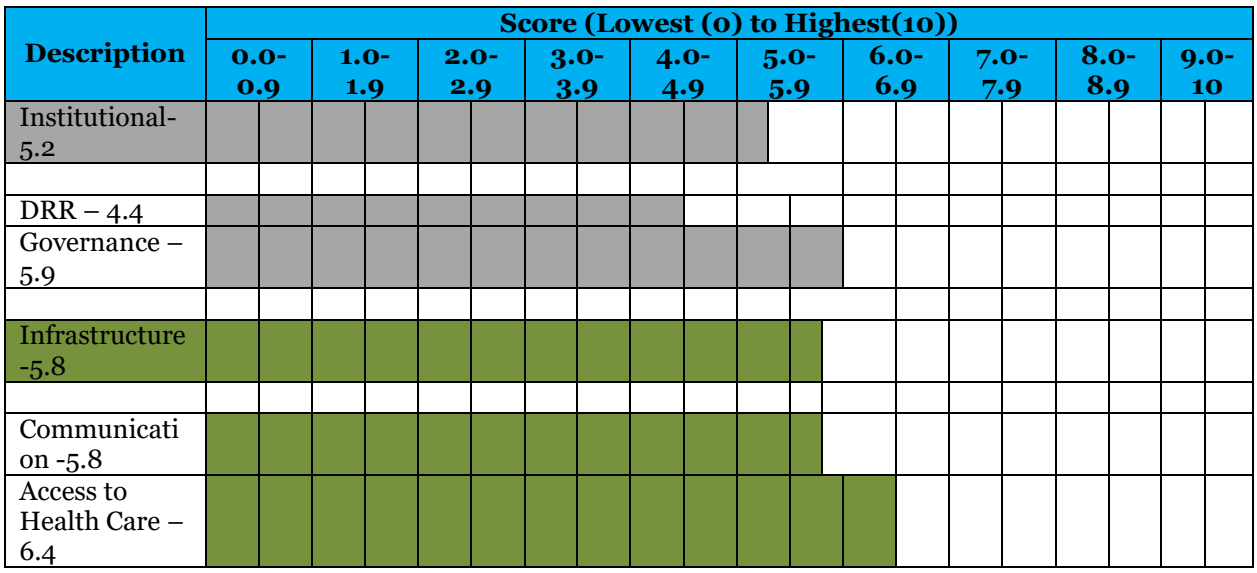
It is based on the principle of regional decentralized state power, while maintaining a unitary form of state organization, with the King at the head of both systems. The challenge for the country has been in developing modern political and administrative structures to complement the traditional institutions. An attempt was made to achieve this through a decentralised system of governance with three tiers: national/central government, local government, and regional structures known as Tinkhundla. Local government applies to the administration of urban areas, while the Tinkundla system, which is a complex traditional model of election through which representatives are chosen, covers the 250 chiefdoms that are grouped into 55 constituencies. The central government and local government systems follow the western model, while Swazi customary law governs the traditional structures. The system has a number of advantages, including national cohesion, which is necessary for peace and stability. However, this system also implies that in practice there are two de-facto bureaucracies running parallel, and the line between them is blurred.

The Swaziland government has initiated several legal, institutional, financial, and constitutional reforms to improve governance, accountability, and transparency across the public sector and civil services. Amongst others, these initiatives include, public sector management reforms, fiscal restructuring, strengthening of anti-corruption measures, and measures to improve human rights. It is expected that when these reforms are fully implemented, they will aid in the poverty reduction, human capital development, sustainable growth and improvement in the quality of life in Swaziland.

3.2.4 Coping Capacity

The coping capacity of households as measured by the INFORM Lack of Coping Capacity Index for Swaziland is presented in **Chart 3** below.

Chart 3: Lack of Coping Capacity



Physical Infrastructure – 5.3																				

The most widely adopted coping strategies involve selling of assets, especially household assets; changing food consumption patterns, e.g. cutting down spending on quality food, and reducing meal frequency which might have dire effects on pregnant and lactating women, and further reduce productivity; reducing expenditure for health care and education, which will likely increase the number of school dropouts; and migrating in search of livelihoods. The least favoured (and last resort) coping strategies seem to be sending households members to eat elsewhere, spending entire days without eating, borrowing/relying on others and gathering wild foods. These adverse coping mechanisms if not addressed quickly could significantly negatively impact hundreds of impoverished rural residents particularly those living with HIV.

The degree of adoption of the coping strategies is seasonal and is heavily affected by trends of food availability and access, as households spend a large proportion of their income on food. In fact, approximately 52 % of households spend 50% or more of their incomes on food just after the harvest period. This means that more pronounced adoption of coping strategies can be expected in the lean season (October-March).

The social protection schemes in Swaziland play an important role in shock mitigation and the attainment of basic levels of sustenance. Swaziland has moved significantly to modernize its social protection programme. A WB mapping of Social Protection shows that a number of government led social protection programmes are being implemented in Swaziland.[29] The schemes which are mainly non-contributory comprise multiple cash and in-kind transfers, social care services, active labour market programs, and community-based programs implemented by at least five ministries or departments within ministries. Agencies delivering safety net services include the Department of Social Welfare (DSW) within the Deputy Prime Minister's Office (DPMO), the National Emergency Response Council on HIV and AIDS (NERCHA), the Ministry of Education and Training (MOET), the Ministry of Health (MOH), and the NDMA in the DPM's Office. **Table 5** presents the list of programs that currently make up Swaziland's safety net.

Table 5: The Public Safety Net in Swaziland

Programme/Implementing Agency		
Cash Transfers	**In-Kind Transfers**	**Other Social Safety Net Programs**
Old Age Grant /DPM	OVC Education Grants /DPM	Community-based Programs/MPP
Public Assistance /DPM	School Feeding /MOET & NERCHA	Active Labour Market Programs/ MOET, MOL, & others

[29] State of Social Safety Nets, World Bank, 2015/WFP Country Offices

Other DSW Grants /DPM	Neighbourhood Care Points /NERCHA	Social Care Services /DPM, NERCHA & others)
Young Heroes /NERCHA	Food Distribution /NDMA & NERCHA	
	Supplementary Feeding /MOH	
	Health Fee Waivers /MOH	
	Phalala Fund /MOH	
	Agricultural Input Subsidies /MOA	

Source: Swaziland – Using Public Transfers to Reduce Extreme Poverty, World Bank 2012.

In-kind transfers make up the bulk of the schemes. Total government expenditure is estimated at 2.2% of the GDP of which there are approximately 535,000 beneficiaries. This spending on the safety net in Swaziland is higher than the average of 1 to 2 % spent by most developing countries, but is lower than the amount spent by several other Southern African countries (including Malawi, Botswana, Mauritius, and South Africa).
Several shortcomings have been identified in the Swaziland Social Protection programmes, including those related to targeting, administrative efficiency, accountability and financial sustainability.[30] Although the government has made efforts to provide social protection to the poor and vulnerable, substantial numbers of poor and vulnerable people, particularly children, remain unprotected. For example, the SFP provide support to all school children, but those children who cannot afford to go to school do not benefit. Also, the absence of any public works programme in Swaziland means that unemployed youths and adults have limited means to raise income from public sources to smooth the consumption of their households or support them in the aftermath of shocks or crises.

Improvements in administrative efficiency and accountability are possible, including paying OAG beneficiaries electronically. Economies of scale could be realized if programmes were to share certain common functions, such as targeting, registration, information management, and monitoring and evaluation. Also, having a central beneficiary registry would provide important monitoring and planning information and could help to reduce fraud and abuse.

The financial sustainability of several social transfer programs is questionable given their reliance on external funding. This includes the SFP, NCPs, and other smaller programs. About 21 percent of total safety net spending is spent through the capital budget (on both external and local capital projects), and the sustainability of this spending can only be ensured if these items can be absorbed into the recurrent budget.

3.2.5 Progress Made in Building Resilience to Disaster Risks

[30] Swaziland – Using Public Transfers to Reduce Extreme Poverty, World Bank 2012

As a result of Swaziland's susceptibility to natural, climate change-related, economic and human-induced disasters, several efforts have been made over the past several years to build people's capacities and reliance to disasters, with varying results achieved. These efforts have been grounded by the country's commitment to the implementation of the HFA and its successor the Sendai Framework (2015-2030) and the UNFCCC - the international frameworks for the building resilience of nations and communities to disasters and reducing vulnerabilities and risks to hazards.

In addition, several international organizations and civil society have and continue to support disaster resilience building in Swaziland, the plans and programmes of those entities already mentioned and are detailed in **Annex I**.

3.3 Strengths and Weaknesses of the Current Resilience Building Platform

Despite the success achieved to date in building resilience to disasters through the implementation of the various policy instruments, plans, programmes and projects, several gaps as well as challenges exist. These gaps and challenges have been gleaned from a review of several country specific documents.[31] The current situational analysis of the strengths and weaknesses of the resilience building platform in Swaziland is presented below, under five (5) thematic areas/pillars.

Thematic Area 1: Governance

(a) <u>Ensure that disaster risk reduction is a national and local priority with a strong institutional basis for implementation</u>

<u>Strengths</u>

- National policy and legal framework for disaster risk reduction exists with decentralized responsibilities and capacities at all levels. This is characterized by the existence of the following:
  - The Disaster Management (DM) Act of 2006, and the Disaster Risk Management Policy (2010);
  - The NDMA, which was established as the central coordinating body for DRM in Swaziland; and
  - The National Action Plan (NAP) 2013-2018, which was adopted by Cabinet.

<u>Weaknesses</u>

- Disaster Risk Reduction (DRR) is not a high priority in the National Agenda;
- Lack of DRR awareness at highest political level and within key ministries, as well as within the private sector;
- Insufficient capacity, inadequate technical resources as well as low human resources on DRM/CCA at national, regional and local levels;

[31] List of documents is included in the Literature Review.

- Implementation of the DM Act of 2006, and the DRM (2010) policy has not been optimal due to:
    - The complex management structures contained in the Act, demanding significant growth in coordination needs, at the risk of duplication of efforts;
    - Non-establishment of most of the organs to be created under the provisions of the Act, except for the NDMA; and
    - Lack of a coherent strategy for DRM policy operationalization due to NDMA institutional and budgetary constraints;
- Lack of implementation of the 2008-2015 DRR National Action Plan;
- The NDMA) is not fully functional because of a lack of human capacity and financial resources;
- Effective coordination for DRR/CCA, both at national, regional and levels has been identified as a main challenge in Swaziland;
- No budget properly dedicated to DRR in line ministries and at regional level; and
- There is weak main-streaming of DRM and CCA measures into national development plans, sector plans and budgets, which translates into lack of ownership of DRR initiatives.

(b) Dedicated and adequate resources are available to implement disaster risk reduction plans and activities at all administrative levels

Strengths

- Emergency Fund exists under NDMA.

Weaknesses

- No budget properly dedicated to DRM and CCA in line ministries and at regional level: There is an insufficient allocation of financial resources for DRR reported at national and regional levels and within related sectors, due mainly to
    - Fiscal constraints faced by the government budget; and
    - The need for stronger capacities in advocating for resources supported by clear rationale; and
- The existing Emergency Fund under NDMA is used mainly to respond to emergencies and disasters when they occur.

(c) Community Participation and decentralization is ensured through the delegation of authority and resources to local levels

Strengths

- The Disaster Management Act of 2006 mandates all four Regional Administrators (RAs) to establish a Regional Disaster Management Committee to be chaired by the Regional Secretary or a person appointed by that Regional Secretary (RS), the composition of such committees is also defined in the Act;
- Three out of four Regional Disaster Management Committees have been established, trained on DRM/CCA issues, and have also been sensitized on their Terms of Reference;
- Plans are underway to strengthen the capacity of Regional Disaster Management Committees to effectively execute their mandate; and

- The Urban Government Act (1969) provides that all urban local authorities should develop Integrated Development Plans which constitutes components like disaster management and environmental sustainability plan.

Weaknesses

- The effectiveness of disaster management components of the Integrated Development Plans (IDPs) is weak, with only three out of thirteen municipalities committed to main-streaming of DRR through the development of contingency plans; and
- There is poor development of DRM structures at rural and urban local government levels, which has in turn translated into weak integration of DRR into regional Development plans and budgets

(d) National multi sectoral platform

Strengths

- A national multi sectoral platform for disaster risk reduction is functioning, with:
  - Multi-sector involvement/engagement accomplished through the Multi-Hazard Contingency plan (MHCP).
  - The MHCP is led, coordinated and managed through an Inter-Cluster/Sector arrangement with the NDMA serving as the Lead Agency and the United Nations or relevant NGO Agency as Core Lead Agency.
  - Relevant Government Sector Ministries/Departments have focal points that assist the NDMA in coordinating and managing all issues pertaining to DRM in line with the Disaster Management Act (2006) and Disaster Risk Management Policy (2010)
  - Some clusters/sectors have been merged in view of the size of the country and in order to maximize the strengths of stakeholders/ organizations;
- An effective and efficient Inter-Agency disaster risk management mechanism exists for the implementation of resilience building activities. It is under the guidance of the UN Resident Coordinator (UNRC), the United Nations Country Team (UNCT) and has responsibilities for:
  - Providing overall leadership to the sectoral cluster planning, response and recovery and for initiating dialogue with the Government and donors; and
  - Serving as the Core Lead Agencies and working closely with their relevant counterpart Lead Agencies in Government; and
- Civil Society organizations such as the Red Cross, World Vision, Nazarene Compassionate Ministries and Save the Children are playing vital roles in DRR coordination and implementation of DRR activities, in the context of an expanded humanitarian country partnership

Weaknesses

- Ineffective and sub-optimal coordination of DRR/EPR both at National and regional levels due to lack of resources; and
- Most of the sectoral cluster working groups formed through the Multi Hazard Contingency Plan (MHCP) development process at the technical level are not very

well functional and do not meet regularly except the Health working group, which seems to be very active.

The strengthening of a national platform for improved DRR and emergency preparedness and response (EPR) coordination mechanisms would be very helpful: such a coordination mechanism can facilitate coordination across sectors, and promote dialogue at a national and regional level to improve awareness of DRR. This will facilitate the integration of DRR into national policies, planning and programs in various development sectors, as well as into international or bilateral development aid policies and programs. Considerations need to be made for additional resources to provide secretariat support to the National resilience building platform. Existing sectoral working groups for DRR/EPR should be reinforced, and community participation should be promoted to achieve a sustainable system of interlinked DRR and CCA at a number of different levels. For example, national DRR platforms and committees should include climate change specialists, CCA experts and environmental delegates in the decision-making process, and vice versa. Integration between DRR and CCA supported to build a bridge between current disaster risk management efforts aimed at reducing vulnerabilities to extreme events, and efforts to promote climate change adaptation and mitigation.

Thematic Area 2: Identify, assess and monitor disaster risks and enhance early warning systems (EWS)

(a) National and local risk assessments based on hazard data and vulnerability information are available and include risk assessments for key sectors.

Strengths

- The multi-sector approach to conduct assessments and use that information planning is functional;
- Standardized tools for assessment at the onset of disaster were developed targeting the household and institutional level;
- The NDMA plays a coordination role among different players and acts as the central repository for assessment tools and reports and handles all issues pertaining to disaster risk reduction from preparedness, response, mitigation and recovery; and
- There are other institutions that have coordination functions to include: the Surveyor General's office, which provides maps and detailed locations; the Central statics Office (CSO); Swaziland VAC; National Early Warning Unit (NEWU) under the MOA and the Emergency Preparedness and Response Unit under the MOH. These departments deal with their risk assessment at the sector level.

Weaknesses

- No standardized tool that is being used to conduct the assessment by the various risks and vulnerabilities at the national, regional, community and sectoral levels;

- Inadequate skilled and qualified personnel available in the country, characterized by:
    - Not all weather stations have officers deployed to run them
    - There are limited capacities in government technical units to produce and analyze data that would contribute to a proper risk assessment
    - Non-existence of continuous data sets from meteorological service
    - Meteorological stations are insufficiently manned, resulting in difficulties in having observations carried out over the weekends
    - There are also frequent breakdowns of the functioning of weather stations and most of the time they are not fixed in time, hence gaps are recorded data sets series;
- Weak collaboration between producers and users of early warning information;
- The system does not incorporate mechanisms for turning scientific/technical information on weather from the NEWU into risk scenarios, for developing warning messages (such as evacuation in the face of potential floods/fires/hail storms) keyed to those scenarios, and, for transmitting those messages to communities at risk; and
- No comprehensive risk assessments conducted. There is no up-to-date comprehensive disaster risk profile for the country. However, individual institutions do conduct ad-hoc risk assessment in a non-coherent manner and is not comprehensive.

(b) **Systems are in place to monitor, archive and disseminate data on key hazards and vulnerabilities**

Strengths

- The monitoring of these hazards is done solely by the Meteorological (MET) office which has a mandate to collect data and issue early warning information on weather related hazards in a timely manner to facilitate proper decision making;
- Swazi VAC (SVAC), which is located under the NDMA, is utilized to assess levels of chronic food insecurity, malnutrition, livelihoods and vulnerability in rural households in the four regions of the country;
- The building of capacity of core SVAC members to undertake integrated food security and vulnerability analyses of household survey data etc. is conducted; and
- The NEWU conducts food supply assessment in conjunction with other stakeholders, provide advice on food supply policies, gather, analyze and disseminate information on food security issues, provide early warning information on the expected weather conditions and crop production. This is done in collaboration with the MET and other regional and international bodies, including SADC VAC, FAO and WFP.

Weaknesses

- Early warning rainfall information/forecast provided by the MET does not indicate the frequency and the spatial distribution of the rain;
- There is the absence of a disaster loss database: historical information and previous disaster events are not yet stored in a centralized database managed by the NDMA. It addition no aggregation or analysis of data is done, and detailed maps do not exist;

- Baseline data on disaster incidents and vulnerability are not available to measure improvements or lack thereof over time;
- No systematic data collection and information management for DRR: data collection is considered as a challenge due to lack of tools, funding, staff and competencies; and
- Most data collection is initiated as part of specific projects carried out by UN Agencies, NGOs or other International Organizations, with data collection often halted once the projects end, and in most cases it does not constitute a nationwide effort

(c) Early warning systems are in place for all major hazards, with outreach to communities

Strengths

- Early warning systems for major hazards are in place in the country, although not very strong;
- Individual institutions and departments do have fair capacity in risk knowledge, monitoring and early warning services;
- The media is fairly involved in the early warning information dissemination, where the meteorological service uses social media for sharing information as well as the local newspapers, television and radio; and
- The media play a major role in ensuring that different types of stakeholders and information users receive early warning information.

Weaknesses

- The (EWS) does not provide timely and understandable warning to end users or operational guidance to disaster managers;
- Coordination with relevant sectors and actors is either non-existent or ad hoc, and early warning systems appear to be only sporadically integrated into policy and decision making processes and emergency systems; and
- Early warning information does not reach the community level in a simple and understandable manner that can be applied by the users.

There is, therefore, the need for effective communication and collaboration between data and information producers and users in order to empower communities under threat from natural and other hazards to take effective and timely decisions to protect lives, property and the environment from the effects of disasters. There is a great need to ensure that information reaches the local communities and a follow up is made to ensure that the right decisions are made based on the shared information.

(d) National and local risk assessments take account of regional / trans-boundary risks, with a view to regional cooperation in risk reduction.

Strengths

- The Department of Meteorological Service operates under the authority of the Meteorology Act 1992, which provides the explicit legal basis and, together with

the Convention of the World Meteorological Office (WMO) and other national and international agreements and treaties;

- Swazi-Met has close working relations with the SADC Secretariat especially on annual hemisphere/regional forecast/weather outlook where Swaziland is a member;
- Individual line ministries and individual institutions continue to forge working relations with their trans-boundary counterparts as well as at hemisphere/regional level; and
- The Department of Water Affairs (DWA) is part of trans-boundary water sharing agreements between South Africa and Mozambique and participates in early warning information dissemination among the three countries.

Weaknesses

- Lack of consistent system monitoring and reporting of hazards, with a view to inform regional databases; and
- Lack of country tailored methodologies for vulnerability and risk mapping, assessment and analysis

Obviously, there is the need to establish a national risk observatory in Swaziland, which would continuously collect and analyze data from relevant agencies, coordinate and/or disseminate early warnings, and serve as a communications hub. A National Risk Observatory would:

- Unify the disparate databases of various agencies;
- Over the medium to long term, develop and apply at both national and sub-national levels common and compatible standards for database structure, temporal and geographical referencing, cataloguing, archiving, and updating;
- Introduce procedures and regulations ensuring open access to databases to all relevant stakeholders at all levels;
- Develop country-tailored methodologies for vulnerability and risk mapping, assessment and analysis;
- Organize training of technical personnel at national and regional levels for vulnerability and risk mapping and assessments; and
- Perform vulnerability and risk mapping and assessments in a pilot area to test the tool and competencies.

Thematic Area 3: Use knowledge, innovation and education to build a culture of safety and resilience at all levels

(a) Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems etc).

Strengths

- NDMA celebrates Annual International Disaster Reduction Day, as the platform for sensitization and advocacy activities at the national level, by bringing many stakeholders (UN Agencies, NGOs, Civil Society, Government institutions,

bilateral partners, general public, etc.) to discuss issues related to risk reduction in the country;

- UN Agencies are engaged on the promoting and advocating for DRR in the country;
- NGOs and Civil Society Organizations are supporting the sensitization and advocacy agenda on DRM/CCA issues at community levels, to include:
    - The Baphalali Swaziland National Red Cross Society is a very active in community disaster reduction and most of work has focused on educating local communities on HIV and AIDS and other communicable diseases
    - The Red Cross has been working to expand public awareness and education, as well as the understanding of locally prevalent hazards, and promote a practical culture of safety and resilience
    - The World Vision is also very active at the community level and its interventions have addressed problems in food insecurity (mainly through agriculture), water shortages, education, etc.
    - The Coordinating Assembly of Non-Governmental Organizations (CANGO) coordinates the NGO sector in Swaziland and builds the capacity of the member organizations — so they can fulfil their mandates related to resilience building in the country. This mandate is carried out through four established consortiums: Gender Consortium, Governance and Human Rights Consortium, HIV/AIDS Consortium and Food Security Consortium.
    - Disaster risk reduction committees have also been established at the community level through World Vision initiatives.

Weaknesses

- There is the lack of a centralized, comprehensive information system for DRM/CCA: Individual departments and institutions have sector specific DRM/CCA information which is not accessible to all stakeholders.
- The is a low capacity of DRM/CCA stakeholders to develop educational material to disseminate to the media;
- While the media in Swaziland plays an important role in disseminating public information and educational programs that help to improve the population's knowledge and behaviour in the face of hazards and risks, the low capacity of DRM/CCA stakeholders to develop their own programmes reduces the extent to which national media and broadcast services can fulfil a more important role in hazard education and warning; and
- There is a lack of interaction between professional originators of warnings and professional media presenters and programmers.

(b) School curricula, education material and relevant trainings include disaster risk reduction and recovery concepts and practices.

Strengths

- The National Curriculum Centre (NCC) has developed a curriculum integrating DRR in primary and secondary education in the country, in which:
    - A series of workshops involving curriculum developers and DRR practitioners and experts have been conducted to develop a DRR curriculum for primary and secondary schools in the country. The

workshops follow a Canadian based model for developing curriculum called DACUM
    - Information, education and communication (IEC) materials have been developed to aid in learning and teaching about DRR in schools; and
- Several institutions have been identified as key institutions for DRM/CCA training: University of Swaziland (UNISWA) Consultancy & Training Centre; UNISWA Research Centre); the Swaziland College of Technology (SCOT); Swaziland Institute for Management and Public Administration (SIMPA); the Institute of Development Management (IDM); etc.

Weaknesses

- Although DRR has been main-streamed in schools there is still a need to improve and strengthen the capacity of experts, curriculum developers and teachers and to expand the scope and depth of the curriculum;
- There is the need to improve and strengthen secondary curriculum on DRM/CCA to enable students to pique their interest in choosing DRR as a field of study; and
- There is little or no involvement of research and institutions of higher learning on DRR activities: research and training institutes like UNISWA, IDM, etc. are not very well capacitated in order to support DRM/CCA related activities (risk assessment, risk mapping, capacity development through training, etc.)

(c) Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened.

Strengths

- The National HIV and AIDS Information and Training Center (National Info Center) has been established to influence social behaviour change through timely provision of accurate HIV and AIDS information to ensure an AIDS-free Swaziland. The Information and Training Centre collection has diverse materials on HIV and AIDS, including: books, journals, newsletters, conference papers, directories, video cassettes, etc. The center is open to researchers, development agencies, faith based organizations, NGOs, media, Individuals.
- There is a Swaziland HIV Prevention Toolkit, which covers a broad range of topics pertaining to HIV and AIDS prevention. The materials are in the form of research papers, periodicals, books, training materials (tool kits and manuals), and awareness raising products (posters, booklets, leaflets, presentations), that creatively and factually share current and dynamic knowledge and skills relating to HIV and AIDS, TB, as well on prevention and impact mitigation responses.

Weaknesses

- Weak technical and scientific capacities to develop and apply methodologies, studies and models to assess vulnerabilities and the impact of weather, water and climate related hazards; and
- There is limited use of methods for predicting multi-risk assessments and to conduct socioeconomic cost benefit analysis of risk reduction for incorporation in decision-making processes.

(d) Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities.

Strengths

- The DRM/CCA stakeholders have developed a calendar for national simulation exercises which indicates that simulations will be conducted at least twice every year, the purpose of which is to:
    - Assist the country and target communities to better prepare, respond and mitigate the effect of natural hazards and disasters when they occur
    - Test stakeholder coordination in the context of the MHCP national framework for emergency/ disaster preparedness and response
    - Enable community to have a knowledge of the different key stakeholders in disaster, their various roles and means to contact them using their toll free numbers
    - Give the stakeholders an opportunity to conduct social mobilization on the services they provide to communities, their roles and responsibilities during disasters
    - Provide an opportunity to harmonize and coordinate different tasks in disaster situation, thus promoting effective disaster mitigation measures.

Weaknesses

- There is still a need to review public messages in order for the public to better understand disaster related concepts;
- There is no countrywide public awareness strategy for building or promoting resilience to disasters, with outreach to urban communities;
- Some NGOs such as World Vision, Lutheran Development Services are assisting some communities to develop and implement community based disaster preparedness emergency plans. However, coverage is limited to rural communities and a few constituencies where these organizations operate;
- Some individual members of ministries have undergone basic trainings in DRM/CCA in association with other programs, but no systematic DRM/CCA sensitization for public officials is in place; and
- Several ministries stated that they have no responsibility or capacity for DRM/CCA, and they do not see clear links between their work and DRM/CCA.

Thematic Area 4: Reduce underlying risk factors

(a) Disaster risk reduction is an integral objective of environment related policies and plans, those including related land use, natural resource management and adaptation to climate change.

Strengths

- The GoS has promulgated numerous policies and related legislation in environmental, land and waste management and has:
    - Initiated climate change adaptation measures

    - Established the Environmental Management Fund to alleviate the constraints on activities envisaged under the UN Conventions
    - Developed legislation and systems for Water Resource and Waste management systems to address problems of solid waste management
    - Promulgated numerous land management policies;
- Several important initiatives have also produced several new acts, such as the Flora Protection Act of 2001 and the Water Act of 2003, and most importantly the Environmental Management Act of 2002;
- Swaziland has also participated in international development platforms that have led to important multi- lateral conventions, treaties and protocols, most of which have been duly ratified but have had limited implementation or main-streaming. These include, among others: The United Nations Convention on Biological Diversity), the United Nations Convention to Combat Desertification, and the United Nations Framework Convention on Climate Change;
- The institutionalization of climate change issues and processes is mandated to the Swazi MET, which houses the National UNFCCC Focal Point; and
- The Government of Swaziland has developed and adopted a range of legal documents, laws and policies on environmental related issues, among them: the National Solid Waste Management Strategy (2003); the National Framework on Biosafety (2004); the Alien Invasive Strategy and Action Plan (2004); the National Action Programme on the Convention to Combat Desertification (2001); the National Forest Policy and the National Forestry Programme, etc;

Weaknesses

- Even though the GOS has promulgated numerous policies in environmental, land and waste management, there the absence of a comprehensive implementation strategy that will enable these policies to be translated into meaningful inter-sectoral activities;
- There is a lack of well-defined institutional mandates;
- Land use management is still ineffective and uncoordinated in many parts of the country; and
- There are no comprehensive water treatment and waste management systems.

(b) Social development policies and plans are being implemented to reduce the vulnerability of populations most at risk.

Strengths

- Swaziland has a number of strengths in the area of social protection. A recent comprehensive mapping exercise by the World Bank enumerated the various social assistance programmes put in place by the government. These schemes – mostly non-contributory – consist of mixed cash and in kind transfers, social care services, and labour market programmes implemented by at least five (5) ministries;
- Swaziland, with the assistance of UNICEF, has developed new legislation and policies aimed at scaling-up service delivery to reach the most vulnerable children.
- Strategic plans, guidelines and standards, such as the National Plan of Action for Children 2011-2015, Social Development Strategic Plan 2011/15, Guidelines and

Standards for Alternative Care, and Strategy and Actions on Violence against Children, provide an opportunity for the operationalization of an international convention on the protection of children.

- The OVC education grant scheme targets orphans and vulnerable children to enable them to access education.

Weaknesses

- The impact of the social protection programmes is compromised due to the inadequate resources allocated to the implementation of such programmes;
- At an institutional level, there is the lack of a coherent articulated vision on social protection. At present the country doesn't have a national social protection strategy, as a result:
    - Coordination and collaboration between and within different ministries and stakeholders is inadequate, leading to duplication, gaps and occasional policy incoherence
    - The different schemes are fragmented and there is insufficient coordination between the government and donors involved, which limit the capacity to trigger those schemes into an effective entry point for DRR activities.

(c) Economic and productive sectoral policies and plans have been implemented to reduce the vulnerability of economic activities

Strengths

- The economy of the country is predominantly, agro-based and the investment in agriculture is the principal catalyst for economic development. The Government provides support to rural farmers, in the form of subsidies, to enable them to switch to commercial farming has been intensified. It has improved their earnings and food security.
- The Government of Swaziland with the support of development partners has further embarked on the retrofitting of public infrastructure such as hospitals and schools.

Weaknesses

- The high rate of unemployment is a major cause of vulnerability: a key challenge for the Swazi economy is job creation in high value-adding sectors;
- Despite the dependence of the majority of the population on agriculture, the contribution of the sector to GDP has been declining;
- Limited investments in the resources sector have seen the mining sector remaining stagnant;
- With skills development failing to adapt to the changing structure and new demands of the productive activities, Swaziland faces both skill shortages and a mismatch between skills possessed by its workforce and those demanded by employers. This impact, particularly negatively on employment opportunities among the young;
- The country had one of the highest youth unemployment rates in Africa.

(d) Planning and management of human settlements incorporate disaster risk reduction elements, including enforcement of building codes.

Strengths

- The Swaziland National Housing Board (SNHB), an entity established in 1988, is the body broadly responsible for public housing and housing related matters, with responsibility to:
  - Develop affordable housing on a financially self-sustaining basis
  - Manage existing public housing stock on behalf of government
  - Implement shelter-related policies.
- The Surveyor General's Office (SGO) is responsible for the surveying and certification of township plans and the Deeds Registry Office (DRO) for the issue of formal leases on property.
- Other policies and strategies have been developed by the Swazi Government for a better management of the urban and rural planning sector in the country, including the National Housing Policy (2001), the National Land Policy, the Town Planning Act (1961), the Urban Government Act (1969), the Building & Housing Act (1968), etc.

Weaknesses

- Land use planning, including physical planning in Swaziland is generally taking place in an ad hoc and uncoordinated manner. In many cases this has led to a poor selection of land use in relation to the suitability and economic potential of the land and indirectly leads to increased land degradation;
- Although there are legislations to uphold the building standards and codes (Human Settlements Act), the GoS is having a challenge as the legislation are not enforceable in the rural areas;
- Rapid urbanization and continuing growth of the Swazi population creates some challenges in the urban environment, as the urban plans were developed several decades ago and have never been updated; and
- The growing population has been building houses without permission in risk areas (such as river banks), but there seems to be no measure taken about this.

(e) Disaster risk reduction measures are integrated into post disaster recovery and rehabilitation processes

Strengths

- The NDMA has facilitated the development of the MHCP that incorporate multi-sector DRR Preparedness and Post disaster Plans;
- The NDMA has improved main-streaming of DRR to the eight (8) sectors of the economy;
- The NDMA in collaboration with the United Nations system is facilitating the development of disaster preparedness plans of the four (4) gazetted local authorities;
- The preparation of regional preparedness plans is in the pipeline for all the administrative regions of the country. The process was initiated through the

hazard mapping exercise that was expedited in three (3) out of the four (4) administrative regions;

- The Government is supporting DRR activities in the country through budget allocation to the National NDMA. The Government also provides resources during emergencies and disaster response activities; and
- Collaborating partners like UN agencies, NGOs, and bilateral partners have provided technical and financial assistance on DRR initiatives in Swaziland.

Weaknesses

Although the government has made a significant commitment towards the DRR agenda, the commitment has not been translated into the implementation of DRR activities across the various sectors to contribute to the National sustainable development Agenda. This outcome has been due mainly to several factors:

- Limited budget has been dedicated to DRR in line ministries and at regional level: insufficient allocation of financial resources for DRR was reported at national and regional levels and within related sectors. It was recognized that this was due in part to fiscal constraints faced by the government, as well as the need for stronger capacities in advocating for resources supported by clear rationale;
- The existing Emergency Fund under NDMA is used mainly to respond to emergencies and disasters when they occur, as well as up scaling of gender specific humanitarian assistance; and
- As a result of limited funding, the Government has mainly prioritized short-term interventions such as disaster relief and recovery programmes.

(f) Procedures are in place to assess the disaster risk impacts of major development projects, especially infrastructure.

Strengths

- National Energy Policy (2002) has been promulgated: The vision of the energy policy is to ensure that the development goals of the country are met through the sustainable supply and use of energy for the benefit of all the citizens of the country. The key objectives of the Policy are: ensuring access to energy for all, enhancing employment creation, ensuring security of energy supply, stimulating economic growth and development, ensuring environmental health sustainability;
- The promulgation of the Mining Policy (2003): The 2003 National Mining Policy, the 2002 Environmental Management Act and the 2011 Mines and Minerals Act provides the framework for dealing with environmental concerns; and
- Though policies may have overlapped the government has established the Public Policy Coordination Unit, which has a mandate to coordinate policy formulation, review as well as monitoring the implementation process.

Weaknesses

- The government has not been able to put in place a comprehensive implementation strategy that will enable these policies to translate into meaningful inter-sectoral activities for sustainable environmental management and disaster risk reduction;

- A lack of well-defined institutional mandates, associated with poorly defined responsibilities in relation to the national obligations and commitments for DRR undermine the existing capacity; and
- The increased frequency of uncontrolled fires has damaged forests despite the increase in planted forest areas.

Thematic Area 5: Strengthen disaster preparedness for effective response at all levels

(a) Strong policy, technical and institutional capacities and mechanisms for disaster risk management, with a disaster risk reduction perspective are in place.

Strengths

- The introduction of more professional staff within the (NDMA) has enhanced the technical and institutional capacity of the lead DRR institution in the country. This has led to better cluster coordination in disaster preparedness and response;
- The establishment of regional coordination mechanisms through Regional Disaster Management Committees (RDMC), which will strengthen DRR actions at regional and constituency levels;
- Major Municipal councils have developed Disaster Risk Plans and programmes which are multi sectoral. Attempts have been made to map available resources within regions and municipalities (human, transport, water, health facilities, etc.); and
- Any disaster that occurs at the regional and national level are shared through situation reports and further deliberated upon during quarterly Mufti-Hazard Contingency Planning meetings.

Weaknesses

- Coordination of DRR activities still remains a challenge as the sectors continue to plan and implement activities in silos, resulting in over-lap and duplication; and
- There is the need to strengthen the capacity of the coordinating agency to better coordinate stakeholders during DRR activities.

(b) Disaster preparedness plans and contingency plans are in place at all administrative levels, and regular training drills and rehearsals are held to test and develop disaster response programmes.

Strengths

- The MHCP forms the basis for national simulation exercises which aim to validate the plans to ascertain its work-ability. The Plan is reviewed annually to incorporate emerging hazards. At municipal levels the Disaster Plans are in infancy and no drills have been done. However, they are in the pipeline for urban disaster simulation;
- Capacity building for urban search and rescue for first line responders is ongoing with plans for further training of a national urban search and rescue team; and

- Regional emergency teams are developing Emergency Incident Management Plans which have scheduled drills for better work flow and at an incident.

Weaknesses

- Regular turnover in the sector lead focal persons; and
- Budgets for pre-positioned materials remain a challenge. However, the inclusion of non-state actors has assisted the effective and timely response to disaster incidents

(c) Financial reserves and contingency mechanisms are in place to support effective response and recovery when required.

Strengths

- The Disaster Management Act provides for the establishment of a Disaster Fund, which is to be managed by the office of the Deputy Prime Minister;
- Funds have been made available to Civil Society to support in the implementation of DRR activities at community level through the effective use of their volunteers. This enables the quick collection of data for effecting response and recovery activities;
- Mapping finances has been effectively done in the fight against HIV and AIDS and could be also achieved tracking all stakeholders; and
- The country has realized the role of partners who have a comparative advantage in mobilizing funds for response and reconstruction this has reduced the burden on limited available state funding.

Weaknesses

- The available finances within the country for effective planning of disaster response and recovery have not been mapped. This exercise would include tracking of existing and potentially available resources in case of disasters.

(d) Procedures are in place to exchange relevant information during hazard events and disasters, and undertake post-event reviews.

Strengths

- The Nation has adopted and domesticated the Household Assessment Format (HAF) which is used during post disaster assessments to assess damage and losses;
- The stakeholders were involved in the review of the HAF tool, and various pilots were undertaken to assess its suitability in collecting the required data; and
- The tool is being used by all stakeholders involved in disaster assessment.

Weaknesses

Currently, data is managed on an ad-hoc basis and brought together to prepare a synthesized report. However, it is hoped that with full functionality of the NDMA there will be information management and knowledge platform which will be key to future plans.

4.0 STRATEGIC ANALYSIS AND PRIORITY AREAS OF FOCUS IN BUILDING RESILIENCE

4.1 The Context

Over the last two decades, the increased frequency, intensity and variability of hydro-meteorological hazards have heightened the compelling need for the country to adopt disaster risk reduction and management (DRRM) and climate change adaptation (CCA) measures. Numerous projects and activities have been undertaken by various institutions and stakeholders to build resilience to hazards. However, the follow through that is needed and was expected to ensure that gains are sustained or scaled up have presented serious challenges in making the country safer, adaptive and more resilient to hydro-meteorological, epidemiological and man-made hazards. In addition, challenges remain in adopting best practices and learning from past experiences. In the context of the above, vulnerability and population's risk to disasters are still on the rise, due to the country's inability to address some critical structural and non-structural strategic issues.

4.2 Summary of Identified Gaps in Resilience Building

Some of the main gaps and challenges identified under **Section 3** are summarized under five thematic headings below, albeit with some repetition, to provide a better understanding of and clarity in the strategic direction being proposed in resilience building in Swaziland.[32]

<u>Ensure that disaster risk reduction is a national and local priority with a strong institutional basis for implementation</u>

- Disaster Risk Reduction is not a high priority in the National Agenda;
- Lack of proper implementation of the Act and the DRM Policy;
- Lack of Implementation of the 2008-2015 DRR National Action Plan;
- The National Disaster Management Agency (NDMA) is not fully functional because of a lack of human capacity and financial resources;

[32] Thematic headings of the document entitled: *Disaster Risk Reduction, Emergency Preparedness and Response Capacity Assessment Report: The Kingdom of Swaziland: GOSZ/UNDP, 2013,* utilized as a base document.

- Effective coordination for DRR/CCA, both at national and regional levels has been identified as a main challenge in Swaziland;
- Lack of DRR awareness at highest level within key ministries and parliament;
- Insufficient capacity on DRR at national and regional levels;
- No budget properly dedicated to DRR in line ministries and at regional level;
- DRR/ CCA main-streaming still very weak; and
- Weak capacity of Local Government Authorities on DRR;

Identify, assess and monitor disaster risks and enhance early warning (EW)

- Inadequate skilled and qualified human resources;
- Non-continuous data sets;
- Weak communication and collaboration between producers and users of EW information;
- Weak Early Warning System at all levels;
- No comprehensive Risk Assessment;
- No systematic data collection and Information management for DRR/CCA;
- Absence of a disaster loss database; and
- In terms of early warning, Swaziland has established the National Early Warning Unit (NEWU). However, this department deals more with agriculture and food security issues.

Use knowledge, innovation and education to build a culture of safety and resilience at all levels

- DRR/CCA is not yet perceived as 'Everybody's business';
- Low involvement of the media on DRR/CCA related issues;
- No formal national coordinated programme/strategy aimed at public awareness for building or promoting resilience to disasters with outreach to urban and rural communities;
- Availability of training programme in DRM/CCA for professionals is limited, and the various agencies are not working aggressively towards a better understanding of their role in resilience building;
- Weak technical and scientific capacities to develop and apply methodologies, studies and models to assess risks, vulnerabilities and the impact of weather, water and climate related hazards;
- Little or no involvement of research and teaching institutes on DRR/CCA activities;
- Non-implementation of UNISDR Campaigns (Safe Cities, Safe Schools and Safe Hospitals); and
- Local government authorities need more improvement with DRR/CCA capacity building than their national and state counterparts

Reduce the underlying risk factors

- Inability of the government to put in place a comprehensive implementation strategy that will enable policies to be translated into meaningful inter-sectoral activities for sustainable environmental management and DRR/CCA;
- Lack of well-defined institutional and individual mandates, associated with poorly defined responsibilities in relation to the national obligations and commitments for DRR/CCA;
- Challenges in the urban environment resulting from rapid urbanisation and continuing growth of the Swazi population, to include the building of houses without permission in risk areas (such as river banks). There appears to be limited measures taken to mitigate this situation;
- Land use management is still ineffective and uncoordinated in many areas across the country, arising from ineffective physical planning, and to include responsible factors such as non-adoption and utilization of modern planning approaches; outdated and outmoded land use planning policies, laws and regulations; inadequate manpower; poor and inadequate funding for and an inadequate institutional framework for land management;
- Inadequate management of wastewater, leading to the enrichment of pollutants (heavy metals, toxic organic chemicals and microorganisms) in the soil, environment and at the end crop and livestock;
- Low economic growth: in 2015, Swaziland's economic growth rate of 1.6% remained one of the lowest in sub-Saharan Africa. The low growth rate and underlying fiscal problems highlight the risk of the worsening of already weak social indicators and a possible reversal of the poverty gains made before the fiscal crisis of 2010/11, when poverty declined from 69% to an estimated 63% in 2010;
- The high rate of unemployment is a major cause of vulnerability; and
- At an institutional level, there is a lack of a coherent articulated vision on a social protection national programme, with the absence of a national social protection strategy. As a result, coordination and collaboration between and within different ministries and stakeholders are inadequate, leading to duplication, gaps and occasional policy incoherence. The different schemes are fragmented and there is also insufficient coordination between the government and donors involved, which limit the capacity to trigger the social protection schemes into an effective entry point for DRR/CCA activities

Strengthen disaster preparedness for effective response at all levels

- Line Ministries have clear legislation, policies and plans, but are facing challenges in terms of law enforcement;
- National programmes and/or policies to make schools and health facilities safe in emergencies are non-existent;
- There is a weak dissemination of the legislative framework for disaster management;
- While the 2006 Disaster Management Act, the 2010 Management policy and the related National Action Plans (NAPs) provide frameworks for disaster preparedness and response, the national approach to disaster is mostly reactive and not proactive;

- Identified priority actions and activities in the NAPs are not being implemented according to the established timeframe. Most provisions of the Act have not yet been established or are not fully functional as yet. There is limited capacity to operationalize and implement the legal framework for emergency, preparedness and response;
- NDMA has limited resources to fulfil its mandate in terms of number of staff, capacity and adequacy of funds;
- There is no dedicated budget for preparedness and response at national, regional and local level;
- The MHCP is based on hydro-meteorological hazards and includes only rural areas. No urban contingency plans have been developed. Contingency Plans, including the MHCP are not updated on a timely basis;
- Simulations of the National Contingency Plan need to be reinforced in terms of number, scale and geographic coverage. Simulations take place at Tinkhundla level, but the stakeholders involved are mostly those operating at national level;
- Apart from the Maguga Dam there are two other major dams. However, emergency preparedness plans have not been developed for these dams.
- Some of the contingency plans developed, such as the National Multi-sectoral Bushfire Contingency Plan and the Swaziland National Contingency Plan for Cholera are outdated and have never been tested;
- Preparedness activities are included in the plans of some line ministries, but they are limited;
- Pre-positioning of stock is limited on the Government side. Existent stockpiling is done either by the UN or NGOS;
- No national mapping of hazards and risks has been done. Limited to a few projects in some areas that have done community based hazard and risk identification;
- Traditionally, the focus on hazard and risk identification has been in rural areas – urban areas have been excluded;
- Communication of early warning information is limited to radio and television;
- No clear community or household action comes with the warnings, and individual communities are left to decide on how best to act;
- Early warning information from the **SARCOF** has been said to be in a format that is not user friendly;
- Preparedness and response plans/SOPs that are linked to action based on early warning information are not in place at all levels (national, regional, community);
- NDMA carries out an annual simulation in one of the 55 Tinkundla /Constituencies and it is limited to testing mechanisms at community level;
- Data collection for most baseline database systems limited to the traditional questionnaire surveys;
- The data analysis conducted is quite limited and is mostly is mostly intra-sectoral in nature, with very little inter-sectoral analysis done;
- The methodology utilized in rapid assessment analysis process is not at a level that will allow for the identification of programming requirements;
- No clear dissemination plan for rapid/in-depth assessments. Dissemination is limited to people who would have done the assessment and a few others who request it;

- No clear understanding of the target audiences of the different types of information/products produced;
- Limited drawdown of funds for emergency response costs;
- Most NGOs and international agencies have no dedicated budget lines for emergencies. Funds are allocated to the organization's regular programmes and provision for a contingency line for emergency operations is not part of their budget plan.

4.3 The Strategic Issues

Several institutional reports (World Bank, United Nations, UK DFID, etc.), hemisphere/regional reports (DRAPA, RIASCO, CARICOM), and country reports (Australia, Nepal, Philippines, Nepal, Republic of the Marshall Islands, and Swaziland to name a few countries) have identified, in a broad context, some of the strategic issues that must be considered in resilience building. These strategic issues must be country specific, and derived from a detailed analysis of the strengths and weaknesses of the national resilience building platform, and opportunities to be exploited and threats faced in the external environment. In the context of Swaziland, these country specific strategic issues are discussed below, as they are critical inputs in the development of Swaziland Resilience Strategy and Action Plan.

Addressing the Underlying Causes of Vulnerability

At the center of the resilience building is the need to address the underlying causes of people's vulnerabilities – social, economic, physical and environmental. The challenges faced to the building of resilience and the gaps identified in Swaziland suggest that the development of the Resilience Strategy and Plan of Action must address the contributing factors and processes leading to disaster risks, including changing environmental drivers (climate change and variability), as well as the consequences of poverty and inequality, unplanned and rapid urbanisation, poor land management and compounding factors such as demographic change, weak institutional arrangements, disempowered local actors, lack of regulation (or its enforcement), cultural beliefs and experiences, lack of (or contextually inappropriate) tools, barriers to uptake of new technologies and the intersections with issues such as cultural beliefs, social practices and historic experiences.

More efforts are needed in identifying those zones that are prone to hazards and the factors which contribute to people's exposure to disasters, incorporating risk analysis in sectoral and national development plans and building people's capacities towards sustainable livelihood options, to name a few. Although resilience building has been gaining attention in various sectors of the country, more resources and initiatives must be given to disaster risk assessments, main-streaming resilience into development plans by incorporating DRRM and CCA measures to address the underlying causes of people's vulnerabilities, and providing different sustainable livelihood options for vulnerable sectors of the society.

Managing the Unavoidable

Notwithstanding the country's effort to reduce people's exposure to natural hazards, or make their assets more resistant to hazards, natural risk cannot be reduced to zero. Disasters will continue to inflict damage to the people and on the assets of the country, and it is therefore critical to supplement the actions that are implemented to mitigate the levels of exposure and vulnerability with improvements in the ability of the people to cope with shocks that cannot be avoided.[33]

Such actions require a holistic, flexible and scalable risk management strategy with a range of policy instruments appropriate for different disasters and affected populations. These instruments include international aid, government insurance and contingent finance, government reserve funds, adaptive social protection, market insurance, financial inclusion (savings, credit and revenue diversification, enterprise diversification, social protection, remittances). Revenue diversification and basic social protection can help households at all income levels to cope with small shocks. Remittances make people less vulnerable to income shocks. Financial inclusion helps poor people save in forms less vulnerable to natural hazards, than in-kind savings like livestock and housing, and diversify risk.

However, when the shock is large, these instruments will not be sufficient, and additional tools will be required. For those relatively wealthier households, savings will help, and market insurance can provide them with an efficient protection for larger losses. However, for the poorest households savings are often not an option, and high transaction costs and affordability issues make access to private insurance challenging.

Therefore, to cover large shocks for the poorest households, well targeted and easily scalable safety nets are needed. However, these systems must be designed to maintain the incentive to invest in long-term adaptation to economic and environmental changes. Such an adaptive social protection system does, however, create a liability for the government, which may be forced to rely on financial instruments such as reserve funds (for small scale events), contingent finance, or re-insurance products.

Convergence of DRM and CCA

The links between disaster risk reduction (DRR) and climate change adaptation (CCA) are now more and more appreciated by resilience practitioners. However, the convergence is yet to be articulated and reflected in concrete terms, particularly in initiatives aimed at increasing people's capacity to adapt to the changes in general, and to those of climate-related hazards, in particular, to reduce vulnerability.

Streaming of DRM and CCA into Development Plans

As DRM and CCA are not viewed within the sustainable development framework, the development of relevant programmes has been reactive, that is, done intermittently or only as a quick response to a destructive disaster. Also, resilience programmes and projects are not sustained because they are not main-streamed into sectoral and national

[33] World Bank and GFDRR (2013): Building Resilience to Disaster and Climate Change through Social Protection

development plans and more importantly, into national and local policies – both of which will secure sustained funding and political support.

Information, Capacities and Skills in DRM and CCA

While it is recognized that a number of instructional, education and communication materials have already been produced, however, most of them continue to highlight disaster preparedness and response without due consideration to prevention and mitigation. The development of information and campaign materials which will help people understand the linkages between DRM and CCA and how these two concepts contribute to resilience building are of utmost importance. Likewise having institutionalized mechanisms for knowledge development, sharing and management will contribute to the documentation, replication and scaling up of good practices on DRM and CCA, and ultimately on resilience building.

Research for Development

Swaziland must develop a culture of generating relevant information for decision making in both the public and private sectors, as knowledge is one of the important ingredients for this process. Institutions dedicated to research must be adequately staffed and receive adequate funding, which could be encouraged by appropriate fiscal incentives. The research should span all areas - including natural science, production technology, social science, humanities, education, population and health.

Where technology transfers from abroad are made, the possibility of adapting that technology to suit local conditions must be investigated. Conversely, if the required research capability threshold has been reached, locally based research results can find applications abroad.

Building Capacities of People and Institutions

The importance of human resource development as a key macro strategy stems from the fact that human resources are one of the primary resources Swaziland has. This resource can only contribute meaningfully to sustainable economic and political development if its capabilities and qualities are enhanced.

Gaps in applying resilience principles to actual practice exist at different levels of government and among CCA/DRM practitioners and the various stakeholders. Roles and responsibilities need to be understood in the context of emergency situations and resilience building. Thus, competency-based capacity building programmes on DRM and CCA should be developed and continually conducted in order to be effective and efficient in response to the needs of communities and institutions. These capacity building activities will help enhance their understanding and skills so that DRM and CCA principles and concepts can be applied, and concrete actions can be taken towards building resilience.

Building Effective Partnerships

The DRM components of disaster preparedness (prevention and mitigation), and disaster response (rehabilitation and recovery) are not mutually exclusive. However, conventional institutional and operational mechanisms deal with actual operations and planning as separate structures with their respective personnel and stakeholders. There is the need to strengthen partnerships and improve ways of working among key players and stakeholders. To build resilience, post-disaster relief and rehabilitation requires sensitivity to the development processes so that a culture of dependence is eliminated and sustainability is assured.

This principle calls for the enhancement of true partnership through effective dialogue and information sharing with both the state and non-state actors. There is need by existing cooperating partners (both resident and non-resident) to leverage possible partnerships more creatively.

Cultural Sensitivity/Indigenous Practices

The resilience building process must recognize the importance of culturally-sensitive risk reduction measures at all levels. People's vulnerability to disasters as well as their capacities to adapt to the changing realities are more often than not related to cultural and indigenous practices. By being sensitive to the indigenous practices and local knowledge, resilience building approaches will become more effective and more easily understood and embraced by the people.

Building Back Better

In the context of post-disaster reconstruction, the "Build Back Better" principle is being promoted. However, current practices have not ensured that better and safer structures are built on safe locations during reconstruction and rehabilitation. Neither has engineering and land use practices been risk sensitive such that prevention and migration are addressed. Through the combination of increased knowledge and capacities, CCA and DRM main-streaming into development plans and programmes, and building institutional mechanisms through monitoring, evaluation and learning, "Building Back Better" can be achieved. Over time, improvements in the way DRM and CCA are addressed in infrastructure, utilities, buildings, and housing should be seen.

Agricultural Development

Swaziland has a comparative advantage in agricultural production because of its good soils, good climatic conditions, potential for more quality agricultural research and competitive wage rates. A large portion of the population will be still deriving its livelihood from agriculture over the next 25 years. It therefore makes good economic sense to select the agricultural development agenda as one of the major areas of strategic thrust. The agricultural sector has relatively strong backward linkages with other sectors in the domestic economy. Hence, by stimulating it, it is hoped to stimulate other sectors of the domestic economy.

This strategic area essentially involves raising the capability of the agricultural sector to generate a higher volume of goods and services for given factors of production, without destroying the environment. Important elements are food and nutrition security at the household and community levels; commercialization of agriculture on Swazi Nation Land; efficient water resource management and usage; and rational land allocation and utilization.

4.3 Framework for the SRSAP

The framework for action must systematically target all the hazard prone districts in Swaziland, with a focus on hydro meteorological hazards (droughts, flood, and strong winds/storms), man-made hazards (wildfires), and economic shocks (high and volatile food and energy prices). These actions must ensure that climate change adaptation and disaster risk reduction are a national and local priority with a strong institutional basis for implementation.

The critical issue for the formulation of the ARSAP is to ensure that the activities that are proposed are necessary and sufficient to allow Swaziland to build resilience to disasters and economic shocks.

The broad-based opportunities and threats derived from the external environment analysis and the strengths and weaknesses identified from the analysis of the existing internal resilience building agenda allow for an integrated analysis and synthesis of the factors to be conducted resulting in the in the broad elements of SRSAP.

4.4 Key Priority Areas for Action

On the basis of the integrated analysis and synthesis of the external and internal critical factors conducted, the following key priority areas were considered critical to the building of resilience to natural disasters and economic shocks in Swaziland. These priority areas should therefore be considered as an integral part of the Resilience Strategy and Action Plan, and include:

- Strengthening institutional and technical capacity for climate change adaptation and disaster risk management;
- Assessing and monitoring climate risks (current and future) and vulnerabilities, and enhancing early warning systems;
- Improving knowledge management, awareness raising and education on climate change impacts, adaptation and disaster risk management;
- Reducing climate related risks and the underlying vulnerabilities by implementing technical options; and
- Strengthening capacities and procedures for effective disaster preparedness, response and rehabilitation at all levels and the integration of climate change adaptation initiatives.

1. Strengthen institutional and technical capacity for climate change adaptation and disaster risk management and enhance policy frameworks and coordination mechanisms at all levels

Objective: Ensure efficient institutional mechanisms at all levels (geographic and thematic), while covering all aspects of climate change and disaster risk management activities and enhancing coordination with other agencies.

Strategy: Strengthening institutional and technical capacities and mainstreaming climate change adaptation and disaster risk management within national and sectoral policies, strategies and plans.

Key Areas:

- Strengthen the policy instrument framework, including the legal framework, to engender an environment that is conducive for the development and implementation of priority actions for resilience building;
- Strengthen institutional mechanisms for effective coordination of climate change and DRM related tasks;
- Mainstream climate change and disaster risk management in national and sectoral policies, strategies and plans; and
- Strengthen the relevant technical agencies/units and mandate them for climate change adaptation, disaster risk management and integrated natural resources management at national, district and local levels

2. Assess and monitor climate risks (current and future) and vulnerabilities, and enhance early warning systems for proactive climate risk management and adaptation to climate change

Objective: Improve climate risk and vulnerability assessment tools and methods; climate information products and early warning systems customized to the needs of users, especially farmers and other information dependent communities.

Strategy: Use of best available methodologies for more systematic monitoring of current and future climate related risks. Improve sectoral specific early warning systems with dissemination down to local level.

Key Areas:

- Improve climate impact, risk and vulnerability assessment methodologies and transfer to relevant users;
- Strengthen the institutional and technical capacity of SWAZI Met to be able to provide necessary forecast products and early warning systems for the relevant applications.;
- Strengthen technical capacity to apply need based climate and weather information products and early warning systems at the sectoral level; and

- Develop and test livelihood based damage and loss assessments procedures and baseline database formats at the level of the productive sectors

3. Improve knowledge management, database and promote awareness on climate change impacts, adaptation and disaster risk management

Objective: Use knowledge to build a culture of innovation and resilience, and to institutionalize training on climate change adaptation and disaster risk management.

Strategy: Awareness raising, knowledge management and information dissemination on climate change adaptation and disaster risk management

Key Areas:

- Design and apply awareness creation strategies for climate change adaptation and disaster risk management at all levels;
- Enhance knowledge, innovations and good practices for climate change adaptation and disaster risk management;
- Mobilize local communities and local institutions for climate change adaptation and disaster risk management interventions;
- Share knowledge and strategically disseminate key reports and information material related to climate change adaptation and disaster risk management
- Develop networks across disciplines and regions; dialogue;
- Include DRR/CCA into school curricula, formal and informal education; and
- Strengthen the research capacity: multi-risk; socioeconomic; application

4. Reduce climate related risks and underlying vulnerabilities by implementing technical options and integrating approaches of Community Based Adaptation (CBA) and Community Based Disaster Risk Management (CBDRM)

Objective: Increased capacity of technical staff, research institutes and users/producers to implement and disseminate a range of tested best practices for increasing resilience against climate change impacts and natural hazards.

Strategy: Facilitate long-term community based adaptation processes and related technology development and transfer for enhancing climate resilience and sustainable development in in the most vulnerable districts.

Key Areas:

- Promote integrated production systems and economic diversification to build resilience of communities to climate change impacts;
- Promote sustainable ecosystem and environmental management;
- Promote the integration of DRR strategies integrated with CCA;
- Promote food and nutrition security for resilience –Climate Smart Agriculture;
- Integrate DRR/CCA into the health sector and safe hospitals;
- Protect critical public facilities;

- Strengthen the recovery and social protection schemes to ensure flexibility and scalability;
- Promote risk sharing and transfer mechanisms, such as insurance;
- Promote post-harvest practices to proactively manage climate related risks;
- Reduce landslide and erosion risks through community level interventions;
- Promote sustainable biodiversity, land use planning and land and soil management practices;
- Promote sustainable water management and conservation practices;
- Improve the construction of buildings by ensuring the conformity of statutory codes with the latest standards in building practice and with peril faced;
- Promote community action plans for climate change adaptation and disaster risk management and package lessons learned;
- Promote Public-Private sector partnership;
- Promote rural development plans with integrated DRR/CCA measures; and
- Strengthen research institutions to enable them to prioritize immediate issues and conduct applied research on climate change impacts and adaptation/mitigation and develop technologies for sustainable land and water management.

5. Strengthen capacities and procedures for effective disaster preparedness, response and rehabilitation at all levels and the integration of climate change adaptation into response, recovery and rehabilitation initiatives

Objective: Enhance the national and local capacities for disaster preparedness, response and rehabilitation and ensure that climate change adaptation actions are considered in all relevant interventions.

Strategy: Facilitate long-term sustainable risk reduction and adaptation measures as part of response and rehabilitation interventions.

Key Areas:

- Promote regular contingency planning at all levels;
- Enhance adequate response measures to improve effectiveness of emergency response actions;
- Standardize the content/ format of information collection on disaster impacts;
- Build capacity to know the risks at all levels to facilitate planning for better preparedness and response;
- Strengthen capacities to integrate CCA, DRM and sustainable natural resources management into response and rehabilitation projects;
- Strength the emergency funding framework; and
- Promote voluntarism and participation

The Resilience Strategy and Action Plan should also consider four cross cutting elements that should be part of all the priority actions outlined above: Capacity Development, Knowledge and Communication, Partnerships, and Gender equity.

5.0 SWAZILAND RESILIENCE STRATEGY AND ACTION PLAN

5.1 Overview

The **Swaziland Resilience Strategy and Action Plan** (**SRSAP**) is a road map that demonstrates the contribution of disaster risk management (DRM) and climate change adaptation measures to gender-responsive and rights-based sustainable development in the Kingdom. It promotes inclusive growth, builds the adaptive capacities of communities, increases the resilience of vulnerable sectors and communities, and optimizes disaster migration opportunities with a view to promoting the welfare and security of the population.

The SRSAP is guided by good governance principles within the context of poverty alleviation and environmental protection. It recognizes the need for partnerships for effective delivery of services to the people of the country - that is, working together through complementation of resources. Engaging the participation of civil society organizations (CSO), regional and international organizations, the private sector and volunteers in the government's resilience building programmes is therefore part and parcel of the national strategy and plan.

The SRSAP highlights the need for institutionalizing resilience building policies, structures, coordination mechanisms and programs with continuing but greater budget appropriation on DRM and CCA from national to local levels. Thus, the plan outlines the activities which shall strengthen the capacity of personnel of national government, regional and local government units and partner stakeholders, and build the disaster resilience of communities. It also outlines institutionalized arrangements and measures for reducing disaster risks, including projected climate risks, and enhancing disaster preparedness and response capabilities at all levels.

The SRSAP also highlights the importance of main-streaming DRM and CCA measures in the development processes such as policy formulation, socioeconomic development planning, budgeting and governance, particularly in the area of environment, agriculture, water, energy, sanitation and hygiene (WASH), health, education, poverty reduction, land-use and urban planning and public infrastructure and housing among others. Main-streaming also puts forth the need to develop common tools to analyse the various hazards and vulnerability factors which expose the Kingdom communities and people to harm.

Competency and science-based capacity building activities are likewise incorporated into the SRSAP, along with the nurturing of continuous learning through knowledge development and management of good DRM and CCA practices on the ground.

A critical component of the SRSAP is the establishment of measureable, quantitative and qualitative targets for achievement, which is phased to facilitate optimal sequencing of activities and to ensure complementarities, within a specific period of time.

The SRSAP and affiliated inputs expended and outputs achieved is subjected to a monitoring, evaluation and accountability process which allows the participation of and access by all stakeholders through transparent mechanisms. An effective Results-based Evaluation and Monitoring and Information System is implemented to ensure results are achieved and to measure progress along the implementation path. The Monitoring and Evaluation systems will be utilized to evaluate how well financial expenditures match the SRSAP outputs.

Finally, the SRSAP focuses to a large extent on the major hydro-meteorological hazards that have impacted Swaziland (drought, strong winds and storms, and floods), and to a lesser extent on economic shocks (high and volatile food and energy prices). It is anticipated that spill-over benefits from this strategic focus will accrue to other epidemiological and man-made hazards (wildfires).

The formulation process of the SRSAP was discussed under **Section 4** of the Report.

5.2 The Pillars of the Resilience Strategy and Action Plan

The SRSAP framework is built on the need to address the contributing factors and processes leading to disaster risk, including changing environmental drivers (climate change and variability), as well as the consequences of poverty and inequality, unplanned and rapid urbanisation, poor land management and compounding factors such as demographic change, weak institutional arrangements, disempowered local actors, lack of regulation (or its enforcement), cultural beliefs and experiences, lack of (or contextually inappropriate) tools, barriers to uptake of new technologies and the intersections with issues such as cultural beliefs, social practices and historic experiences. It addresses critical issues, including:

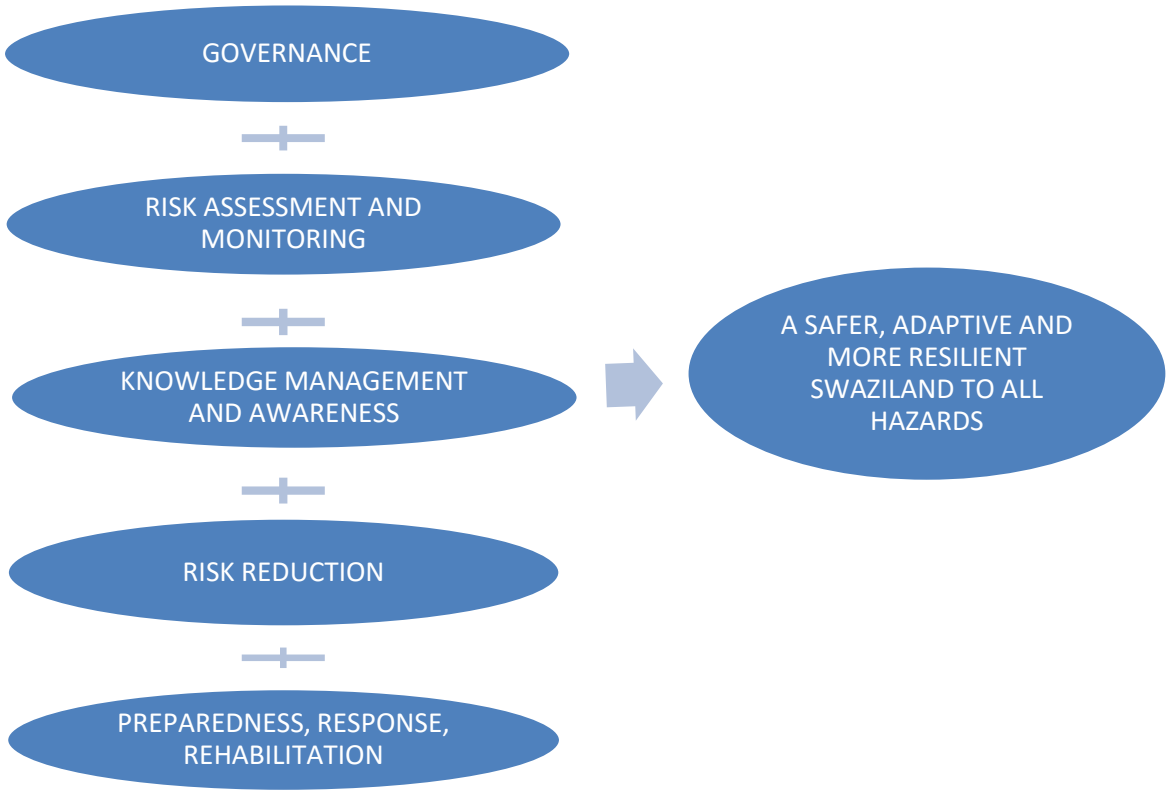
- Areas for capacity building to improve the country's institutional capacity for better programme planning and implementation in order to address to DRR, CCA and Food Security;
- Priorities for the medium and long term promotion of diversification of agricultural production and community assets, capacity building for government and partners working on DRR, CCA, mapping of hazards and risks, monitoring, preparedness and response and support to the scaling up of the existing social protection mechanisms, including elderly grants, orphaned and vulnerable children (OVC) grants and farm input grants and subsidies;
- Areas for improved inter-sectoral coordination with relevant suggestions for the implementation of identified improvements that are necessary; and
- The institutional arrangements for effective resilience building and the coordination of response to disasters, and defining of the roles of the stakeholders including the UN Agencies;

The SRSAP has five distinct yet mutually reinforcing pillars (**Figure 3**), namely:

- Governance;
- Risk Assessment and Monitoring;
- Knowledge Management and Awareness;
- Risk Reduction; and
- DRM AND CCA Preparedness, Response and Rehabilitation Measures

Figure 3: The SRSAP Framework for Resilience Building

Safer, Adaptive and More Resilient Swaziland to All Hazards for All Generations



The Sendai Framework for Disaster Risk Reduction (2015 - 2030) presents a discourse on the critical roles these five (5) thematic areas/pillars play in resilience building, with some of the critical issues highlighted below.

Governance

Disaster risk governance at the local/community, regional and national levels is of great importance for an effective and efficient management of the process of resilience building. Clear vision, plans, competence, guidance and coordination within and across sectors, as well as the participation of relevant stakeholders are needed. The strengthening of disaster risk governance for prevention, mitigation, preparedness, response, recovery and

rehabilitation is therefore necessary as it fosters collaboration and partnership across mechanisms and institutions for the implementation of instruments relevant to disaster risk reduction and sustainable development. At present there is no single entity mandated to be responsible for resilience building within Swaziland. The new challenges require a re-definition of CCA and DRM related tasks and responsibilities in the country, including the building/strengthening of partnerships and networks with other stakeholders.

Risk Assessment and Monitoring

Policies and practices for disaster risk management and climate change adaptation should be based on an understanding of disaster risk in all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment. Such knowledge can be leveraged for the purpose of pre-disaster risk assessment, for prevention and mitigation and for the development and implementation of appropriate preparedness and effective response to disasters. This pillar addresses issues related to access to the latest tools and methods translating climate information products into impact outlooks, and alternative management strategies relevant to vulnerable communities and establishing a strategy for communication.

Knowledge Management and Awareness

Effective resilience building also requires improved understanding of the processes that help to strengthen resilience at different levels. More efforts towards vertical and horizontal integration are needed to effectively triangulate different forms of knowledge in ways that can support the processes of planning for future risk and uncertainty. A lack of action in this regard is due in part to inappropriate or inadequate forms of knowledge, particularly in relation to the availability of down-scaled climate data. However, it is also due to a lack of technical capacity and skills needed to access and translate scientific knowledge on disasters and climate risks. This can constrain efforts towards integration. The re-interpretation of scientific data by end-users lacking the necessary technical skills can lead to flawed outcomes. But this is not just a challenge of better 'translation'. Utilizing scientific knowledge alone produces only partial solutions - unless informed by knowledge of the observed changes, emerging and perceived trends and the socioeconomic context of the local level. Knowledge brokers and intermediaries are needed to connect technical and scientific sources with community knowledge and to enhance the accessibility, relevance and credible translation of knowledge. This should result in the building/strengthening of the capacity of policy makers, disaster risk reduction practitioners, civil society organizations and citizens to become more effective in planning for uncertainty and change and responding to disasters.

This suggests the need for improvement in operational skills at the institutional level to implement climate change adaptation and disaster prevention and preparedness activities. In this context, awareness creation and knowledge building are considered very important. The lack of knowledge and awareness about the climate related impacts at the community level must also be addressed. This pillar is focused on addressing these gaps.

Risk Reduction

Public and private investment in disaster risk prevention and reduction through structural and non-structural measures are essential to enhance the economic, social, health and cultural resilience of persons, communities, the regions and the country as a whole and assets, as well as the environment. These can be drivers of innovation, growth and job creation. Such measures are cost-effective and instrumental in saving lives, preventing and reducing losses and ensuring effective recovery and rehabilitation. Technical options to assist communities in increasing livelihood adaptation and resilience against climate change impacts and natural hazards are known and available at district and national levels. However, the available options are often not known or easily accessible at the community level. Climate change adaptation and disaster risk reduction measures are not systematically assessed, documented and shared. To make climate change adaptation and disaster risk management more effective, it is of utmost significance that the available options are systematically documented, shared and adapted to location specific needs in a participatory way with the communities.

DRM AND CCA Preparedness, Response and Rehabilitation Measures

The steady growth of disaster risk, including the increase of people and asset exposure, combined with the lessons learned from past disasters, indicates the need to further strengthen disaster preparedness for response, take action in anticipation of events, integrate disaster risk reduction in response preparedness and ensure that the capacities are in place for effective response and recovery at all levels. Disasters have demonstrated that the recovery, rehabilitation and reconstruction phase, which needs to be prepared ahead of a disaster, is a critical opportunity to "Build Back Better", including through integrating disaster risk reduction into development measures, making communities, regions and Swaziland resilient to disasters. In Swaziland, significant resources are being allocated for response and rehabilitation after natural disasters. These efforts are primarily ad hoc in nature, focusing on the immediate needs. These interventions can be utilized as an opportunity to integrate climate change adaptation priorities, considering long-term perspectives.

Each pillar has its own objective in support of attaining the country's overall goal of "**A *Safer, Adaptive and More Resilient Swaziland to All Hazards and for All Generations***".

The pillars overlap and essentially:

- **Mutually reinforce each other and are interoperable.** In this context, activities under each of the pillars may directly or indirectly affect each other. For example, it may be assumed that the level of preparedness and intensity of response activities conducted is lessened because appropriate prevention and mitigation activities have been put in place.

- **Do not, should not and cannot stand alone.** Activities of a thematic area are executed with due consideration paid to their linkages with other activities in the remaining four thematic areas/pillars.
- **Have neither clear starting nor ending points between each of the pillars and overlaps are expected.** With grey spots existing between and among the pillars, all relevant activities of the SRSAP should be smoothly integrated with the pertinent activities of partners and lead agencies, within the sphere of working together. Within the framework of the SRSAP, the overlapping activities are presented under the specific pillar that best captures the essence seen through the lens of the resilience building area and correspond to the given relevant parameter.

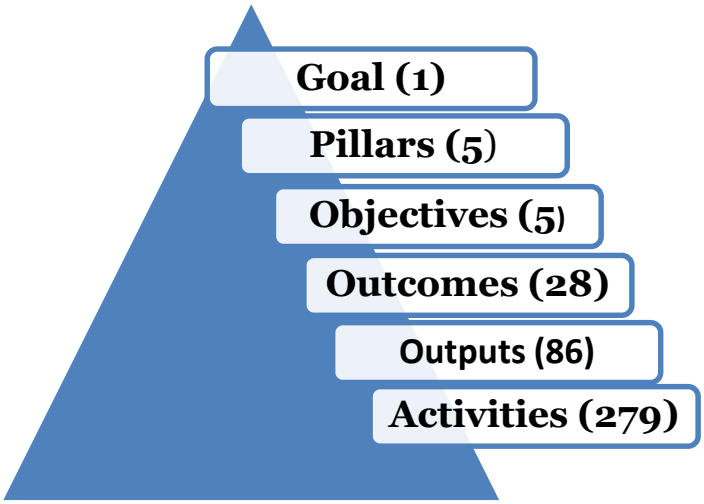
- **Are centred on problem-needs and asset-strengths.** With the identification of the different factors which contribute to the vulnerability of Swaziland, the SRSAP focuses on how the root of the problems can be addressed. Likewise, the plan acknowledges existing and inherent assets and strengths of the country which will help to attain the outcomes established in the SRSAP.

- **All point in one direction, i.e., to reduce people's vulnerability and increase their capacities.** The outcomes, outputs and activities are focused on a specific pillar, but the SRSAP should be viewed in its totality. The parts contribute to the cohesive whole and thus all efforts made through the implementation of concrete activities, when combined, would lead to the realization and achievement of the country's goal of a safer, adaptive and more resilient Swaziland.

5.3 Goals, Objectives, Outcomes and Outputs

The SRSAP has one long term goal targeted through the five pillars with corresponding objectives which are further defined through outputs. The number of goals, pillars, objectives, outcomes, outputs and activities contained within the SRSAP is presented in **Figure 4** below**.**

Figure 4: Number of Goal, Pillars, Objectives, Outcomes, Outputs and Activities of the SRSAP



In general, the SRSAP will be implemented over thirteen (13) years, according to the following timelines, with the two, four, and seven-year intervals.

Term	Period
Short term	2017 -2018
Medium term	2019 -2022
Long term	2023 -2030

The end of the medium term of SRSAP corresponds to the end of NERMAP and the National Development Strategy.

5.4 Cross Cutting Issues Highlighted in the SRSAP

The SRSAP highlights four cross cutting elements that are an integral part of all the priority actions contained in the Plan.

- **Capacity development:** Strengthening institutional and technical capacities is necessary for effective development and implementation of the priority interventions. Though capacity development is specifically addressed under Pillar 1, this applies to all the priority action areas based on the need. The core areas of capacity development include research and development, technology transfer, tools and methods for assessment, agriculture and livestock support services, policy advocacy, awareness raising and main-streaming.

- **Knowledge and communication:** There is a lack of knowledge and awareness about the climate related impacts and adaptation measures at all levels.

Communication between research and development in general and to the users of information, in particular, are critical to the transfer of new technological innovations in the building of resilience. The generation, documentation, sharing and application of information directly contribute to meeting Pillar 3.

- **Partnerships**: Strategic partnership promotes an interdisciplinary approach in implementing the priority actions. The SRSAP foresees partnerships at all levels and among the agencies, departments/units, ministries, private sector civil society and hemisphere/regional and international organizations. Specific collaboration and coordination arrangements at various levels are described in **Section 6**.

- **Gender Equity:** The gender dimension is crucial in the country, where gender inequalities in access to and control over resources are persistent, undermining a sustainable and inclusive development of Swaziland. The gender roles and relations affect food and nutrition security and household welfare which are critical indicators of agriculture development. Integration and main-streaming of gender priorities in all the activities is the key to the successful implementation of the SRSAP.

5.5 SRSAP Logical Framework Matrix

The logical framework matrix by the Pillar for the objective, outcomes, outputs, actions/activities, indicator, lead agency and timeline is presented in the tables below.

SWAZILAND RESILIENCE STRATEGY AND ACTION PLAN (SRSAP) MATRIX

PILLAR 1 – GOVERNANCE

Institutional and Technical Capacities for Disaster Risk Management (DRM) and Climate Change Adaptation (CCA) in Planning and Policy Frameworks and Coordination Mechanisms at All Levels

Strategy: Strengthening institutional and technical capacities and mainstreaming climate change adaptation and disaster risk management within national, regional, community and sectoral policies, strategies and plans.

OBJECTIVE	OUTCOMES
To ensure clear vision, plans, competence and coordination are in place within the Kingdom, that foster collaboration among institutions in the implementation of disaster risk management and climate change adaptation measures.	**1.1** Institutional mechanisms for the efficient and effective coordination of DRM and CCA tasks within Swaziland strengthened at the national, regional and local/community levels
	1.2 Technical Units strengthened and provided with mandates for DRM and CCA management at the national, regional and local/community levels
	1.3 DRM and CCA main-streamed and integrated into national sectoral, regional and local development policies, strategies, plans and budgets
	1.4 DRM and CCA considerations integrated into cross cutting issues such as environmental management and gender equality

Outcome 1.1: Institutional mechanisms for the efficient and effective coordination of DRM and CCA tasks within Swaziland strengthened at the national, regional and local/community levels

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% COMPLETION		
				2017 2018	2019 2022	2023 2030
1.1.1 National, regional, local and sectoral frameworks of laws, regulations and public policies reviewed, updated, further developed, as appropriate, and promoted to ensure coherence and to drive resilience at various levels	Review and harmonize Disaster Management Act (2006), Disaster Management Policy (2010) and Sectoral Policies within and across all sectors	**NDMA**	Harmonized Management Act (2006) and policy framework are established to better drive resilience building at all levels	90	100	100
	Prepare guidelines for the formulation of regional, community level and sectoral resilience plans and promote a participatory dialogue with all stakeholders at all levels for the preparation of resilience strategies and plans that are aligned to the SRSAP, incorporating priorities of CCA/DRM, natural resources management and management of degraded lands	**NDMA**	Regional and local/community level and sectoral plans prepared or updated, incorporating resilience perspectives of the SRSAP to ensure internal national consistency	80	100	100
	Operationalize the Revised Disaster Management Policy (2010) and the various Sectoral Policies, taken into consideration new emerging issues contained in the SRSAP	**NDMA**	Revised Disaster Management Policy (2010) and Sectoral Policy frameworks available for the operationalization of the national SRSAP and its various components at t regional, local and sectoral levels	90	100	100
	Adopt and implement the SRSAP across all levels, different time scales, with targets, indicators and time frames, aimed at preventing the creation of risk, the reduction of existing risk and the strengthening of economic, social, health and environmental resilience	**NDMA**	The SRSAP and other strategic components at the various levels are adopted and being implemented utilizing the Revised Disaster Management Policy (2010) and Sectoral Policy frameworks	50	80	100

1.1.2 The national integrated institutional framework for resilience building strengthened	Establish resilience building structures at national, regional and local/community levels and strengthen urban government capacity in DRM, CCA and EPR	**NDMA**	Organs mandated in the Disaster Management Act (2006) are established and functional	80	100	100
	Define with clarity, roles and responsibilities across all relevant organizations involved in resilience building to ensure better coordination of pre-event planning and preparedness, event response and post-event activities	**NDMA**	Presence of an organizational chart documenting the structure and role definitions of each relevant agency to achieve a single point of coordination Structure agreed and preferably signed off by all participants via MOUs or similar instruments	70	100	100
	Address disaster risk in publicly owned, managed or regulated services and infrastructures	**NDMA**	Protocols developed and available to guide the involvement of publicly owned, managed or regulated services and the co-option of infrastructures	80	100	100
	Promote and provide incentives, as relevant, for actions by persons, households, communities and businesses	**NDMA**	Framework of incentives developed to drive the actions of persons, households, communities and businesses in resilience building	80	100	100
	Enhance relevant mechanisms and initiatives for disaster risk transparency	**NDMA**	A framework for action, comprised of financial incentives, public awareness-raising and training initiatives, reporting requirements and legal and administrative measures developed and implemented to enhance transparency	80	100	100
1.1.3 Strengthened mechanisms for	Establish/strengthen the necessary mechanisms and incentives to ensure high levels of compliance with the existing	**NDMA**	Compliance mechanisms and incentives in place to address issues related to land use and	70	90	100

compliance and reporting in place	safety-enhancing provisions of sectoral laws and regulations, including those addressing land use and urban planning, building codes, environmental and resource management and health and safety standards, and update them, where needed, to ensure an adequate focus on resilience building		urban planning, building codes, environmental and resource management and health and safety standards, and updated, where needed, to ensure an adequate focus on resilience building			
	Develop/strengthen, as appropriate, mechanisms to follow up, periodically assess and publicly report on progress on national, regional and local/community plans; and promote public scrutiny and encourage institutional debates, including by parliamentarians and other relevant officials, on progress reports of local/community, regional and national plans for resilience building	**NDMA**	Monitoring, evaluation and reporting framework developed/strengthened and in place to track and provide progress reports on the implementation of the various plans	90	100	100

Outcome 1.2: Technical Units strengthened and provided with mandates for DRM and CCA management at the national, regional and local/community levels

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% COMPLETION		
				2017 2018	2019 2022	2023 2030
1.2.1 Technical Units strengthened and provided with mandates for DRM and CCA management at the national and regional levels	Strengthen the gender equity, climate change, resource mobilization and statistics component of the NDMA	**NDMA**	Additional staff with specific TOR and required logistic support in place	100	100	100
	Enhance operational and technical capacities of offices operating at the regional and area level on climate change adaptation, disaster risk management and integrated management of natural resources	**NDMA**	Training programs conducted in risk prone areas	60	90	100
	Mandate the departments and offices at decentralized levels to participate as key partners in CCA/DRM committees at all levels	**NDMA**	New guidelines and informed to all vulnerable regions	100	100	100

Outcome 1.3: DRM and CCA main-streamed and integrated into national sectoral, regional and local development policies, strategies, plans and budgets

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% COMPLETION		
				2017 2018	2019 2022	2023 2030
1.3.1 Capacity built for main-streaming CCA and DRM for planners and decision makers at the national, sectoral, regional	Initiate the process of integration of climate change adaptation and disaster risk management and sustainable land management (controlling and preventing land degradation) priorities, policies, strategies and plans (including special programs on food security)	**NDMA**	Tor established for the integration process	100	100	100

and local/community levels to ensure the resilience building becomes an integral component in planning, decision making and budgetary processes at all levels	Develop science-based protocols and technologies that facilitate the financial and economical sound main-streaming of DRM and CCA	**NDMA**	Protocols for the for integration of DRM and CCA into policies, strategies and plans available	60	100	100
	Identify key CCA/DRM main-streaming partners and existing level of CCA/DRM main-streaming at all levels	**NDMA**	Level of integration of CCA/DRM in the planning process identified	100	100	100
	Conduct CCA/DRM main-streaming training with key partners in national development planning and budgetary processes linked to annual budget submissions (linked to **1.3.2**)	**NDMA**	Number of staff from key organization responsible for resilience building that successfully completed main-streaming training	50	80	100
1.3.2 CCA and DRM considerations main-streamed into macroeconomic policy, fiscal management and national budgetary processes and practices	Collect information on cost of disasters and risk of disasters for incorporation in the macroeconomic and fiscal policy, forward projections and monitoring of economic growth	**NDMA**	Updated loss database in place	100	100	100
	Prepare financial (operating and capital) plan(s) with a reasoned set of priorities based on the disaster resilience impact to be achieved and keyed to "most severe" and "most probable" scenarios	**NDMA/ MEPD**	A comprehensive long term financial plan exists, and is based on a coherent nationwide set of priorities that covers all identified needs	100	100	100
	Prepare priorities for disaster resilience investment that are clear and defensible based on a view of the most beneficial impact	**NDMA/ MEPD**	Guidelines for the selection of priorities for investment developed and utilized	100	100	100
	Priorities are assembled into planning cycle that integrates spending by all key ministries, departments/units as well as relevant institutions	**NDMA/ MEPD**	Priorities are assembled into a coherent set of 5-year plans, with mechanisms in place for updating.	100	100	100
	Establish a sustainable source of fund for resilience building, to include a provision in the DRM policy guidelines of a 1% per institutions' budget dedicated to resilience building activities	**All relevant institutions**	NDMA has a sustainable source of funds for program execution. Organizations at all levels are proactive in CCA/DRM	50	80	100

	Establish Contingency Fund for post disaster recovery (may be referred to as a "rainy day" fund)	**NDMA/ MEPD**	Contingency fund exists to address impacts from the "most severe" and "most probable" scenarios, is 100% adequate and utilized for the intended purpose	50	80	100
	Establish a regime of incentives and financing/credit for stakeholders (agribusinesses, farmers, agro-processors and related support organizations) to deal with preparedness and recovery based on the most severe" and "most probable" scenarios	**NDMA/ MEPD**	Incentives and financing/ credit facility exist to deal with all known resilience issues, for all segments of the country	50	80	100
	Pursue all possible methods of financing and funding for resilience building	**NDMA/ MEPD**	The country has a systematic inventory of financing methods and all potential sources of funds for different resilience expenditure, a strategy for using them in a way that complements its own resources	50	80	100
1.3.3 Resilience building as a development issue raised at the highest level (parliament) to increase commitment and support of policies and priorities	Prepare and circulate periodically, Resilience Building briefs to parliament	**NDMA**	Improved level of support provided (legislative and budgetary) for Resilience building programmes by parliamentarians	100	100	100
1.3.4 Enhanced Civil Society Organizations (CSO) participation in national, regional	Develop selection criteria and accreditation for CSO participation in Resilience Building at the national, regional and local levels	**NDMA**	The number of CSOs participating in Resilience Building meetings	40	70	100

and local Resilience Building						
1.3.5 Strengthened and improved Corporate Partnership for Resilience building	Develop partnership/donor profiles for Resilience building in Swaziland	**NDMA**	Developed Partnership/Donor Profiles available	50	100	100
1.3.6 Resilience and CCA/DRM issues (including adaptation and mitigation, land degradation) and food security priorities are integrated into national, regional and local level plans	Promote the integration of disaster risk management and climate change adaptation issues (including adaptation and mitigation, land degradation) and food security priorities into national, regional and local level plans	**NDMA**	Increased in the number of regions and communities integrating CCA and DRM considerations into new plans or updating existing plans	30	70	100

Outcome 1.4: DRM and CCA considerations integrated into cross cutting issues such as environmental management and gender equality

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% COMPLETION		
				2017 2018	2019 2022	2023 2030
1.4.1 Environmental and gender equality policies developed with a CCA/DRM lens	Review and integrate DRM and CCA into the various environment and gender equality policies, plans, programs and projects	**NDMA/ SEA**	At the national level, DRM and CCA are integral objectives of environment and gender equality - related policies and plans, including for land use and natural resource management	100	100	100
1.4.2 Aligned Climate Change Commission (CCC) and NDMA work plans	Review DRM and CCA laws and implementing rules and regulations to ensure the alignment of CCC and NDMA work plans	**NDMA/ SEA**	SRSAP and National Climate Change Commission Action Plan aligned and available	30	100	100

PILLAR 2 – RISK ASSESSMENT AND MONITORING

Assessing and monitoring risks (current and future) and vulnerabilities, and enhance early warning systems for proactive climate risk management and adaptation to climate change

Strategy: Use of best available methodologies for more systematic monitoring of current and future climate related risks, including for agriculture and food security. Improve sector specific early warning systems with information dissemination down to local level.

OBJECTIVE	OUTCOMES
Improve climate risk and vulnerability assessment tools and methods, and ensure that climate information products and early warning systems are customized to the needs of dependent communities, including farmers.	**2.1** Climate impact, risk and vulnerability assessment methodologies improved and derived outputs from the enhanced processes are transferred to relevant sectors, departments and communities for application
	2.2 Institutional and technical capacities of Weather and Climate Services strengthened to improve the provision of necessary forecast products obtained from the early warning systems for application at appropriate levels
	2.3 National technical capacities to apply need based climate and weather information products derived from early warning systems strengthened
	2.4 Livelihood based damage and loss assessments procedures and baseline database formats developed and tested

Outcome 2.1: Climate impact, risk and vulnerability assessment methodologies improved and derived outputs from the enhanced processes are transferred to relevant sectors, departments and communities for application

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% COMPLETION		
				2017 2018	2019 2022	2023 2030
2.1.1 Risk and vulnerability assessments conducted to ensure that knowledge of the most prevalent	National standards (and tools and methodologies) established for risk and vulnerability assessments	**NEWU/ Swazi-Met/ NDMA**	National standards (and tools and methodologies) for risk and vulnerability assessments that are of international standards are in place and available for applications	30	60	100

hazards faced by the country and their likelihood exists.	Conduct hazard risk, vulnerability and impact assessment studies for the relevant sectors, and share the information with relevant entities for decision making and planning	**NEWU/ Swazi-Met**	The results of the analysis available for decision making and planning, including: (i) Comprehensive recent, expert reviewed estimates of probability of known hazards or perils and their extent; and (ii) Comprehensive, detailed and up to date hazard maps, covering perils, assets and vulnerable population at risk.	30	60	100
	Prepare detailed climate impacts, hazard risk (including land degradation) and vulnerability maps of the country, targeting agriculture, infrastructure and housing	**NEWU/ Swazi-Met**	Existence of spatial information outputs, comprised of timely updated scenarios setting out country wide exposure and vulnerability from each hazard level, and include estimates of losses based on empirical data, where available, or experts reviewed estimates of probable impact	25	50	100
	Consolidate and use results from in-depth studies on current and future climate risks and impacts on natural resources and relevant sectors to design/update policy priorities, adaptation and DRM strategies	**NEWU/ Swazi-Met /NDMA**	Results of impact analysis, including a comprehensive knowledge of exposure and vulnerability (scenarios for the most "severe" and most "probable"" incidence) utilized in for the formulation/updating of policies, plans and adaptation and DRM strategies	20	40	100
	Establish a process that is agreed upon by all relevant agencies to update hazard estimates and exposure and vulnerability assessments and asset inventory on a timely basis	**NEWU/ Swazi-Met /NDMA**	Update processes exist, are proven to work at required frequency and thoroughness, and are accepted by all relevant agencies	25	50	100

Outcome 2.2: Institutional and technical capacity of Weather and Climate Services strengthened to be able to improve the provision of necessary forecast products obtained from the early warning systems for applications at the appropriate levels

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% COMPLETION		
				2017 2018	2019 2022	2023 2030
2.2.1 Institutional and technical capacities of Swazi-Met and other relevant departments and entities strengthened	Assess the existing EWS capacity and the information needs at the national, regional and local levels of all key hazards and ensure adequacy of the EWS Weather and Climate Service's capacity vis-à-vis needs, including the establishment of links to hemisphere/regional and international early warning systems	**NEWU/ Swazi-Met/VAC**	Network of functional early warning systems established/ strengthened, tested and the range of information products available made known to the public	60	90	100
	Establish community based early warning systems for drought, flood and storm at local level in collaboration with MOA and Department of Water	**NEWU/ Swazi-Met /MOA DOW**	Localized drought and flood early warning system established and tested in drought vulnerable areas and major river basins	50	80	100
	Enhance human resources and logistics requirements of Swazi-Met and other relevant departments and entities, and facilitate the necessary need based training programmes	**NEWU/ Swazi-Met**	Cadre of quality staff trained and engaged on a sustainable basis to produce and provide well packaged information products relevant to resilience building	60	80	100
	Assess existing agro-climatic/ climate monitoring for agriculture applications and strengthen climate monitoring infrastructure and equipment research stations	**NEWU/ Swazi-Met /MOA**	At least 60% of the agro-climatic observatories upgraded	30	70	100
	Develop the specialized technical capacity for early warning systems management for relevant hazards at the national, regional and local levels	**NEWU/ Swazi-Met /NDMA/ VAC**	Number of functionaries trained and engaged on sustainable basis in the application of early warning systems platform and information in resilience building at the national, regional and local levels	40	70	100
	Establish/strengthen the data management system to ensure robustness in the collection, analysis, management and use of relevant data and practical	**NEWU/ Swazi-Met**	Real time access to reliable data, making use of space and in situ information, including geographic information systems	60	80	100

	information and also to ensure its dissemination, taking into account the needs of different categories of users, as appropriate	**/NDMA/ VAC**	(GIS) promoted, and modern information and communications technology innovations available and utilized to enhance measurement tools as well as the collection, analysis and dissemination of data			
	Evaluate and communicate on a timely basis available information from early warning systems, and seasonal forecast products from international and /hemisphere/regional institutions for applications	**NEWU/ Swazi-Met/ VAC**	Forecast products made available on a timely basis and intended beneficiaries, especially farmers and households in the most vulnerable communities have access to the products	50	70	100

Outcome 2.3: National technical capacities to apply need based climate and weather information products derived from early warning systems strengthened

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% COMPLETION		
				2017 2018	2019 2022	2023 2030
2.3.1 Enhanced application of need based climate and weather information products	Enhance the climate database in Swazi-Met and other departments and entities, and provide training to interpret historical climatic data for applications, including those related to agriculture.	**NEWU/ Swazi-Met**	Updated historical climate data (at least 30 years) from the meteorological stations are better packaged and available for use	40	70	100
	Support is provided by Swazi-Met to relevant agencies and entities to translate weather and climate forecast products into impact outlooks using decision support tools	**NEWU/ Swazi-Met**	A technical core group from the various Clusters trained to interpret weather and climate information and prepare impact outlooks	30	60	100
	Tap and train functionaries from the regional and local offices for hazard monitoring	**NEWU/ Swazi-Met/ NDMA**	Number of functionaries change	30	60	100
	Apply risk information in all its dimensions of vulnerability, capacity and exposure of persons, communities,	**NDMA**	Risk information applied in the development and	60	100	100

	countries and assets, as well as hazard characteristics		implementation of disaster risk reduction policies			
	Establish a communication strategy and mechanisms for timely dissemination of EW messages to local level /farmers	**NEWU/ Swazi-Met/ NDMA**	Reduction in damage and losses and number of people affected	60	100	100
2.3.2 Flood/Drought Management Plan (F/DMP) and template developed to mitigate and alleviate a crisis	Develop indicators and thresholds establishing onset, ending, and severity levels of exceptional circumstances (extensive flooding/prolong drought)	**MNRE/ NDMA**	Indicators and thresholds established to include information on the stored water volume in reservoirs, piezo metric levels in aquifers, fluvial total discharge of natural precipitation patterns in representative pluviometric rainfall stations, impacts at the social and environmental levels, among other variables	70	100	100
	Establish the measures to be taken in each flood/drought phase in order to manage the deterioration of the water status and to mitigate negative flood/drought effects	**MNRE/ NDMA**	(i) Preventative and strategic measures are developed and used under the normal status (ii) Operational (tactical) measures are developed and applied when floods/droughts occur (during pre-alert and alert statuses) (iii) Organizational measures developed and implemented, such as the establishment of coordination protocols among administrators and public and private entities linked to the problem (iv) Follow-up measures are implemented to serve in the process of ensuring compliance and application of F/DMP and its effects (v) Protocols for restoration or exit flood/drought measures developed and implemented	70	100	100

	Establish an organizational framework to deal with flood/drought and subsequent revisions and updating of existing flood/drought management plan	**MNRE/ NDMA**	An organizational chart developed and defined roles and responsibilities of the entities involved established	70	100	100
	Develop a special template dedicated to extensive flooding/prolong drought related to agriculture and groundwater and climate aspects, as agriculture is the main water resources pressure in the country	**MNRE/ NDMA**	Flood/Drought Template (Annex) developed for agriculture that are informed and aligned to the SRSAP	70	100	100

Outcome 2.4: Livelihood based damage and loss assessments procedures and baseline database formats developed and tested

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% COMPLETION		
				2017 2018	2019 2022	2023 2030
2.4.1 Enhanced integrated livelihood approach in place in support of resilience building	Consolidate existing data on damage and loss due to climate related extreme events (including natural disasters) in collaboration with all relevant ministries and organizations and strengthen the database in NDMA	**NEWU/ Swazi-Met/ NDMA**	A time series data for at least 30 years available	30	60	100
	Strengthen livelihood oriented baseline data collection methodologies and formats and facilitate implementation in risk prone districts of Swaziland	**NEWU/ Swazi-Met/ NDMA**	Integrated livelihood approach introduced and impact analyses of events conducted and reports available	20	70	100
	Strengthen specifically, the crop and livestock livelihoods monitoring and forecasting system and database in high risk areas to establish a basis for better risk reduction, emergency needs assessment and response	**NEWU/ Swazi-Met/ NDMA/ MOA**	Improved crop and livestock livelihoods monitoring and forecasting system established, building on existing ones	50	70	100

PILLAR 3 – KNOWLEDGE MANAGEMENT AND AWARENESS

Improved knowledge management, database and awareness raising on climate change impacts, adaptation and disaster risk management

Strategy: To enhance awareness raising, knowledge management and information dissemination on climate change adaptation and disaster risk management in Swaziland

OBJECTIVE	OUTCOMES
Use knowledge to build a culture of innovation and resilience, and to institutionalize training on climate change adaptation and disaster risk management in the country	**3.1** Awareness creation strategy for climate change adaptation and disaster risk management designed and applied at the national, regional and local levels
	3.2 Enhanced knowledge, innovations and good practices for climate change adaptation and disaster risk management
	3.3 Local communities and local institutions mobilized for climate change adaptation and disaster risk management interventions
	3.4 Knowledge on key reports and information material related to climate change adaptation and disaster risk management shared and disseminated strategically

Outcome 3.1: Awareness creation strategy for climate change adaptation and disaster risk management designed and applied at the national, regional and local levels

OUTPUTS	ACTIONS/ACTIVITIES		OBJECTIVE INDICATOR (S)	% COMPLETION

		LEAD AGENCY		2017 2018	2019 2022	2023 2030
3.1.1 Level of awareness of the country, regions and communities as to the threats and impacts of all hazards increased through the development and implementation of a comprehensive national CCA/DRM information, education and communication program	Identify the information needs of dependent regions and communities relevant to disaster risk management (short term) and climate change adaptation (long-term)	**NDMA/ MOTKH/ NCC**	Information needs of the local communities in the various vulnerable areas of the country, including the different agro-ecological zones, available and integrated into routine sectoral support services	30	60	100
	Conduct local level awareness raising campaigns and training programs for communities on lessons learned and best practices of DRM, CCA and sustainable land management	**NDMA/ MOTKH/ NCC**	Increased in the number of awareness raising campaigns and training programs organized for local/community groups in each region	40	70	100
	Conduct field days, orientation meetings, demonstration rallies, exchange visits for community and farmer groups to create awareness on climate change adaptation and disaster risk management	**NDMA/ MOTKH/ MOA**	At least one event conducted per year in each of Tinkhungla community involving the most vulnerable group representatives	20	50	100
	Build capacity of local farmer organizations and community based local institutions (NGoS/CSOs) in and promote access to information related to risks and vulnerabilities for community based disaster risk management, integrated natural resources management and climate change adaptation	**NDMA/ MOTKH/ MOA**	At least one training conducted for the representatives of the local institutions at the Tinkhungla level	20	50	100

Outcome 3.2: Enhanced knowledge, innovations and good practices for climate change adaptation and disaster risk management

OUTPUTS	ACTIONS/ACTIVITIES		OBJECTIVE INDICATOR (S)	% COMPLETION

		LEAD AGENCY		2017 2018	2019 2022	2023 2030
3.2.1 CCA/DRM knowledge base established as a resource for developing public awareness programming materials and for decision making and planning	Promote investments in innovation and technology development in long-term, multi-hazard and solution-driven research in disaster risk management	**NDMA/ MEPD**	Knowledge management platform enhanced to address gaps, obstacles, interdependencies, and social, economic, educational and environmental challenges and disaster risks	50	80	100
	Develop the resilience building knowledge of government officials at all levels, civil society, communities and volunteers, as well as the private sector, through sharing experiences, lessons learned, best practices and training and education on resilience building	**NDMA/ MET**	Increased use of existing training and education mechanisms and peer learning to enhance the knowledge platform of the resilience building process.	40	70	100
	Improve and promote dialogue and cooperation among scientific and technological communities, other relevant stakeholders and policy makers	**NDMA/ MET/ Institutions of Higher Learning**	Enhanced facilitation of a science policy interface for effective decision-making in resilience building	40	70	100
	Establish information centers at the Tinkhungla development committees and regional levels for the documentation of gender sensitive local knowledge, risks and vulnerabilities	**NDMA/ MEC /NCC**	Information centers within the NDMA and outreach offices established and operational	30	60	100
	Promote the use of traditional, indigenous and local knowledge and practices, as appropriate, to complement scientific knowledge in resilience building	**NDMA/ MOTKH**	Policies, strategies, plans and programmes of specific sectors, that are developed and implemented with a cross-sectoral approach are better tailored to localities and to the context	40	70	100
	A best practice database for resilience building (includes indigenous and local practices) relevant to the various sectors established at national level and dissemination at the local level	**NDMA**	A best practice database developed and housed in NDMA and linked to other relevant national, regional and international sectoral database, such as that of the FAO	40	70	100

	Integrate climate change, DRM and sustainable land management into the farmer field school approach and promote the agricultural extension system to demonstrate and disseminate good practices	**NDMA/ MOA**	Revised farmer field school curriculum available and at least two demonstrations conducted in each region per year	40	80	100
	Integrate resilience building issues into the formal (school curricula, textbooks and teachers' guides and manuals for use at all educational levels, including colleges/ universities and vocational schools) and non-formal education	**NDMA/ MOE /NCC**	New curriculum includes CCA and DRM related subjects and implemented in schools, colleges, universities and vocational institutions, as well as in civic education at all levels	30	60	100
	Establish a Resilience Building Institute to conduct education, training, research and publication programmes in order to strengthen technical and scientific capacity	**NDMA/ MOE /NCC**	Education and research activities conducted on a sustained basis, at this permanent facility, to capitalize on and consolidate existing knowledge and to develop and apply methodologies and models in resilience building	30	80	100

Outcome 3.3: Local communities and local institutions mobilized for climate change adaptation and disaster risk management interventions

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% COMPLETION		
				2017 2018	2019 2022	2023 2030

3.3.1 Local communities and local institutions mobilized for CCA and DRM interventions	Enhance collaboration among people at the local level to disseminate resilience building information through the involvement of grass root community-based and nongovernmental organizations.	**NDMA/ MOTKH**	Increased involvement of NGoS/CSOs in local/community resilience building interventions, aggressively addressing the full spectrum of DRM and CCA issues in the communities, irrespective of demographics	50	80	100
	Promote the use of mobile devices, e-mails and non-technology based systems of engagement of local communities to receive and provide updates before, during and after an event	**NDMA/ MOTKH**	All information before, during and after an event is available on mobile devices; this is supported by alerts on social media and non-technology based systems; this is also used to enable in-and out-bound communication flows between vulnerable populations and the government. It also allows the public sourcing of data and event issues.	50	80	100
	Promote establishment of model demonstrations at regional research centers (mainly health and agriculture) by involving local communities to showcase relevant good practice examples on climate change adaptation and disaster risk management	**NDMA/ MOA/ MOH**	Model Demonstrations established at Regional Centers	40	70	100
	Organize periodical capacity development and knowledge sharing sessions with NDMA staff and local institutions and farmers on relevant aspects of climate change adaptation and disaster risk management	**NDMA /MOA/ MOH**	Capacity development events organized	30	60	100

Outcome 3.4 Knowledge on key reports and information material related to climate change adaptation and disaster risk management shared and disseminated strategically

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% COMPLETION		
				2017	2019	2023

				2018	2022	2030
3.4.1 Key reports and information disseminated	Make non-sensitive hazard exposure, risk and vulnerability and disaster damage and loss information freely available and accessible, as appropriate	**NDMA**	Non-sensitive information identified, packaged and placed in the public domain	60	80	100
	Disseminate information on CCA and DRM through mass media, newspapers, printed bulletins and social media	**NDMA**	Routine information sharing mechanisms established through mass and social medium	60	80	100
	Dissemination of best practices of CCA and DRM	**NDMA**	Printed leaflets, information briefs developed and disseminated at the national, regional and local/community levels	50	70	100

PILLAR 4 – RISK REDUCTION FOR RESILIEMCE

Reducing climate related risks and underlying vulnerabilities by implementing technical options and integrating approaches of Community Based Adaptation (CBA) and Community Based Disaster Risk Management (CBDRM)

Strategy: To facilitate long-term community based adaptation processes and related technology development and transfer for enhancing climate resilience and sustainable development in the most vulnerable regions.

OBJECTIVE	OUTCOMES
To facilitate long term adaptation processes and related technology development and transfer for enhancing the country's resilience to disaster and climate change, especially in the most vulnerable sectors and communities	**4.1** Integrated production systems and economic diversification promoted to build resilience of communities to climate change impacts
	4.2 Disasters' impact on poverty, income volatility and food and nutrition insecurity is mitigated by making agriculture more resilient
	4.3 Increased value to the society of ecosystem services through reduction in erosion and sedimentation of water bodies, improvement in water quality, limited flooding, and regularity of water flows.
	4.4 Decision makers and the general public more receptive to the need for adequate zoning and building codes in the reducing vulnerability of human settlements
	4.5 Increased disaster resilience of infrastructure systems
	4.6 Reduced vulnerability to water-related hazards and water shortages resulting from hazards
	4.7 Increased disaster resilience of health sector through the integration of CCA and DRM measures
	4.8 Enhanced social protection program to build resilience to disasters and climate change
	4.9 Strengthened existing school feeding program for better learning and lifelong healthy food choices
	4.10 Strengthened risk sharing and transfer mechanisms
	4.11 Strengthened Long Term Low Carbon Development Pathway/Strategy to reduce vulnerability to climate change impacts

Outcome 4.1: Integrated production systems and economic diversification promoted to build resilience of communities to climate change impact

OUTPUTS	ACTIONS/ACTIVITIES			% COMPLETION

		LEAD AGENCY	OBJECTIVE INDICATOR (S)	2017 2018	2019 2022	2023 2030
4.1.1 Agriculture and economic diversification promoted	Conduct feasibility analyses of diversifying strategies and income generating options within and outside of agriculture, especially in vulnerable areas	**MEPD/ MCIT / MOA**	Portfolio of profitable livelihood diversification options identified and made available	50	70	100
	Design and implement the policy incentives framework conducive to the promotion of the feasible options, including investments in infrastructure, technologies, market development and human capacity	**MEPD/ MCIT/ MOA**	A regime of incentives developed and available to support enterprise promotion and development	90	100	100
	Revise/remove policies that contribute to single crop dependency, such as input price support programs	**MEPD/ MOA**	Market based price structure in place and promoted	60	90	100
	Strengthen the community Savings Groups as a critical source of funds for start-up and the purchase of inputs for the diversified enterprises.	**MEPD/ NGoS/ MOA**	Loans disbursed and number of new start-up business.	70	90	100
	Develop and implement a special program for the increased production, value added processing and consumption of locally produced staples and livestock products	**MOA**	Value chain analyses conducted to diagnose and address constraints. Action plans for the selected industries developed and implemented, involving all actors along the value chain. Best practices for sustainable production and value addition identified, documented and disseminated	50	70	100
	Encourage the use of crops and livestock species within integrated production systems that are more resilient to climate related risks	**MOA**	New models of integrated production systems introduced in agro-ecological zones and adopted.	30	60	100
	Enable climate vulnerable communities to sustain their livelihoods by improving access to basic agricultural services, technology and practices (on-farm agro-biodiversity management, integrated pest	**MOA**	Over 60 % of communities the in vulnerable regions have improved access to basic agriculture services	40	70	100

	management, home garden promotion, farmers field school)					
4.1.2 Research institutions strengthened and facilitated to prioritize immediate resilience building issues and conduct applied research on climate change impacts and adaptation/mitigation and develop technologies for sustainable management, including land management	Strengthen research and development linkages (research – extension) on climate change adaptation and disaster risk management, including land management	**MOA/ MNRE / MTEA**	New research projects on crop improvement and land management prepared and implemented by the MOA	30	60	100
	Promote joint demonstration of drought, flood, and heat tolerant varieties and technologies of integrated natural resources management and rehabilitation of degraded lands at the regional centers and local research stations	**MOA/ MNRE / MTEA**	Guidelines for field demonstration of adaptation practices established and at least 25 demonstrations conducted	30	50	100
4.1.3 Entrepreneurship promoted to foster the development of micro, small and medium-sized enterprises (MSMSE) in poor and vulnerable communities	Adopt/develop training manuals for entrepreneurship training	**MCIT/ MEPD/ MET**	Training manuals are available	50	80	100
	Select trainees to participate in the entrepreneurial training programs and conduct training, with heavy focus on women and youth	**MCIT/ MEPD/ MET**	Training programmes to cover both business and technical areas, to include the basic elements of entrepreneurship, sustainable and innovative, decent rural employment/ business models, and enterprise development and management	40	70	100
	Establish a small business incubator facility and mentorship programme to support small business start-up process and operations	**MCIT/ MEPD/ MET**	Incubator facility in place and mentorship programme with the private sector developed and operational	40	70	100
	Provide continuous support for MSMSE business start-up, financing, access to information services, technical assistance, training, and mentorship	**MCIT/ MEPD/ MET**	Small business support unit established/strengthened and providing support services to the MSMSEs	40	70	100

Outcome 4.2: Disasters' impact on poverty, income volatility and food and nutrition insecurity is mitigated by making agriculture more resilient.

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% COMPLETION		
				2017 2018	2019 2022	2023 2030
4.2.1 Climate Smart Agriculture practices are promoted to sustainably increase productivity, to enhance resilience, and to minimize greenhouse gas (GHGs) emissions.	Promote the use of drought stress tolerant improved varieties such as maize, pearl millet, sorghum, cowpea, chickpea, groundnut and sweet potato.	**MOA**	Increased yields above the norm in drought affected environment	50	80	100
	Promote the use of sustainable intensification practices (**SIPs**) on farms to include: minimum tillage, crop diversification (inter-cropping and rotations, growing different cultivars/ varieties at different farm plots that have different environmental response), use of manure, complementary use of organic fertilizers, and investment in soil and water conservation.[34]	**MOA**	Improved productivity, enhanced resilience of production system and conservation of natural resource base. Improve yields and income.	40	70	100
	In alignment with **SIPs** above, intensify the application of conservation agriculture technologies (CATs) on farm based on the three principles of minimum mechanical soil disturbance, permanent soil cover with organic mulch, and crop rotation and tillage	**MOA**	Crop yields stabilized, need for tillage avoided, early planting of crop with the first rainfall allowed and soil erosion reduced. Improve yields and income.	60	80	100
4.2.2 Enhanced sustainable water management and conservation practices on farms	Design and implement a regime of financial incentives and policy mechanisms to support the construction of rainwater harvesting facilities, the increased use of water efficient technologies (such as drip irrigation on farms), and the sustainable management of animal manure on farms.	**MEPD /MOA/ MNRE**	Number of farms with water harvesting facilities, efficient water usage technologies and bio-gas plants	60	80	100
	Implement on-farm water conservation and management practices to support vulnerable communities (water harvesting schemes, multi-use water system and technologies e.g. drip irrigation)	**MOA MNRE**	New water conservation practices introduced, demonstrated and adopted	50	90	100

[34] Lee, 2005; Pretty et al., 2011

	Improve existing water harvesting techniques, water productivity and drought management in selected areas of the Lowveld, Middle-veld and Lubombo ecological zones, for example through the construction of mini-dams.	**MOA MNRE**	Number of new and improved techniques introduced, such as the construction of mini-dams	50	90	100
	Increase irrigation coverage where water resources are available without negative impacts on ground water	**MOA MNRE**	Increased number of hectares of additional crop under irrigation	40	70	100
4.2.3 Construction of animal and poultry housing improved, guidelines to construct the same developed and available, proactive animal/livestock management initiatives promoted	Develop standards for animal shelters and poultry houses that are international	**MOA/ MHUD**	New standards followed constructing animal shelters and poultry houses.	40	70	100
	Promote the vaccination of animals that are being raised in vulnerable regions before the start of the rainy season	**MOA**	Coverage of existing vaccination programs to additional vulnerable communities	60	80	100
	Intensify the use of grass-legume combination in cattle production to improve the quality and quantity of the feeds.		Increased productivity, yields and income	40	70	100
	Supply improved fodder and forage grass seeds to producers and introduce improved fodder storage methods	**MOA**	New species/varieties identified and technology introduced and adopted by the farmers	30	60	100
	Promote the cultivation of fodder and forage grass on livestock farms and community lands	**MOA**	Improved practices introduced and adopted by the farmers and some feed stored for dry seasons	40	70	100
	Research and promote the use of sugar cane by-products as a source of feed for cattle and other ruminants to include: molasses, cane stalk, sugar cane tops, in combination with a cheap source of protein such as urea.	**MOA/ Swazi Sugar Company**	New sugar cane-based livestock feeding products developed, introduced and adopted by farmers	30	60	100
	Promote improved manure management and support at community level to establish bio-gas plants and animal waste recycling as manure	**MOA/ MNRE**	A Number of bio-gas plants established on farms on within communities	30	60	100
	Promote the diversification of livestock production in order to optimize utilization of available pastures by keeping combinations of different species of	**MOA**	Change portfolio composition of livestock enterprises	20	50	100

	livestock e.g. cattle, sheep and goats and poultry, to match production with the availability of fodder on the farm. Small ruminants, such as improved breeds of sheep and goats, can be used by farmers to upgrade their stock and increase productivity.					
	Link local beef and dairy milk production to urban markets	**MOA**	Mechanisms established to improve value chain linkages	40	70	100
4.2.4 Post harvest practices to proactively manage climate related risks is promoted	Promote improvement of strategic seed banks and seed storage systems at regional and community levels and enhance seed buffer stock at regional and national levels	**MOA**	Improved seed storage systems at community and regional level established	30	50	100
	Strengthen existing agricultural research centers for enhanced production of quality seeds and seedlings	**MOA**	Number of existing agricultural research centres for seeds and seedlings improved	30	50	100
	Improve local storage practice for inputs and outputs (farm level food, animal feed and local seed storage systems)	**MOA**	New storage technologies introduced and adopted in selected strategic locations	30	50	100
	Conduct training in pre-harvest, harvest and post-harvest management and technologies	**MOA**	Number of training activities conducted at the national, regional and community levels	50	70	100

Outcome 4.3: Increased value to the society of ecosystem services through reduction in erosion and sedimentation of water bodies, improvement in water quality, limited flooding, and regularity of water flows.

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% COMPLETION		
				2017 2018	2019 2022	2023 2030
4.3.1 The value and benefits to the country of ecosystem services for	Identify and manage ecosystem services as critical assets	**MNRE/ SEA NDMA/**	Critical ecosystem services are identified and monitored annually on a defined set of	40	70	100

disaster risk prevention recognized, and therefore protected and/or enhanced as a part of the resilience building strategy for Swaziland			key health/performance indicators			
	Establish a system to monitor changes in species diversity, extent or benefit of each ecosystem service in the last 5 years	**MNRE/ SEA NDMA/**	Comprehensive system, including the monitoring tools, roles and process in place, utilized and disseminated	40	70	100
	Evaluate the impact of land use and other policies for ecosystem services	**MNRE/ SEA NDMA/**	Land use policies are strongly supportive of critical ecosystem services and are fully enforced	40	70	100
4.3.2 Resilience of watersheds to natural disasters enhanced	Promote the use of alternative production practices to reduce erosion, including terrace management in the hills to reduce the risk of landslides and the introduction of Slope Agriculture Land Technology (SALT)	**MNRE /MOA**	Models of SALT and other practices introduced in watersheds and adopted.	40	70	100
	Discourage settlements in flood prone areas and invest in river training, especially to reduce flood risks	**MNRE /MOA**	New guidelines on settlements in hazard prone areas developed and promoted	50	70	100
	Promote the adoption of agro-forestry practices on sloped areas	**MNRE /MOA**	Slopes stabilized, an additional source of income available, and raw material provided to support the value addition (agro-processing) agenda	50	70	100
	Identify land in the watershed that is degraded and/or at risk of degradation and establishes measures necessary for ensuring its conservation, including the planting/replanting of trees.	**MNRE /MOA**	Increased forest cover	40	60	100
	Provide adequate tree planting materials to households for forest planting	**MNRE /MOA**	Increased forest cover	50	70	100
	Develop local watershed /land use management plans through the municipality and community participation	**MNRE /MOA**	Plans are available	50	80	100

4.3.3 Sustainable biodiversity, land and soil management practices promoted	Promote natural and social heritage conservation and community level bio-diversity conservation practices through community mobilization.	**MNRE /MOA**	New guidelines on conservation and bio-diversity conservation introduced.	60	90	100
	Intensify the implementation of sustainable land and soil management (organic farming, community biodiversity management, integrated nutrient management etc.,)	**MNRE /MOA**	Some communities would have introduced sustainable land and soil management practices	40	70	100
	Integrate climate change adaptation and mitigation priorities into the activities of the forest user groups and leasehold forestry in pilot scale and promote sustainable forest resource management (community fire control, non-timber forest products management, etc.)	**NDMA/ MNRE /MOA**	Practices contributing to adaptation and mitigation introduced through forest user groups in mid- and high- hill regions as part of the first phase.	40	70	100
	Protect/support the protection of cultural and collecting institutions and other sites of historical, cultural heritage and religious interest	**NDMA/ MNRE/ MOTEA**	Guidelines/legislations in place and enforced to ensure that cultural and collecting institutions and other sites are protected	50	80	100

Outcome 4.4: Decision makers and public more receptive to the need for adequate zoning and building codes in reducing the vulnerability of human settlements.

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% COMPLETION		
				2017 2018	2019 2022	2023 2030

4.4.1 A Knowledge management platform established for decision makers at all levels (national, regional, local government; landowners and private sector, etc.) focusing on the link between land titling use and settlement planning and vulnerability to disasters in the context of resilience building	Review the current situation regarding land titling and use and settlement planning and vulnerability to disasters, including the National Land Policy, and the Human Settlement Act (1988)	**SNHB/ SGO/ DRO/ DPPH/ MOHUD**	Recommendations made for upgrading the land titling and use and settlement planning framework (policies, laws and regulations)	100	100	100
	Develop, promulgate and enforce up to date land use and settlement policies, laws and regulations	**SNHB/ SGO/ DRO/ DPPH/ MOHUD**	Existence of applicable policies, laws and regulations for land use and settlements. Reduced land degradation	20	100	100
	Reinforce the capacities of the Department of Physical Planning and Housing (staff, competencies, equipment and financial resources) to ensure that future investments in infrastructure in the country respect land use planning and building regulations.	**SNHB/ /DPPH**	Training events conducted, equipment purchased and financial resources expended. Land use planning and building regulations are reflected in new infrastructure development	40	80	100
	Develop a coordinated national public awareness program regarding the link between and land titling and use and settlement planning and vulnerability to disasters	**SNHB/ SGO/ DRO/ DPPH/ MOHUD**	Government re-introduction of land use planning and settlement policies during the first two years of the SRSAP	60	80	100
4.4.2 The role of the private sector in ensuring the adoption of safe and risk sensitive building practices and a building code for construction strengthened	Review the current situation regarding building codes, including the National Housing Policy (2001), the National Land Policy, the Town Planning Act (1961), the Urban Government Act (1969), the Building & Housing Act (1968), the Human Settlement Act (1988), the Urban Policy Statement, etc.	**SNHB/ SGO/ DRO /DPPH MOHUD**	Recommendations made for upgrading the building codes available	70	100	100
	Update the national building codes to conform to the latest hemisphere and	**SNHB/ SGO/ DRO/**	National building codes are upgraded and these latest	60	90	100

	international standards and building practices and with peril faced	**DPPH/ MOHUD**	standards are reflected in new buildings			
	Promote the proper design and construction of buildings to withstand hazards, including the use of the principles of universal design and the standardization of building materials; retrofitting and rebuilding; nurturing a culture of maintenance; and taking into account economic, social, structural, technological and environmental impact assessments	**SNHB/ DPPH/ MOHUD**	Constructed buildings are better able to withstand hazards	40	70	100
	Reinforce the capacities of the Department of Physical Planning and Housing) to ensure conformity to the building codes through effective monitoring and evaluation, and enforcement.	**SNHB/ /DPPH**	Training events conducted, equipment purchased, financial resources expended and Compliance Unit strengthened and operational	40	70	100
	Actively encourage the lending institutions to include building code requirements in home loan applications		Reduced resistance to initiatives to coordinate land and housing planning	40	70	100

Outcome 4.5: Increased disaster resilience of infrastructure systems.

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% COMPLETION		
				2017 2018	2019 2022	2023 2030

4.5.1 Enhanced disaster resilience capacity and adequacy of infrastructure systems to ensure business continuity after an event	Conduct an inventory, vulnerability and risk assessments for critical facilities and infrastructure and systematically linked into a failure chain as applicable	**NDMA/ MHUD/ MPWT**	The country has the information to frame recovery and rehabilitation strategy and plan that allows it to prioritize in Building Back Better	70	100	100
	Develop guidelines on the redesign, retro-fitting and operational modification of infrastructure	**NDMA MHUD/ MPWT**	Guidelines developed and utilized in the retrofitting of a number of critical infrastructure	30	60	100
	Develop guidelines on the process to maintain critical infrastructure to ensure integrity and operability	**MHUD/ MPWT**	An audited annual inspection process implemented and remediation of issues related to critical infrastructure effected	30	60	100
	Integrate CCA and DRM measures into building codes and local ordinances as they relate to the construction of critical infrastructure	**NDMA, MHUD**	Construction of infrastructure conforms to the latest standards and practices	30	50	100

Outcome 4.6: Reduced vulnerability to water-related hazards and water shortages resulting from hazards

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% COMPLETION		
				2017 2018	2019 2022	2023 2030
4.6.1 Improved policy and legislative framework for water safety, use and management	Conduct a review of the various pieces of legislation, spread across Ministries and institutions, with a view to harmonize. Include Freshwater Fish Act (1938), Swaziland Electricity Act (1963), Water Act (1967), Water Services Act (1992), Joint Water Commission Act (1992), Swaziland Environment Authority Act (1998), Swaziland Administrative Order (1998), Borehole Act, to name a few.	**MNRE/ DWA**	Recommendations made for the harmonization of the legislative framework to regulate water safety, use and management available	100	100	100
	Design, promulgate and enforce a harmonized legislative framework, with a clear policy on water safety, use	**MNRE/ DWA**	Harmonized legislative framework, providing clarity on policies related to the safety, use	70	100	

	and management, including both (TDL) and SNL		and management of water in place			
	Design and implement a policy regime of fiscal incentives and disincentives to promote investments in and the adoption of more efficient water irrigation systems, such as drip system, on the farm	**MEPD/ MOA**	Increased use of drip irrigation system on farm	40	80	100
	Establish a Flood/Drought Management Committee to coordinate the development and management of a Flood/Drought Template for the country (**Linked to 2.3.2**)	**DWA/ NDMA**	Flood/Drought Management Committee and Plan in place and implementation coordinated	60	100	100
4.6.2 Improved water supply situation of the country	Conduct a ground water study to determine national ground water availability, and to identify reliable ground water aquifers as well as ground water recharge points	**MNRE/ DWA**	Quantitative assessment of ground water resources of the country available	90	100	100
	Conduct explorations for the presence of water at depth of beyond 100 meters.		Repairs to the MNRE drills completed, drills conducted and hydro-logical data available	100	100	100
	Conduct an economic cost/benefit analysis (include social considerations) of the interventions recommended under **domestic water and sanitation** activities as well as **under water resource management** of the **NERMAP** and the **MNRE:** ***Plan 2016 to 2022***, with a view to rationalize and prioritize their implementation	**MNRE/ DWA**	Based on resource availability a rationalized and prioritized list of water related interventions under NERMAP and **MNRE** is available for implementation	100	100	100
	Implement priority list of water related interventions in a phased manner subject to securing the financial resources for the same	**MNRE/ DWA**	A phased implementation of priority list of water interventions in place, subject to funds availability	20	50	100
	Construct canals to increase intake capacity of selected water schemes to support the demand of farmers en-route (not part of) a Scheme, example in the Lubovane Dam area	**DWA/ MOA**	Farmers En-route selected schemes provided with the opportunity to utilize the water	40	70	100

	Increase national investments in the construction of inter-basin water transfer systems for selected areas	**MNRE/ DWA /MEPD**	Water transferred from areas of abundance to dry areas and/or areas of high demand	20	60	100
	Strengthen the early warning system for water availability through the modelling and monitoring of all river basins	**MNRE/ DWA**	Early warning information available, package and disseminated to and utilized by end-users is strategies and plans	60	90	100
	Design and implement a policy regime of fiscal incentives and disincentives to promote investments in the installation of rainwater catchment tanks in all new public, private and household buildings	**MNRE/ DWA /MEPD**	Legislative agenda developed and implemented Increased use of catchment tanks in public and private buildings and homes	30	60	100
	Include water catchment tanks as qualification criteria for housing loans from financial institutions	**MNRE/ DWA**	Increased installation of catchment tanks in new home constructions	30	50	100
4.6.3 The level of public awareness about water related risks raised	Design and implement an awareness raising campaign of linkages between water, pollution and public health	**MOH/ NDMA/ DWA**	Improvement in water use and management at the household level	40	60	100
	Equip communities with knowledge and means to purify water	**MOH/ NDMA/ DWA**	Reduction in the number of water related public health diseases	30	60	100
	Facilitate regular consultative meetings between landowners, private sector and the water regulatory authorities	**MOH/ NDMA/ DWA**	Improvement in water use and management at all levels	30	60	100
	Promote the recycling of water in households and industries	**NDMA/ DWA**	Appropriate systems to process waste water installed at homes and in industries	20	50	100

Outcome 4.7: Increased disaster resilience of health sector through the integration of CCA and DRM measures

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% COMPLETION		
				2017 2018	2019 2022	2023 2030

4.7.1 Health targets and indicators included in monitoring and reporting on resilience building progress	Include HIV/AIDS targets and indicators in monitoring and reporting progress	**MOH**	Changes in HIV/AIDS prevalence Access to HIV/AIDS treatment and care	70	100	100
	Include relevant health targets and indicators in monitoring and reporting on DRR 2030, to include: reduction in deaths in emergencies and disasters, country's capacities for managing public health risks, % of hospitals and health facilities with emergency response plans to continue health care in disasters, % of new hospitals and health facilities built to withstand hazards, and % of existing hospitals and health care facilities requiring improved safety are retrofitted	**MOH/ CSO**	An Established framework to capture data on the targets and indicators Strengthened evidence and science base for developing best practices, and for improved monitoring and reporting	70	100	100
4.7.2 Capacity of the ***Safe Hospitals Initiative*** strengthened	Through a standardized and structured methodology, determine the Hospital Safety Index to support the health sector in the management of risks	**MOH**	Monitor and evaluate existing health facilities using the Hospital Safety Index	90	100	100
	Utilize the Hospital Safety Index to evaluate and obtain a clear picture of the state of safety of health structures in certain regions or communities	**MOH/ NDMA**	Hospital safety index, as well as the vulnerability, functionality, accessibility and resilience determine response to disasters and emergencies	70	90	100
	Utilize the knowledge of the real functionality and safety of health facilities to establish plans for responding to emergency situations, according to the capacity and capabilities of the different centres	**MOH/ NDMA**	Health contingency plan available	60	80	100
4.7.3 Action and resources to support health and related sectors that are vital to resilience building strengthened	Conduct rapid and comprehensive health and nutrition assessments in vulnerable communities and disseminate of findings	**MOH**	Information available and utilized in developing health sector mitigation and response plans Health and nutrition stakeholders identified Routine activities scaled up to emergency response mode	80	100	100

	Include people with life-threatening and chronic disease, due to their particular needs, in the design of policies and plans	**MOH**	Enhanced the management of their risks before, during and after disasters, including having access to life-saving services	60	80	100
	Strengthen the human capital in vulnerable areas for CCA/DRM health practices, advocacy, and policy development to enable the expansion of services to meet the additional demand during disasters and emergencies	**MOH**	Cost effective excess supply of health professionals created	50	70	100
	Implement health days and health campaigns to provide health services and create the awareness of the link between the health sector and CCA and DRM	**MOH**	Remote areas covered in the program	30	50	100
	Develop response mechanisms to address the special needs of groups with vulnerabilities (e.g. Aged, people with disabilities, OVC, women)	**MOH**	Identification of vulnerable groups targeted	60	90	100
	Include community health groups with vital information on community risks and capacities in risk assessments	**MOH/ NDMA**	Improvement in the reliability of information obtained from communities	60	80	100
4.7.4 Implemented diseases surveillance system weak	Scale up Integrated disease surveillance and response system	**MOH**	Strengthened and harmonized diseases surveillance system	60	90	100
	Improve data analysis and provide timely feedback	**MOH**	Analysis report available	60	80	100
4.7.5 Improved coordination and knowledge management in the health sector	Develop strong coordination mechanisms within the health sector by sharing and integrating mandates of relevant institutions, at the national and regional levels	**MOH/ NDMA**	Better coordination of activities, efficient use of resources and more effective provision of services.	70	100	100
	Develop the capacity of health workers in understanding resilience building issues and in applying and implementing disaster risk reduction approaches in health work	**MOH/ NDMA**	A cadre of trained health workers has a better understanding of resilience building and able to apply the knowledge and implement DRM/CCA approaches in the health sector	60	80	100

	Promote and enhance the technical capacities in the field of disaster medicine	**MOH/ NDMA**	Cadre of health workers trained in the field of disaster medicine through accessing and participating in short–term funded courses offered at the hemisphere and international levels	60	80	100
	Support and train community health groups in issues and approaches in resilience building in health programmes	**MOH/ NDMA**	Support provided and training conducted in collaboration with other sectors, as well as in the implementation of the International Health Regulations (2005) of the World Health Organization	60	80	100

Outcome 4.8: Enhanced social protection program (SP) designed to build resilience to disasters and climate shocks and natural disasters[35]

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% COMPLETION		
				2017 2018	2019 2022	2023 2030
4.8.1 Well coordinated institutional platform established among ministries and agencies[36]	Promote effective formal communication channels and linkages among social protection, disaster management, and relevant sectoral ministries/agencies, including those responsible for early warning systems	**DPMO/ DSW**	Better coordination of relevant disaster risk management, climate change adaptation, and social protection agencies and actors	50	80	100
	Establish clearly defined roles and responsibilities of all ministries/ agencies and other implementing partners, including international, nongovernmental, civil society, and private sector organizations	**DPMO/ DSW**	Expertise and institutional capacity of actors tapped	70	90	100
	Promote linkages and information-sharing arrangements with the broader	**DPMO/ DSW**	Common beneficiaries database (registry) established and shared	70	90	100

[35] Based a lot on the World Bank: Building Resilience to Disasters and Climate Change through Social Protection, 2013
[36] Mexico's Programa de Empleo Temporal (PET) based on this platform

	humanitarian response system, such as the United Nations–led emergency cluster system.					
4.8.2 Ensured Scalability and Flexibility in the SP programme[37]	Promote scalability and flexibility in the administrative mechanisms used to mobilize and deploy contingency financing and human resources, transfer benefits, manage fiduciary risks, and identify and register affected people	**DPMO/ DSW**	Contingency budget and procedures for administering financing must be in place that allow institutions and implementing agencies to gain access to funding immediately when an emergency is declared.	60	80	100
4.8.3 Households that are most vulnerable to natural disasters and climate change-related risks are targeted, using a combination of targeting strategies to ensure efficiency and effectiveness in the process	Utilize geographic targeting of high-exposure areas (ex-ante) or areas that have been affected by disaster/climate impacts (ex post)	**DPMO/ DSW**	A geographic targeting approach applied in areas where damage is extensive and most households are affected.	40	60	100
	Promote categorical targeting for particular categories at risk, such as children, elderly people, people with disabilities, or people vulnerable to disaster/climate)	**DPMO/ DSW**	A categorical targeting approach applied in areas where the affected population is dispersed, and in places where pockets of poverty or vulnerability co-exist with relatively well-off populations	40	60	100
	Conduct poverty-based targeting, where the measures of changes to welfare as a result of disaster- or climate-related shocks complement easily identifiable welfare measures such as housing location and quality and assets	**DPMO/ DSW**	Poverty-based targeting approach applied in areas where the affected population is dispersed, and in places where pockets of poverty or vulnerability co-exist with relatively well-off populations	40	60	100
	Apply self-targeting, where individuals or households decide whether to participate	**DPMO/ DSW**	Public work programmes promoted to accomplish self-targeting	40	60	100
	Promote community-based targeting, where community selects the beneficiaries based on its own disaster and climate vulnerability criteria	**DPMO/ DSW**	A community-based targeting approach implemented and grounded on the unique disaster and climate vulnerability criteria of the communities	40	60	100

[37] See the Ethiopia's Productive Safety Program, Kuriakose and others, 2012.

4.8.4 Good Governance and Accountability ensured	Promote the effective participation in decision making by communities and vulnerable groups	**DPMO/ DSW**	Measures devised to overcome the limitations and constraints that prevent vulnerable groups from participating in or accessing the programmes	60	80	100
	Establish good two-way communications and feedback mechanisms	**DPMO/ DSW**	Feedback mechanisms established, for both programme beneficiaries and the broader affected population	60	80	100
	Promote the effective management of fiduciary risks	**DPMO/ DSW**	Emergency guidelines that simplify or modify existing financial management and procurement procedures and emphasize internal and external communication on programme guidelines developed and in place	20	50	100
	Promote the measuring of outcomes and impact, and the use the findings to inform operations.	**DPMO/ DSW**	Disaster and climate sensitive criteria integrated in social protection M and E plans	40	70	100
4.8.5 Adaptive Capacity at the Household and Community Level enhanced	Promote greater community involvement in the design and implementation of inclusive policies and social safety-net mechanisms	**DPMO/ DSW/ MOTKH**	Durable solutions are developed and implemented in the post-disaster phase and people disproportionately affected by disasters are empowered and assisted	40	70	100
	Promote the enhancement of communities' physical assets by reducing the risk of disaster and adapting to climate change	**DPMO/ DSW**	Hazard-proof infrastructure built or rehabilitated. Structural mitigation measures in place Environmental conservation and rehabilitation measures encouraged	30	60	100
	Promote greater to to basic health care services	**DPMO/ DSW/ MOH**	Enhanced programmes of maternal, new-born and child health, sexual and reproductive health, food and nutrition security, and housing and education in place, all	40	70	100

			supporting the alleviation of poverty			
	Support viable livelihood enhancement programmes at the community and household levels	**DPMO/ DSW**	Households have diversified sources of income	60	90	100

Outcome 4.9: Strengthened existing school feeding program for better learning and lifelong healthy food choices

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% COMPLETION		
				2017 2018	2019 2022	2023 2030
***4.9.1* A** national school nutrition policy developed	Conduct assessment of relevant policy instruments and measures impacting on school nutrition and develop and implement National School Healthy Lifestyle Policy using the WHO school policy Framework	**DPMO/ DSW/ MET/ MOH**	National School Healthy Lifestyle Policy developed and in place	90	100	100
	Promote breastfeeding and complementary foods that are nutrient dense and iron rich and re-establish baby-friendly initiative in all hospitals	**DPMO/ DSW/ MET/ MOH**	Nutritional status of new-born enhanced	70	90	100
4.9.2 Infrastructure for the provision of meals strengthened	Conduct an assessment of the capacity of existing facilities, with a view for expansion to facilitate a larger programme	**DPMO/ DSW/ MET/ MOH**	Recommendations made on facility needs for expansion	90	100	100
	Carry out construction to expand the meal preparation facilities, purchase and install major equipment and operationalize the expanded facilities	**DPMO/ DSW/ MET/ MOH**	The school meals programme expanded and operationalized	50	70	100
	Build human capacity at institutions, schools and day care centers, and intensify awareness and public education programmes for parents and food vendors	**DPMO/ DSW/ MET/ MOH**	Community buy-in school meals programme	50	70	100
4.9.3 Nutrition education in schools promoted to reduce the	Assess the program against its stated objectives, to include Anthropometric assessment of students	**DPMO/ DSW/ MET/MOH**	Appropriateness of meal standards determined	60	80	100

prevalence of obesity, stunting, under-nutrition, micronutrient deficiencies and the associated health consequences	Utilize the Food Based Dietary Guidelines (FBDGs) to promote healthy food choices and appropriate methods of preparation to preserve nutrients	**DPMO/ DSW/ MET/ MOH**	Improved health and nutritional status of school children through healthy food choices made	70	100	100
	Promote the benefits of locally produced foods and introduce more local foods through a process of recipe development and testing	**DPMO/ DSW/ MET/ MOH**	School meals program utilized as an entry point to change consumption patterns in the country towards ore local foods	70	100	100
	Support the expansion of school, backyard and community gardens as sources of foods for the school meals program	**DPMO/ DSW/ MET/ MOH**	Increased income of schools and households	40	70	100
	Conduct training of school meals staff to improve consistency in meal production and portioning of food and food safety and sanitation	**DPMO/ DSW/ MET/ MOH**	Safe meals o the right quantity and quality served	50	80	100
	Develop recipes for every menu item to contain: the ingredients, weight/volume of each ingredient, preparation instructions (directions), cooking temperature, cooking time, serving size, recipe yield and equipment and utensils to be used	**DPMO/ DSW/ MET/ MOH**	Recipes for all menu items standardized	70	90	100
4.9.4 Efficiency and effectiveness of school nutrition interventions improved through better targeting	Institute a coordination mechanism for data collection and analysis of children's health and nutritional status	**DPMO/ DSW/ MET/ MOH**	Nutritional status of children monitored	60	80	100
	Implement procedures for the collation of surveillance data to identify those at risk for nutrition related diseases and monitor the nutritional status of the population, especially school children	**DPMO/ DSW/ MET/ MOH**	At risk school children identified and targeted	70	90	100
4.9.5 Governance mechanisms and systems improved	Establish a School Meals Program Management Committee and create a platform for continuous dialogue with policy makers	**DPMO/ DSW/ MET/ MOH**	Enhanced community participation and feedback with policy makers	70	90	100

Outcome 4.10: Strengthened risk sharing and transfer mechanisms

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% COMPLETION		
				2017 2018	2019 2022	2023 2030
4.10.1 Availability and access to various disaster risk financing and insurance schemes for vulnerable groups and/or communities	Establish and inventory and review available insurance mechanisms for crops, livestock, households, businesses and government, and saving and credit schemes, with the participation of relevant stakeholders	**MEPD/ NDMA**	Recommendations made and available	60	90	100
	Assess scope and feasibility for risk transfer mechanisms in the agricultural sector, households, businesses and government, and develop strategy tailored to the needs of the various groups	**MEPD/ NDMA**	Risk Transfer Mechanisms developed and in place, to include instruments such as insurance (micro-insurance, agricultural insurance, private property insurance, public asset insurance), securities (including catastrophic bonds and swaps), contingent loans/credit, and government reserves/contingent funds	50	80	100
4.10.2 Mechanism developed for increased risk financing	Conduct research and develop new solutions and modalities for risk financing schemes (stand-alone contracts or risk pools)	**MEPD/ NDMA**	Risk transfer instruments developed[38]	50	70	100
	Develop an advocacy and risk communication plan to encourage communities to avail of risk financing options	**MEPD/ NDMA**	Increased risk coverage at all levels	50	70	100

[38] See for example World Bank Global Index Insurance Facility (GIIF0) and Africa Reinsurance Corporation (Africa Re): A New Risk Sharing Facility to Lower Premiums for Africa's Farmers, 2017 (http://www.worldbank.org/en/topic/financialsector.

Outcome 4.11: Strengthened Long Term Low Carbon Development Pathway/Strategy to reduce vulnerability to climate change impacts

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% COMPLETION		
				2017 2018	2019 2022	2023 2030
4.11.1 Strengthened Long Term Low Carbon Development Pathway/Strategy	Review the long term economic and energy outlook for the country with a view to develop/enhance the framework for low carbon and climate resilient development pathway at national and regional levels	**MNRE/ MEPD**	An enhance framework for low carbon and climate resilient development pathway at national and regional levels in place	50	70	100
	Identify barriers, challenges and other factors that would inhibit low carbon, climate resilient growth in Swaziland	**MNRE/ MEPD**	Barriers and challenges to the development of a low carbon, climate resilient growth pathway identified and mitigation strategy developed	50	70	100
	Identify urgent short- and long-term quick win opportunities and activities that could feed into medium and long-term low carbon and climate resilient development investments in the country	**MNRE/ MEPD**	Portfolio of feasible investment opportunities and activities for low carbon and climate resilient development identified and available for promotion	50	70	100
	Develop a framework of incentives, including tax exemptions and credits, to promote investment in renewable energy opportunities (such as wind and solar) at all levels	**MNRE/ MEPD**	Framework of incentives in place, resulting in increased investments in solar, wind and other forms of renewable energy at the household, business and public institutional levels	60	80	100

PILLAR 5 – DRM AND CCA PREPAREDNESS, RESPONSE AND REHABILITATION MEASURES

Capacities and Procedures for Effective Disaster Preparedness, Response and Rehabilitation and the Integration of Climate Change Adaptation into Response, Recovery and Rehabilitation Initiatives

Strategy: Facilitate long-term sustainable risk reduction and adaptation measures as part of response and rehabilitation interventions.

OBJECTIVE	OUTCOMES
Enhance the national and local capacities for disaster preparedness, response and rehabilitation and ensure that disaster risk management climate change adaptation measures are integrated in the planning and implementation of relevant interventions	**Preparedness**
	5.1 Comprehensive national, regional and local preparedness and response policies, plans and systems established and operational
	Disaster Response
	5.2 Disaster response operational plans developed and managed to preserve life and meet the basic subsistence needs of the affected population
	5.3 Well coordinated, integrated system for recovery implemented at the national, regional and local levels
	Rehabilitation and Recovery
	5.4 Disaster risk reduction (DRR) and climate change adaptation (CCA) measures are incorporated into post disaster recovery and reconstruction processes Damage, Losses and Recovery Needs Assessed and Recovery Strategy Determined and Plan of Action Developed
	5.5 Hemisphere/Regional and International Support
	Regional/hemisphere and global cooperation and coordination promoted in pre-event preparedness post disaster recovery and reconstruction processes

Outcome 5.1: Comprehensive national, regional and local preparedness and response policies, plans and systems established and operational

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% COMPLETION		
				2017 2018	2019 2022	2022 2030
5.1.1 Engendered environment for preparedness and response strategies, including coordination mechanisms and infrastructure	Review, rationalize and periodically update disaster risk management (including climate change adaptation) and multi-hazards contingency policies, plans and programmes, with the involvement of relevant institutions	**NDMA**	Robust national disaster risk management and climate change policy framework in place and all vulnerable regions, communities and sectors have contingency plans	60	80	100
	Review and strengthen, where necessary, national laws and procedures in international cooperation, based on the Guidelines for the Domestic Facilitation and Regulation of International Disaster Relief and Initial Recovery Assistance[39]	**NDMA**	Updated Laws and Procedures in place, based on international standards, for guiding disaster relief and recovery processes	60	90	100
	Develop and/or enhance and simulate climate change scenario-based preparedness and response plans at the national, regional and local levels	**NDMA**	All vulnerable regions and local communities have contingency plans	40	70	100
	Ensure the optimal maintenance of the strengthened people centred multi-hazard, multi-sectoral forecasting systems, DRM/CCA communication mechanisms (including for emergency), social technologies and hazard monitoring telecommunications systems	**SWAZI-Met/ NDMA**	Protocol for maintenance of systems and mechanisms developed and implemented	60	80	100
	Promote the resilience of new and existing critical infrastructure, such as water, transportation and telecommunications infrastructure,	**NDMA/ MUUD/ MPWT**	Processes such as audited inspections in place to periodically evaluate and maintain critical infrastructure and ensure their	60	80	100

[39] www.ifrc.org. Saving lives, changing minds.

	educational facilities, food and nutrition security, hospitals and other health facilities, to ensure that they remain safe, effective and operational during and after disasters in order to provide life-saving and essential services		integrity and operability to deal with "most severe" scenario with minimal economic and human impact			
5.1.2 Increased coordination through emergency operations centers	Develop and/or enhance emergency command systems coordination and communication systems	**NDMA**	Enhanced coordination and communication response measures	40	70	100
	Develop and/or enhance the standard manual of operations for Operations Centers at the national, regional and local levels	**NDMA**	Standard operating systems in place	40	70	100
	Establish/Upgrade community centers for the promotion of public awareness and the stockpiling of necessary materials to implement rescue and relief activities	**NDMA**	Strategically located community centers established/upgraded throughout the country	40	70	100
5.1.3 A better prepared population	Adopt public policies and actions that support an enhanced role of public service workers in establishing or strengthening coordination and funding mechanisms and procedures for relief assistance and plan and prepare for post-disaster recovery and reconstruction	**NDMA**	Improved public policies and protocol guidelines available, with established role of public workers in preparedness, response and recovery processes.	40	70	100
	Train the existing workforce and voluntary workers in disaster response and strengthen technical and logistical capacities to ensure better response in emergencies	**NDMA**	Training manual developed and workforce and volunteers trained	60	80	100
	Develop and/or enhance guidelines for emergency response teams at the national, districts and local levels	**NDMA**	Improved protocol guidelines available for phasing of emergency response and recovery	40	70	100
5.1.4 Increased coordination, complementarity and interoperability of work in CCA and DRM	Promote cooperation of relevant institutions, multiple authorities and stakeholders at all levels, including affected communities and business, in light of the complex and costly	**NDMA**	Partnership arrangements among stakeholders established/strengthened	60	80	100

	nature of post disaster reconstruction, under the coordination of the national authorities					
	Create, maintain and update a directory or database of key players and stakeholders.	**NDMA**	Registry of stakeholders exists	40	70	100
	Establish and/or enhance the internal mechanism for information exchange, collaboration and cooperation with all focal points of resilience building related to DRM and CCA	**NDMA**	Single integrated set of resilience data for stakeholders, including collaborators, farmers and other producers, community organizations and the general public is available and fully shared	40	70	100
	Develop and/or enhance common and integrated response assessment tools and mechanisms (SOPs for deployment and coordination with rapid assessment teams, SRR, evacuation) at he national, district and local levels	**NDMA**	Tools and mechanisms developed and available	40	70	100
	Conduct an inventory of existing resources (physical, financial and human) at the national and regional level	**NDMA**	Integrated operations and essential services ensured	40	70	100
	Formulate coordination mechanisms and guidelines for arrangements in contingency plans at the national, regional and local levels	**NDMA**	Number of MOUs/MOAs signed with CSOs and private sector Increased participation of CSOs and private sector in preparedness activities Number of coordination mechanisms formulated Partnership mechanisms are included in contingency plans	40	70	100

Outcome 5.2: Disaster response operational plan developed and managed to preserve life and meet the basic subsistence needs of the affected population

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% Completion		
				2017 2018	2019 2022	2022 2030
5.2.1 Updated functions of the emergency operations centers (EOCs)	Review and enhance the existing protocol for the activation of the EOCs at the national, regional and local levels	**NDMA**	Existing protocol for the activation of the EOCs reviewed and upgrading to international standards	80	100	100
5.2.2 Well-established system of information gathering, reporting and dissemination	Issue public advisories in accordance with protocols developed based on international standards	**NDMA**	Advisories issued based on the availability of timely, accurate and reliable information during response in compliance with international standards	80	100	100
5.2.3 Established and functional system for coordinated and efficient relief operations in place	Develop and/or enhance the protocol for the activation of relief distribution points/centers to ensure efficiency and effectiveness in the process.	**NDMA**	Rate of affected people served Use of relief distribution mechanisms	80	100	100
5.2.4 Adequate and prompt assessment of needs and damages at all levels conducted	Develop a cadre of well trained personnel in rapid assessment methodology and activate at all levels as needed	**NDMA**	Rapid needs assessment conducted in all affected areas and timely and appropriate consolidated needs assessment reports available	80	90	100
	Develop a cadre of well trained personnel in the use the latest DANA assessment tool, as well as to consolidate, analyse and disseminate data from the local, regional and national levels to all relevant stakeholders	**NDMA**	Damage assessment and needs analysis (DANA) conducted covering all affected areas Integrated DANA reports from national to local levels available	80	90	100
5.2.5 Capacity for an Integrated and coordinated Search, Rescue and Retrieval (SRR) system enhanced and managed	Develop and/or enhance and implement the system for SRR as well as proper disposal	**NDMA**	Number of persons rescued Number of casualties retrieved, identified and turned over to their respective families	80	90	100

5.2.6 Strengthened system for the **s**afe and timely evacuation of affected communities	Strengthen the capacity of local authorities to evacuate persons living in disaster-prone areas	**NDMA**	A cadre of trained personnel in evacuation procedures available and utilized when needed	80	90	100
	Coordination mechanism with appropriate agencies strengthened to ensure greater interoperability and compatibility	**NDMA**	Coordination mechanisms and protocols in place activated	80	90	100
	Mechanism and protocol established and/or strengthened to ensure timely activation of an evacuation system and /or set of procedures	**NDMA**	Number of persons transported and/or evacuated by voluntary, pre-emptive and mandatory actions	80	90	100
5.2.7 Temporary shelter needs are adequately addressed to ensure that all evacuees are sheltered in well-equipped facilities (including areas for lactating mothers and at family homes)	Identify, designate and publish standard-based relief centers and sites	**NDMA/ MHUD**	Information on the number of temporary shelters available published, including location, capacity and amenities provided	80	90	100
	Identify and document the number of available tents and other temporary shelter facilities available and provide information to the general public on the same	**NDMA/ MHUD**	The number of other temporary secondary shelters available published vis-à-vis number of people needing them	80	90	100
	Implement a set of minimum standard for temporary shelters	**NDMA MHUD**	Protocol on shelters developed to be activated when needed	80	90	100
	Provide space for lactating mothers	**NDMA MOH**	Number of evacuation centers with areas for nursing mothers established	80	90	100
	Establish/upgrade child-friendly spaces/temporary learning area in the evacuation center for continuity of education	**NDMA/ MOE**	Restored education services where the evacuation centers are schools	80	90	100
	Provide spaces for safety people's livestock, poultry and pets in the evacuation centers	**NDMA**	Separate areas are provided for the livestock, poultry and pets to protect the livelihoods of some farmers	80	90	100
	Conduct livelihood-oriented activities for internally displaced persons	**NDMA/ MEPD**	Number of evacuation centers with livelihood training programs for the people	70	90	100
5.2.8 Basic health services provided to affected population, whether inside or	Develop a Plan of Action, including the necessary protocol on Medical Consultation and Nutrition Assessment and implement when	**MOH**	The number of patients seen, treated and served	70	90	100

outside the evacuation centers	necessary to ensure that all needy patients are seen/treated and epidemics prevented		The number of identified high risk children enrolled in the nutrition in emergency programmes			
	Develop a Plan of Action, including the necessary protocols for the Assessment of Water Quality and implement as needed	**MOH**	Water and sanitation services provided during emergencies are based on standards included in the Plan of Action	70	90	100
	Establish a database of hospital, clinics and other health care providers to support the determination of the adequacy of these facilities to address casualties during emergencies	**MOH**	Capacity needs of the health providers are matched to available facilities during emergencies	80	90	100
	Develop a programme establishing the mechanisms for the immediate restoration of lifelines, and implement as needed in emergencies	**MOH**	Restored lifelines	70	90	100
	Establish a mechanism of case registry and a database of mortality caused by disaster in order to improve the prevention of morbidity and mortality	**MOH**	Mechanism of case registry and a database of mortality established and available for future guidance	80	90	100
5.2.9 Psychosocial well-being promoted to ensure disaster affected populations are in good mental health during emergencies	Develop and promote coordination mechanisms among heads of relevant agencies with mental health capacity	**MOH**	The number of the affected persons, which were provided mental health and psychosocial services	70	90	100
	Enhance the recovery schemes to provide psychosocial support and mental health services (including referrals) for all people in need, to be implemented during emergencies	**MOH**	Number of people who are undergoing trauma debriefing (critical incident stress debriefing)	70	90	100
	Develop protocols for the conduct of trauma and/or psychological stress debriefings and implement during emergencies	**MOH**	% of the population undergoing psychosocial stress debriefing	70	90	100

Outcome 5.3: Well-coordinated, integrated system for recovery implemented at the national, regional and local levels

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% Completion		
				2017 2018	2019 2022	2023 2030
5.3.1 Contingency planning for post event recovery and reboot of the economy developed	Develop and periodically update comprehensive post event contingency recovery and reboot plans addressing economic, infrastructure and community needs for "most probable" and "most severe" scenarios develop	**NDMA**	Existence of comprehensive national recovery and reboot plans	90	100	100
	Establish post event shadow financial arrangements for dealing with incoming financial aid and disbursements	**NDMA/ MEPD**	Arrangements exist, updated periodically and believed to be workable	90	100	100
	Develop a standardized system of content/format for information collection	**NDMA**	Fully standardized system(content and format) exists for collecting disaster impacts information after the "most probable" scenario	90	100	100
5.3.2 Mechanisms for coordinated and integrated early recovery established and essential services restored	Conduct post-DANA analysis	**NDMA**	Early recovery needs identified	100	100	100
	Develop and implement a system for early recovery, to include specific activities addressing the needs identified	**NDMA**	Number of persons with continuing assistance (financial support and livelihoods)	100	100	100
	Develop partnership mechanisms with utility providers and key stakeholders	**NDMA**	Cooperation agreements in place	90	100	100
	Design and implement temporary livelihood and/or income generating activities (example case for food for work; capacity building in entrepreneurship; micro and small enterprise recovery)	**NDMA/ MEPD**	%% of vulnerable population provided with adequate and appropriate risk protection measures	100	100	100
5.3.3 Strengthened local capacity to prepare for, lead, conduct, and complete reports	Conduct training on Post Disease Needs Assessment(PDNA) and Development of Recovery Plans	**NDMA**	Record of training events at the district and national levels	90	100	100

following a disaster and develop recovery plans						
5.3.4 Post Disaster Needs Assessment (PDNA) conducted	Conduct PDNA and develop recovery plans as needed	**NDMA**	Recovery need assessed to include livelihood activities to be restored/revived and reconstructed efforts required	100	100	100
5.3.5 Recovery Strategy and Plan developed	Coordinate the formulation of the recovery strategy and plan for the country, as needed	**NDMA**	The recovery strategy to focus on reconstruction and infrastructure of physical assets, resumption of service delivery and access to goods and services, restoration of governance and social processes, building back better and risk reduction, and recovery costs National and sector recovery plan to be formulated following the results-based model, and to include: priority needs, interventions required in the short-, medium and long-term, expected outputs, recovery Costs in the short, medium and long-term, and intended outcomes	100	100	100
	Ensure the continuity of operations and planning, including social and economic recovery, and the provision of basic services in the post-disaster phase	**NDMA/ MEPD**	All government entities, sectors and businesses have some form of business continuity plan based on validated planning assumptions	70	90	100
5.3.6 Funding facilities and sources secured	Identify and mobilize funding for the implementation of the Strategy and Action Plan	**MEPD/ NDMA**	Disbursement of resources in the implementation of the Strategy and Action Plan	100	100	100
5.3.7 Simulation exercises promoted to ensure rapid and effective response to disasters and related displacement, including access to safe shelter, essential food and non-	Promote regular disaster preparedness, response and recovery exercises, including evacuation drills, training and the establishment of area-based support systems	**NDMA**	Frequency, efficiency and effectiveness of disaster preparedness, response and recovery exercises conducted	80	100	100

food relief supplies, as appropriate						
5.3.8 Learning loops – evidence of process and format for post-mortems developed and implemented	Develop comprehensive plans for post-mortems on response and recovery programmes that are shared by all stakeholders, and lessons learnt has in fact been used to effect changes in future plans and practices	**NDMA**	The existence of post-mortems on what went well and less well in event response to inform better future post-event planning	100	100	100

Outcome 5.4: Disaster risk reduction (DRR) and climate change adaptation (CCA) measures are incorporated into post disaster recovery and reconstruction processes.

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% Completion		
				20017 2018	2019 2022	2023 2030
5.4.1 Guidelines for preparedness for disaster reconstruction developed	Develop guidance for preparedness for disaster reconstruction, such as on land-use planning and structural standards improvement, based largely on learning from the recovery and reconstruction programmes over the decade, and exchanging experiences, knowledge and lessons learned	**NDMA**	Guidelines for post disaster reconstruction established and available	70	100	100
5.4.2 Guidelines for land use planning measures developed and promoted	Promote the incorporation of land use planning measures in the post disaster recovery process	**NDMA/ MOA**	Lands adequately allocated sectorally for sustainable development based on risk assessments	70	90	100
5.4.3 DRR and CCA measures incorporated in the reconstruction of human settlements	Identify and provide suitable safe relocation sites, for the affected populations, that are outside the risk range, where possible, in consultation with the people concerned, as appropriate	**MHUD**	% of affected communities and regions that are providing safe relocation and settlement areas	60	80	100
	Design and reconstruct resilient housing, utilizing structural	**MHUD**	% of affected districts and communities implementing	60	80	100

	standards improvement and the sharing of expertise knowledge		appropriate safety codes for human settlements			
	Conduct training for social preparation of host communities and those that will be relocated to reduce conflict	**MHUD/ MET**	Relevant government housing cum livelihood programs developed and implemented	70	90	100
	Organize and construct core shelters, engage in Cash for Work, Food for Work, organize sustainable livelihood options to empower settlers/affected families	**MHUD/ NDMA**	% of affected families involved in the construction of Core Shelter/Modified Shelter, Cash for Work/ Food for Work and Sustainable Livelihoods	60	80	100
5.4.4 DRR and CCA measures incorporated in the reconstruction of public facilities and infrastructure	Identify and provide suitable safe relocation sites for infrastructure and facilities outside the risk range, where possible.	**MPWT**	% of affected infrastructure and facilities relocated to safe areas	60	80	100
	Undertake the necessary restoration/rehabilitation of damaged infrastructure according to safety and resilience standards	**MPWT**	% of disaster-resilient transport facilities and other economic infrastructure rehabilitated/ reconstructed	60	80	100
	Implement building codes and promote green technology	**MPWT**	% of constructed/ reconstructed social infrastructure (hospitals and schools) following safety standards	60	80	100
	Conduct close monitoring and /or tracking of procurement of construction materials and approval of infrastructure projects and permits	**MPWT**	% of procurement of materials and applications approved within the prescribed time			

Outcome 5.5: Regional/hemisphere and global cooperation and coordination promoted in pre-event preparedness post disaster recovery and reconstruction processes.

OUTPUTS	ACTIONS/ACTIVITIES	LEAD AGENCY	OBJECTIVE INDICATOR (S)	% Completion		
				20017 2018	2019 2022	2023 2030
5.5.1 Regional/ hemisphere approaches and operational mechanisms in response and recovery processes strengthened	Develop and strengthen, as appropriate, coordinated regional/ hemisphere approaches and operational mechanisms to prepare for and ensure rapid and effective disaster response in situations that exceed national coping capacities	**NDMA**	Number of MOUs/MOAs signed with other governments in the hemisphere to support national rapid and effective disaster response in situations that exceed national coping capacities Increased participation and support from other governments of the region in disaster response and recovery processes	60	90	100
5.5.2 Regional/ hemisphere approaches for the further development and dissemination of instruments established	Support the further development and dissemination of instruments, such as standards, codes, operational guides and other guidance instruments	**NDMA**	A framework document to support regional/hemisphere coordinated action in disaster preparedness and response and to facilitate information sharing on lessons learned and best practices for policy practice and post-disaster reconstruction programmes in place	50	80	100
5.5.3 Regional/ hemisphere approaches for the further development and investment in effective, nationally compatible, multi-hazard early warning mechanisms strengthened/ established	Support the further development of and investment in effective, nationally compatible, regional/ hemisphere multi-hazard early warning mechanisms, where relevant, in line with the Global Framework for Climate Services, and facilitate the sharing and exchange of information across all countries	**NDMA**	A framework document for cooperation at the regional/hemisphere level developed and available	70	90	100

5.5.4 Regional/ hemisphere approaches	Support the development of regional/hemispheric protocols to facilitate the sharing of response capacities and resources during and after disasters	**NDMA**	Regional/hemispheric protocols for response capacities and sharing during and after disasters in place	50	80	100
5.5.5 Country actively supported and participated in international mechanisms for the sharing of experience and learning among countries and all relevant stakeholders	Support and participate in relevant international mechanisms, such as the International Recovery Platform, for the sharing of experience and learning among countries and all relevant stakeholders	**NDMA**	Record of regular attendance at relevant international forums	40	70	100
5.5.6 Country actively supported and participated in regional/hemispheric cooperation to deal with disaster preparedness	Support and participate in regional / hemispheric cooperation to deal with disaster preparedness, including through common exercises and drills	**NDMA**	Record of regular participation in Regional hemispheric exercises	40	70	100

6.0 IMPLEMENTATION OF THE SRSAP

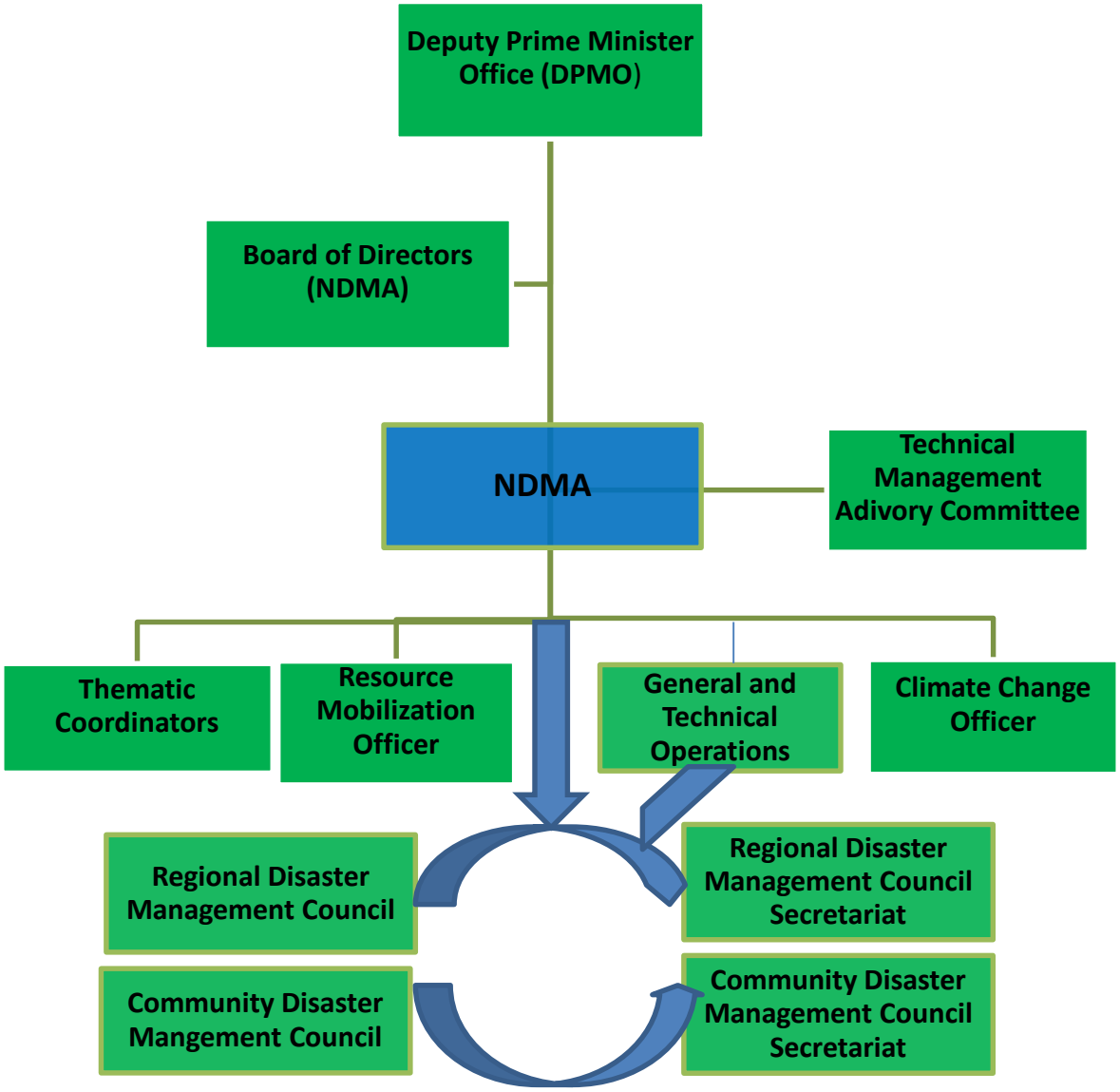
6.1. Implementation Structure

The Government of Swaziland (GOS) has the ultimate overall responsibility for the resilience building in the country. The NDMA, which was established to provide overall coordination of the national disaster risk reduction and management programmes, will have the main responsibility for providing the leadership in facilitating the overall coordination and management of the SRSAP. Effective coordination is imperative, particularly as the national CCA/DRR platform is required to facilitate linkages on a wide range of SRSAP initiatives. This involves collaboration and partnerships between an equally wide range of national and international government and non-government organizations, the private sector, civil society and other relevant stakeholders, including key donor institutions. Specific responsibilities will be:

- Coordinating, integrating, supervising and monitoring the development and enforcement by agencies and organizations of the various laws, plans, programmes, guidelines, codes or technical standards prescribed by the relevant Acts;
- Arranging Terms of Reference and recruitment of relevant technical experts in consultation with relevant ministries and agencies;
- Ascertaining that the policy framework, physical infrastructure, social, economic and environmental plans of the communities and regions are consistent with the SRSAP;
- Ensuring that all SRSAP programmes, projects and activities requiring hemispheric/regional and international support are in accordance with duly established national policies and aligned with international agreements;
- Managing and mobilizing resources for the implementation of the SRSAP, including the operationalization of the National DRM (SRSAP) Fund, and facilitating liaison with donor governments and agencies with a view to secure funding;
- Developing and implementing a communication strategy to ensure high levels of awareness at the national, regional and community levels of the SRSAP, but more importantly of the hazard risks faced by the country and measures identified and being taken to address them;
- Facilitating information sharing, knowledge management, lessons learnt and documentation of best practices;
- Facilitating regular meetings with the relevant agencies, sector clusters and the newly established technical management advisory committee (TMAC) on SRSAP to ensure timely and effective implementation of the actions and activities under the SRSAP;
- Reporting on implementation progress to the Board of Directors of NDMA at scheduled meetings as part of the monitoring and evaluation process, and to raise policy issues; and
- Facilitating the implementation of the monitoring and evaluation mechanism to ensure progress and reporting on SRSAP implementation.

In the context of the redefined responsibility of the NDMA, the institutional structure of the agency will be strengthened in several dimensions (**See Figure 5**).

Figure 5: Institutional Mechanism for the Implementation of SRSA



- The Board of Directors should be strengthened to reflect representations from the private sector, as well as policy makers and technical experts in CCA and DRM. Representations on the Board should be selected at the highest level from sourced institutions.

- A Technical Management Advisory Committee (TMAC) should be established, comprised of experts from relevant national and international institutions involved in DRM/CCA to provide technical and managerial support and guidance

in the implementation of the SRSAP. The membership should include key disaster management and donor institutions and also representatives from the scientific and academic institutions and the private sector.

- Within the TMAC, five Thematic Committees should be established to represent the five pillars of the SRSAP. Each Committee will be the" Technical Think Tank" on the development and implementation of technical options for the enhancing the resilience building process of the respective pillar, as well as the overall SRSAP. To ensure an organic relationship between the TMAC and the Board of Directors of NDMA, the lead of each Thematic Committee (of the five pillars) under the TMAC should report to a designated Vice-Chair of the Board having that portfolio responsibility;
- The possibility of placing more emphasis on thematic clusters as a more effective implementation approach instead of sectoral clusters should be examined.
- The capacities of the sectoral clusters should be strengthened to more effectively coordinate the development and implementation of cluster plans along the entire CCA/DRM chain, instead of just 'cluster emergency response plans.'
- The institutional capacity of the NDMA should be strengthened for effective coordination of CCA and DRM related tasks to include additional staff with specific Terms of Reference and the required logistic support in four technical areas, namely: thematic coordination (5 coordinators), one for each of the five pillars, including an Information, Education and Communication specialist to be responsible for the coordination of Thematic Area/Pillar 3; climate change adaptation (1 specialist); and resource mobilization (1 specialist). The thematic coordinators should liaise closely with the respective thematic committees of the TMAC.
- The Regional Disaster Management offices will be strengthened by providing additional logistic support. At this regional level, a Regional Disaster Management Council (RDMC) should have oversight responsibility for ensuring that SRSAP-sensitive regional development plans contribute to and are aligned to the national SRSAP, and that the regional level initiatives all have programmed budget resources. At the regional level the RDMC chairperson will lead the process.
- At local government and community level, it is the primary responsibility of the local Community Disaster Management Council (CDMC) to ensure that SRSAP is mainstreamed into the respective community development plans, programmes and budgets as part of the local level strategy on sustainable development and poverty reduction. The NDMA should serve to provide overall guidance to the CMDC secretariat in formulating the local component of SRSAP.

The SRSAP will build on, and enhance, the existing inter-sectoral coordination mechanisms within the NDMA. One of the primary tasks of the NDMA will be to establish linkages to adequate technical and financial support to the concerned lead institutions.
Current government programmes at all levels are already contributing to the achievement of the SRSAP goal and objectives, but with varying degrees of success. The identification of specific programmes and projects under the SRSAP as well as their lead and partner agencies will help in establishing specific budgets and promoting better planning for appropriate and effective CCA and DRR investments at the national,

regional and local levels. It will also ensure that there are synergies between different government programmes/schemes vis-à-vis the planning process and implementation. The Government of Swaziland commitment and political will towards the adoption and implementation of the SRSAP will be demonstrated by the issuance of a policy statement and executive order that will require all relevant departmental/non-departmental agencies and local governments to implement the components of the strategy and plan relevant to their institutional mandates.

Agency leads are identified in the SRSAP to ensure effective implementation. The agency leads are expected to assume the following duties and responsibilities:

- Take the lead in initiating the implementation of the activities;
- Coordinate and collaborate with the different implementing partners to ensure that the activities are operationalized;
- Monitor the progress of the activities;
- Evaluate the implementation, development and programme efficiency; and
- Consolidate reports from the implementing partners and submit to the respective Thematic Vice-chair of the Board and Thematic Coordinator for action and feedback

The following are the general duties and responsibilities of the implementing partners:

- Perform the activities to achieve the specific outcomes;
- Work with other implementing partners within the context of coordination, collaboration and partnership; and
- Submit reports to Agency Leads for action and feedback

The non-identification of implementing of partners was done deliberately in order to facilitate near time determination of those partners.

6.2 Implementation Issues and Strategies

Various strategies have been identified as critical to the implementation of the SRSAP to achieve the desired results under each pillar.

Information, Education and Communication (IEC)

A strong national, regional and community commitment is required to save lives and livelihoods threatened by disasters, as well as to reduce damage and losses. Achieving this will need increasing visibility and understanding of DRM and CCA issues, mobilizing partnerships, encouraging actions and marshalling public support for successful implementation of the activities. The SRSAP will use evidence-based advocacy to influence people, policies, structures and systems in order to build resilient communities by raising awareness, working with the media and key stakeholders. The SRSAP will develop advocacy, IEC and various communication strategies based on risk assessments and best practices in CCA and DRM.

Competency-based Capability Building

Customized training programmes should be developed and training conducted to ensure that people are trained based on the needed skills in the different CCA and DRM aspects. Different people have different needs and capacities and developing competency-based capability building programmes ensure that knowledge, skills and attitudes are enhanced and built upon further.

Education on CCA and DRM for All

The main-streaming SRSAP into the formal education system should be undertaken through the integration of CCA and DRM concepts in the curriculum at basic, primary, secondary, university and vocation levels. This also includes the conduct of CCA and DRM training of public sector employees, including teachers. There is the obvious need for the development of teaching materials and training manuals.

Main-streaming of CCA and DRM into Sectoral and National Plans

In all five pillars under the SRSAP, there is the need to ensure CCA and DRM measures are mainstreamed into the various policies, programmes, plans, and projects at the national, regional and community levels, including the private sector and NGoS. This to a large extent means that disaster risk analysis and impacts are integrated and taken into consideration in the development of policies and plans by the different agencies, organizations and sectors.

Research, Technology, Development and Knowledge Management

With the changes in the climate and advances made in science and technology, the conduct of prioritized research and the development of technologies related to DRR/CCA will no doubt contribute to more innovative and adaptive mechanisms and approaches towards resilience building. Along with new information, knowledge management through database development, documentation, recognition and replication of good practices, the objectives and targets of the SRSAP will be achieved through more efficient use of resources, learnings and experiences.

Contingency Planning

Contingency plans are now used in all phases of the DRM cycle, instead of the common historical use in disaster preparedness. Lessons learnt from past experiences and complementary actions between and across thematic areas should be taken into account in developing contingency plans at all levels.

Institutionalization of NDM at the National, Regional and Local Levels

The establishment of permanent offices at the national and district level and community councils at the local level is one of the ways to ensure that resilience building activities, plans and programmes will be implemented and sustained, especially at the local level. Having a point of convergence is important to ensure that CCA and DRM measures complement each other and are institutionalized with the objective of reducing people and institutional vulnerabilities to disasters. This will likewise promote the paradigm shift towards main-streaming resilience building in local planning by investing in risk reduction measures, instead of following the reactive mode exemplified by limiting priority activities to disaster response operations.

Networking and Partnership Building

Building resilient communities and a nation cannot and should not be done by a single agency or organization. Its success is highly dependent on the close collaboration of the different stakeholders. Building effective and mutually re-enforcing partnerships and evolving networks is critical to ensure the multi-stakeholders and multi-sectoral participation of the different players in resilience building.

Pre-disaster Recovery Planning for Faster Post-disaster Rehabilitation and Recovery

Whenever a disaster occurs, there is always great pressure to quickly reconstruct damaged infrastructure and other critical facilities. Pre-disaster recovery planning will help in a more effective response to hasten the recovery from the impacts of a disaster, and ensure the achievement of rehabilitation and recovery outcomes. Pre-disaster recovery planning also promotes greater participation in a non-disaster environment. Within the perspective of building back better, this activity will involve creating disaster scenarios, determining the key areas of intervention, and establishing post-disaster recovery organization. Key inputs in this activity are the risk assessments as well as lessons learned from the earlier disaster rehabilitation and recovery experiences.

6.3 Financing Strategy

The main objective of a financial strategy within this context is to help identify sustainable sources of finance to help implement the activities contained in the SRSAP. These can come from existing national budgets (as can be identified from annual budget submissions/ subventions and the medium-term expenditure framework) and from external sources (such as donors, regional partners, etc.).

At the national and local levels, the following sources can be tapped and/or established to fund the various SRSAP programmes and projects:

- Swaziland Resilience Strategy and Action Plan (SRSAP) Fund.
- Priority Development Assistance Fund (PDAF).
- Adaptation and Risk Financing Assistance.
- Disaster Management Fund, equivalent to 1% of national budget.

Aside from the above sources of funds, the SRSAP can also tap into non-monetary resources available which can help attain the targets identified in the SRSAP, namely:

- CCA and DRM networks of key stakeholders.
- Public-Private Partnerships
- Community-based best practices for application and scaling up.
- Indigenous practices on Resilience building.

While it is acknowledged that building resilience to disaster is the primary responsibility of Government of Swaziland, the prevailing conditions reflect a significant lack of CCA/DRM capacity and resources in the country. This means that resilience building in the Swaziland can only be realized through a fresh infusion of energy and resources from external sources, particularly international non-government organizations and international donor agencies.

Linkages with international and hemisphere/regional disaster risk reduction climate change adaptation institutions and networks and other donor institutions should be enhanced to increase access to technical and financial resources. As such, NDMA in consultation with the MEPD should, as soon as practicable, convene a donor's conference to create awareness and general understanding by donors of the SRSAP and funding requirements. The newly created capacity of Resource Mobilization Officer within the NDMA should immediately take on this responsibility and:

- Prepare project proposals to address specific SRSAP objectives and actions contained, therein; and
- Prepare a Profile of possible funding institutions and facilities for the implementation of the SRSAP, at the national, hemisphere/regional and international levels

The private sector should eventually be more extensively and constructively engaged in order for them to assume a role in funding climate change and disaster risk reduction measures, particularly at the local levels.

Some specific external funding facilities available for the implementation of the SRSAP include:
The European Union (EU): The EU has established a funding facility known as the ACP/EU Natural Disaster Facility, which will provide African States, within the African Caribbean and Pacific (ACP) Grouping, with funding to support CCA/DRM development and implementation.

The World Bank: In 2006, the World Bank established a Global Facility for Disaster Reduction and Recovery. The Pilot Program for Climate Resilience (PPCR) is a targeted program of the Strategic Climate Fund (SCF), which is one of two funds within the Climate Investment Funds (CIP). It is implemented through the African Development Bank and the World Bank Group. The PPCR supports technical assistance and investments to support countries' efforts to integrate climate risk resilience in core development planning and implementation.

Global Environment Facility (GEF): The GEF provides funding support to resilience building directly or indirectly through project support in areas such as biodiversity, climate change, law of the sea, ozone depleting substances, land degradation and desertification.

The Green Climate Fund (GCF): The GCF will be the main channel through which climate finance is allocated. The GCF, which is headquartered in South Korea, is controlled by a Board on which developed and developing countries are equally represented.

The Adaptation Fund: The Adaptation Fund, which is financed through a levy on international carbon market transactions, is the only international climate fund besides the GCF that is independent of development finance institutions.

6.4 Communications Strategy

The success of resilience building in Swaziland will rely heavily on the ownership and support that the SRSAP implementation process receives not only from the government, but certainly also from all sectors of the economy and different levels of the community. This ownership and support can be made possible through a mechanism that provides ongoing and focused awareness and understanding not only of the SRSAP actions and activities, but more importantly of the critical importance of resilience building to longer-term sustainable development in Swaziland.
The communication of the SRSAP in particular, and CCA/DRM in general should be addressed through a two-pronged approach:

- Overall communication and awareness creation of the SRSAP and its intended outcomes, particularly in relation to the focus on making Swaziland a more resilient country; and
- Communication and awareness creation of the specific objectives and related actions and activities of the SRSAP.

The responsibility for the implementation of the broader communication strategy should be vested in the NDMA.

7.0 Monitoring and Evaluation

Feedback mechanisms are important aspects in gauging performance targets and learning from experiences on the ground. The SRSAP, being a long-term plan needs to be constantly reviewed in terms of its relevance and impact on the changing situations on the ground in the process of resilience building.

Monitoring and evaluation (M&E) are essential components of the result-based programme in resilience building and is therefore intended to achieve a number of objectives:

- To ensure that the SRSAP is on-time in terms of its implementation schedule and that lessons from past experiences are considered in adjustments to the plan;
- To identify appropriate and needed revisions and/or changes, from the listed activities in the implementation plan, in case more appropriate ones are realized. New SRSAP initiatives may be identified from this process;
- To provide regular reports to the government and relevant stakeholders on the progress of the implementation, through the NDMA; and
- To provide a mechanism for feedback and accountability to donor partners and organizations of funds expended and progress made in terms of activities implemented.

The **SRSAP Results-based Logical Framework Matrix** that is presented in ***Section 5*** provides an excellent framework for the monitoring and evaluation of progress in the implementation of the SRSAP. It is aligned to the Sendai and the UN 2030 Agenda for Sustainable Development frameworks and, therefore, the relevant information for reporting to those entities will be readily available in the required format. The outcomes and outputs from the matrix are presented in the monitoring and evaluation frame (**Table 6**) below, with short term, medium term and long term timelines.

Table 6: MONITORING AND EVALUATION FRAMEWORK

Pillar 1: Governance

Outcomes	Outputs	Short Term	Medium Term	Long Term
1.1 Institutional mechanisms for the efficient and effective coordination of DRM and CCA tasks within Swaziland strengthened at the national, regional and local/community levels	***1.1.1*** National, regional, local and sectoral frameworks of laws, regulations and public policies reviewed, updated, further developed, as appropriate, and promoted to ensure coherence and to drive resilience at various levels			
	1.1.2 The national integrated institutional framework for resilience building strengthened			
	1.1.3 Strengthened mechanisms for compliance and reporting in place			
1.2 Technical Units strengthened and provided with mandates for DRM and CCA management at the national, regional and local/community levels	**1.2.1** Technical Units strengthened and provided with mandates for DRM and CCA management at the national and regional levels			
1.3 DRM and CCA main-streamed and integrated into national sectoral, regional and local development policies, strategies, plans and budgets	**1.3.1** Capacity built for main-streaming CCA and DRM for planners and decision makers at the national, sectoral, regional and local/community levels to ensure the resilience building becomes an integral component in planning, decision making and budgetary processes at all levels			
	1.3.2 CCA and DRM considerations main-streamed into macroeconomic policy, fiscal management and national budgetary processes and practices			
	1.3.3 Resilience building as a development issue raised at the highest level (parliament) to increase commitment and support of policies and priorities			
	1.3.4 Enhanced Civil Society Organizations (CSO) participation in national, regional and local Resilience Building			
	1.3.5 Strengthened and improved Corporate Partnership for Resilience building			
	1.3.6 Resilience and CCA/DRM issues (including adaptation and mitigation, land degradation) and food security priorities are integrated into national, regional and local level plans			
1.4 DRM and CCA considerations integrated into cross cutting issues such as environmental management and gender equality	**1.4.1** Environmental and gender equality policies developed with a CCA/DRM lens			
	1.4.2 Aligned Climate Change Commission (CCC) and NDMA work plans			

Pillar 2: Risk Assessment and Monitoring

Outcomes	Outputs	Short Term	Medium Term	Long Term
2.1 Climate impact, risk and vulnerability assessment methodologies improved and derived outputs from the enhanced processes are transferred to relevant sectors, departments and communities for application	**2.1.1** Risk and vulnerability assessments conducted to ensure that knowledge of the most prevalent hazards faced by the country and their likelihood exists.			
2.2 Institutional and technical capacities of Weather and Climate Services strengthened to improve the provision of necessary forecast products obtained from the early warning systems for application at appropriate levels	**2.2.1** Institutional and technical capacities of Swazi-Met and other relevant departments and entities strengthened			
2.3 National technical capacities to apply need based climate and weather information products derived from early warning systems strengthened	**2.3.1** Enhanced application of need based climate and weather information products			
	2.3.2 Flood/Drought Management Plan (F/DMP) and template developed to mitigate and alleviate a crisis			
2.4 Livelihood based damage and loss assessments procedures and baseline database formats developed and tested	**2.4.1** Enhanced integrated livelihood approach in place in support of resilience building			

Pillar 3: Knowledge Management and Awareness

Outcomes	Outputs	Short Term	Medium Term	Long Term

3.1 Awareness creation strategy for climate change adaptation and disaster risk management designed and applied at the national, regional and local levels	**3.1.1** Level of awareness of the country, regions and communities as to the threats and impacts of all hazards increased through the development and implementation of a comprehensive national CCA/DRM information, education and communication program			
3.2 Enhanced knowledge, innovations and good practices for climate change adaptation and disaster risk management	***3.2.1*** CCA/DRM knowledge base established as a resource for developing public awareness programming materials and for decision making and planning			
3.3 Local communities and local institutions mobilized for climate change adaptation and disaster risk management interventions	***3.3.1*** Local communities and local institutions mobilized for CCA and DRM interventions			
3.4 Knowledge on key reports and information material related to climate change adaptation and disaster risk management shared and disseminated strategically	***3.4.1*** Key reports and information disseminated			

Pillar 4: Risk Reduction

Outcomes	Outputs	Short Term	Medium Term	Long Term
4.1 Integrated production systems and economic diversification promoted to build resilience of communities to climate change impacts	***4.1.1*** Agriculture and economic diversification promoted			
	4.1.2 Research institutions strengthened and facilitated to prioritize immediate resilience building issues and conduct applied research on climate change impacts and adaptation/mitigation and develop technologies for sustainable management, including land management			
	4.1.3 Entrepreneurship promoted to foster the development of micro, small and medium-sized enterprises (MSMSE) in poor and vulnerable communities			
4.2 Disasters' impact on poverty, income volatility and food and nutrition insecurity is mitigated by making agriculture more resilient	***4.2.1*** Climate Smart Agriculture practices are promoted to sustainably increase productivity, to enhance resilience, and to minimize greenhouse gas (GHGs) emissions			
	4.2.2 Enhanced sustainable water management and conservation practices on farms			
	4.2.3 Construction of animal and poultry housing improved, guidelines to construct			

	the same developed and available, proactive animal/livestock management initiatives promoted			
	4.2.4 Post harvest practices to proactively manage climate related risks is promoted			
4.3 Increased value to the society of ecosystem services through reduction in erosion and sedimentation of water bodies, improvement in water quality, limited flooding, and regularity of water flows	***4.3.1*** The value and benefits to the country of ecosystem services for disaster risk prevention recognized, and therefore protected and/or enhanced as a part of the resilience building strategy for Swaziland			
	4.3.2 Resilience of watersheds to natural disasters enhanced			
	4.3.3 Sustainable biodiversity, land and soil management practices promoted			
4.4 Decision makers and the general public more receptive to the need for adequate zoning and building codes in the reducing vulnerability of human settlements	***4.4.1*** A Knowledge management platform established for decision makers at all levels (national, regional, local government; landowners and private sector, etc.) focusing on the link between land titling use and settlement planning and vulnerability to disasters in the context of resilience building			
	4.4.2 The role of the private sector in ensuring the adoption of safe and risk sensitive building practices and a building code for construction strengthened			
4.5 Increased disaster resilience of infrastructure systems	***4.5.1*** Enhanced disaster resilience capacity and adequacy of infrastructure systems to ensure business continuity after an event			
4.6 Reduced vulnerability to water-related hazards and water shortages resulting from hazards	***4.6.1*** Improved policy and legislative framework for water safety, use and management			
	4.6.2 Improved water supply situation of the country			
	4.6.3 The level of public awareness about water related risks raising			
4.7 Increased disaster resilience of health sector through the integration of CCA and DRM measures	***4.7.1*** Health targets and indicators included in monitoring and reporting on resilience building progress			
	4.7.2 Capacity of the ***Safe Hospitals Initiative*** strengthened			
	4.7.3 Action and resources to support health and related sectors that are vital to resilience building strengthened			
	4.7.4 Implemented diseases surveillance system weak			
	4.7.5 Improved coordination and knowledge management in the health sector			
4.8 Enhanced social protection program to build resilience to disasters and climate change	***4.8.1*** Well coordinated institutional platform established among ministries and agencies			
	4.8.2 Ensured Scalability and Flexibility in the SP programme			

	4.8.3 Households that are most vulnerable to natural disasters and climate change-related risks are targeted, using a combination of targeting strategies to ensure efficiency and effectiveness in the process			
	4.8.4 Good Governance and Accountability ensured			
	4.8.5 Adaptive Capacity at the Household and Community Level enhanced			
4.9 Strengthened existing school feeding program for better learning and lifelong healthy food choices	***4.9.1*** **A** national school nutrition policy developed			
	4.9.2 Infrastructure for the provision of meals strengthened			
	4.9.3 Nutrition education in schools promoted to reduce the prevalence of obesity, stunting, under-nutrition, micronutrient deficiencies and the associated health consequences			
	4.9.4 Efficiency and effectiveness of school nutrition interventions improved through better targeting			
	4.9.5 Governance mechanisms and systems improved			
4.10 Strengthened risk sharing and transfer mechanisms	***4.10.1*** Availability and access to various disaster risk financing and insurance schemes for vulnerable groups and/or communities			
	4.10.2 Mechanism developed for increased risk financing			
4.11 Strengthened Long Term Low Carbon Development Pathway/Strategy to reduce vulnerability to climate change impacts	***4.11.1*** Strengthened Long Term Low Carbon Development			

Pillar 5: DRM and CCA Preparedness, Response and Rehabilitation Measures

Outcomes	Outputs	Short Term	Medium Term	Long Term

5.1 Comprehensive national, regional and local preparedness and response policies, plans and systems established and operational	**5.1.1** Engendered environment for preparedness and response strategies, including coordination mechanisms and infrastructure			
	5.1.2 Increased coordination through emergency operations centers			
	5.1.3 A better prepared population			
	5.1.4 Increased coordination, complementarity and interoperability of work in CCA and DRM			
5.2 Disaster response operational plans developed and managed to preserve life and meet the basic subsistence needs of the affected population	**5.2.1** Updated functions of the emergency operations centers (EOCs)			
	5.2.2 Well-established system of information gathering, reporting and dissemination			
	5.2.3 Established and functional system for coordinated and efficient relief operations in place			
	5.2.4 Adequate and prompt assessment of needs and damages at all levels conducted			
	5.2.5 Capacity for an Integrated and coordinated Search, Rescue and Retrieval (SRR) system enhanced and managed			
	5.2.6 Strengthened system for the **s**afe and timely evacuation of affected communities			
	5.2.7 Temporary shelter needs are adequately addressed to ensure that all evacuees are sheltered in well-equipped facilities (including areas for lactating mothers and at family homes)			
	5.2.8 Basic health services provided to affected population, whether inside or outside the evacuation centers			
	5.2.9 Psychosocial well-being promoted to ensure disaster affected populations are in good mental health during emergencies			
5.3 Well coordinated, integrated system for recovery implemented at the national, regional and local levels	**5.3.1** Contingency planning for post event recovery and reboot of the economy developed			
	5.3.2 Mechanisms for coordinated and integrated early recovery established and essential services restored			
	5.3.3 Strengthened local capacity to prepare for, lead, conduct, and complete reports following a disaster and develop recovery plans			
	5.3.4 Post Disaster Needs Assessment (PDNA) conducted			
	5.3.5 Recovery Strategy and Plan developed			
	5.3.6 Funding facilities and sources secured			

	5.3.7 Simulation exercises promoted to ensure rapid and effective response to disasters and related displacement, including access to safe shelter, essential food and non-food relief supplies, as appropriate			
	5.3.8 Learning loops – evidence of process and format for post-mortems developed and implemented			
5.4 Disaster risk reduction (DRR) and climate change adaptation (CCA) measures are incorporated into post disaster recovery and reconstruction processes Damage, Losses and Recovery Needs Assessed and Recovery Strategy Determined and Plan of Action Developed	**5.4.1** Guidelines for preparedness for disaster reconstruction developed			
	5.4.2 Guidelines for land use planning measures developed and promoted			
	5.4.3 DRR and CCA measures incorporated in the reconstruction of human settlements			
	5.4.4 DRR and CCA measures incorporated in the reconstruction of public facilities and infrastructure			
5.5 Regional/ hemisphere and global cooperation and coordination promoted in pre-event preparedness post disaster recovery and reconstruction processes	**5.5.1** Regional/ hemisphere approaches and operational mechanisms in response and recovery processes strengthened			
	5.5.2 Regional/ hemisphere approaches for the further development and dissemination of instruments established			
	5.5.3 Regional/ hemisphere approaches for the further development and investment in effective, nationally compatible, multi-hazard early warning mechanisms strengthened/ established			
	5.5.4 Regional/ hemisphere approaches			
	5.5.5 Country actively supported and participated in international mechanisms for the sharing of experience and learning among countries and all relevant stakeholders			
	5.5.6 Country actively supported and participated in regional/hemispheric cooperation to deal with disaster preparedness			

The responsibility for monitoring and evaluation of the SRSAP should be vested in the NDMA.

Monitoring and evaluation will use the indicators, targets and activities identified in each of the five pillars of the SRSAP. The indicators established in the SRSAP will be applicable

at the local, district and national levels. The M&E process will utilize a modified version of UNISDR Resilient Scorecard for Cities, 2015.[40] This isdone for two main reasons:

- It provides a highly integrated platform, that is strong, well-coordinated and systematic that allows for the base-lining of the status resilience building at any time as well as for the identification of areas of deficiencies in capabilities, knowledge and resources; and
- It incorporates the critical resilience building elements of the 2030 Agenda for Sustainable Development (SDG) and the Sendai Framework, 2015-2030, and hence prevents the proliferation of several M&E frameworks to basically measure the same targets and indicators. It also ensures consistency and reliability of the information to be placed in the domain of the international community.

In order to ensure that the outcome of the M&E reports lead to further strategic planning in relation to resilience building, the NDMA will facilitate formal reviews of the SRSAP following the end of the Short-term period (2017-2018) and the Midterm period (2019 - 2022). The results of such reviews may be adapted as the "second phase" and the "third phase", respectively, of a rolling SRSAP planning process. Ultimately the change is to formally mainstream or integrate the issues related to CCA and DRM into the national sustainable development strategy, sectoral and corporate plans and budgets. When such a situation is reached, then the need for a separate SRSAP is rendered obsolete.

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ANNEX I

Major Resilience Building Initiatives of Regional and International Intuitions

The UN System efforts in strengthening resilience in Swaziland include:

- National Action Plan (NAP) for Capacity Building in Disaster Risk Reduction (2005-2007);
- Strengthening National and Local Resilience to Disaster Risks in Swaziland (2008 – 2010);
- National Action Plan for Disaster Risk Reduction (2008-2015);
- National and Trans-boundary Water Resources Management in Swaziland to manage the expected impacts of Climate Change (2012-2016);
- Strengthening National and Community Systems for Effective Disaster Risk Management (2013-2014);
- United Nations Development Assistance Frameworks (UNDAF) 2011-2015; and 2016-2020.

The United Nations Development Assistance Framework (UNDAF) is the main strategic document that will guide the UN and the Government of Swaziland's engagement in enhancing the economic and social development of the people of Swaziland. The **UNDAF** process ensured that some of the resilience challenges addressed in its core programme of activities over the period 2011-2015, are also captured in the 2016-201 programme. The planning process for the UNDAF was guided by Swaziland's policies and priorities and utilized a consultative process at different levels, both within the UN System and between the UN and its strategic partners, and under the overall leadership of the Joint Steering Committee (co-chaired by the Government and the UN). The UNDAF was based on the following four UNDAF Pillars and the associated UNDAF Outcomes during its 2011-2015 (**Table 1**) lifespan.

Table 1: Swaziland UNDAF: 2011-2015, Pillars and Outcomes[41]

UNDAF Pillar	Outcomes
HIV and AIDS	To contribute to reduced new HIV infections and improved quality of life of persons infected and affected by HIV by 2015
Poverty and Sustainable Livelihoods	Increased and more equitable access of the poor to assets and other resources for sustainable livelihoods
Human Development and Basic Social Services	Increased access to and utilization of quality basic social services, especially for women, children, and disadvantaged groups
Governance	Strengthened national capacities for the promotion and protection of rights

Three priority areas have been identified for the UNDAF 2016-2020[42]. These priority areas and their accompanying outcomes were informed by Swaziland's National

[41] United Nations Development Assistance Frameworks (UNDAF) 2011-2015.

[42] Swaziland United Nations Development Assistance Framework (UNDAF) 2016-2020

Development Strategy (NDS), the national priorities for the post-2015 development agenda, the Common Country Synthesis, the UN system's comparative advantage analysis; the lessons from the UNDAF 2011-2015 and the Strategic Prioritisation Retreat with Government and implementing partners.

Table 1: UNDAF Priorities and Outcomes

Priority Area	Outcome
1: Poverty and inequality reduction, inclusive growth and sustainable development	1.1 Youth, women and vulnerable groups' opportunities for employment and sustainable livelihoods improved by 2020
	1.2 Communities' and national institutions' management of natural resources improved by 2020
2: Equitable and efficient delivery and access to social services	2.1 Children's and adolescents access to quality and inclusive education and; retention in school increased by 2020
	2.2 Families and communities' access to and uptake of quality health and nutrition services increased by 2020
3: Good Governance and Accountability	3.1 Access to, and quality of priority public service delivery to citizens improved by 2020
	3.2 Citizen and Civil Society Organizations' participation in decision-making processes at all levels increased by 2020

The **FAO** has developed and is in the process of implementing a national policy and action plan to address the food and nutrition insecurity of the country. In addition, Swaziland is benefiting from its signatory to a number of international agreements on food security which include: the Rome Declaration on World Food Security (1996); Declaration of the World Food Summit (2002); International Conference on Nutrition (1992); the FAO Committee on World Food Security Right to Food Guidelines (2004); and the International Covenant on Economic, Social and Cultural Rights (1996). This must be seen in the context that, Swaziland's economy relies on agriculture, with 77% of the population deriving their livelihoods from subsistence farming. The agricultural activities are highly dependent on rain making the sector highly vulnerable to climate shocks. Swaziland had been producing less maize (the staple crop) to meet the national requirements. The 2014/15 cereal harvest Swaziland imports approximately 22% of its cereal requirements mainly from South Africa and is a net importer of food. However, the capacity to import food is threatened by reductions in export earnings due to the global financial downturn.

The food security and nutrition challenges largely stem from successive years of drought caused by climate change; multi-dimensional impacts of HIV and AIDS; dependence on production under rain-fed conditions; and declining use of improved agricultural technology. Other factors undermining nutrition include poor access to safe water and sanitation; poor care practices; inappropriate infant and young child feeding practices; and poor maternal hygiene and disease burden. Insufficient access to safe drinking water poses a challenge to proper food preparation, while poor sanitary conditions increase exposure to diseases that affect food utilization. There are rural-urban differences in nutritional status, with the former having much more prevalence than the latter. There is also a disparity between boys and girls, with more boys malnourished than girls.

USAID: Historically, USAID in Swaziland has focused on the areas of democracy, human rights and governance, economic growth and trade, food security, water collection, storage and sanitation, and Global Health. Currently, in partnership with the President of the United States of America Emergency Plan for HIV/AIDS Relief (PEPFAR) and the Government of the Kingdom of Swaziland, USAID is working to address HIV/AIDS in the following five (5) areas:

- Preventing sexual transmission through the distribution of condoms and the provision of counselling and testing;
- Increasing the prevalence of male circumcision;
- Improving institutional capabilities and capacities;
- Lessening the impact of HIV/AIDS by referring persons tested positive for appropriate health care; and
- Decentralizing care treatment through the establishment of neighbourhood Care Points.

IFAD is currently implementing many projects to support rural communities and improve livelihoods, including The Lower Usuthu Smallholder Irrigation Project.

Baphalali Swaziland Red Cross Society (BSRCS) is traditionally strong in public awareness. It conducts awareness campaigns on protecting communities' livelihoods. The BSRCS conducts regular training of volunteers on disaster awareness. Over the years, the BSRCS development work in Swaziland has focused primarily on issues related to health (integrated HIV/AIDS Programme), migration, disaster risk reduction and recovery, shelter, capacity building and humanitarian logistics. In support of the national efforts in response to the 2014-2016 El Nino induced drought in the country, BSRCS is currently engaged in the provision of Direct Cash Transfers (DCT) to 9,800 households (60,000 persons); the development of key-hole gardens; the provision of cooking stoves to households to reduce the dependence on fire wood; The communal production of fodder for livestock; and the provision of training in Climate Change Adaptation measures to 102 households.

BSRCS carries out the bulk of their activities through the use of trained community-based volunteers nationwide.

World Vision: World Vision has been working in Swaziland since 1992, concentrating on changing the lives of the poor. This is being achieved through a community development project approach with a heavy focus on issues related to food insecurity, water shortages, education, HIV and AIDS, health, infrastructural development and economic development. Community partnerships have been launched in the Mhlosheni, Mpolonjeni, and Maphalaleni communities. Each partnership addresses a community's specific need, such as food insecurity, poor water supplies, financial insecurity, inadequate health care, gender issues, and the environment. These partnerships are designed to mobilize donors and local churches in projects that support communities severely impoverished and affected by the AIDS epidemics.

In a direct response to the recent drought situation (2014 to 2016), the World Vision is implementing a seven (7) month cash transfer program and providing in-kind food distribution to a targeted population of 30,000 people. In addition, the World Vision is providing supplementary feeds for children. There are several other NGoS operating in the country contributing in some ways in building the resilience to hazards.

The African Union (AU) seeks to improve the resilience of the peoples of Africa when they are faced with disasters, and to support disaster risk reduction and management activities. It also promotes actions that seek to reduce the impact of disasters and other threats, particularly those affecting the environment, agriculture, and health.

There are several organizations operating in the region, focusing on efforts directed at combating drought in sub-Saharan Africa, including the Economic Community of West African States (ECOWAS), SADC Drought-monitoring Centre, SADC Regional Early Warning Unit (REWU), and the African Centre of Meteorological Application for Development (ACMAD). The Inter-Governmental Authority on Development (IGAD) operates a Regional Early Warning System (REWS) as a key component of national drought and flood preparedness in the SADC region, known as SARCOF. The services of these few technical institutions are limited, however, due to lack of resources and capacity.

Other relevant resilience building institutions that need mentioning include:
SADC Climate Services Centre (SADC-CSC): This centre provides operational regional services for monitoring and predicting extremes in climatic condition. SADC-CSC develops and disseminates meteorological, environmental, and hydro-meteorological products that contribute to improved disaster risk management in the region, and helps to ensure that SADC member states are better prepared for weather and climate disasters, conservation, and protection of natural resources.

Regional Centre for Mapping of Resources for Development (RCMRD: The RCMRD's primary undertaking is to promote sustainable development in its member states through generation, application, and dissemination of Geo-information and associated information and communications technology, products, and services. RCMRD has been very instrumental in capacity building in resource survey, mapping, remote sensing, GIS, and natural resources assessment and management in Africa. RCMRD also provides training for technical officers from its member states and other African countries

in the fields of surveying and mapping, remote sensing, GIS, and natural resources assessment and management.

The Famine Early Warning Systems Network (FEWS NET) is one of the providers of early warning and analysis on food insecurity. It provides objective, evidence-based analysis on more than 36 of the world's most food-insecure countries (including Africa) to help government decision-makers and relief agencies plan for and respond to humanitarian crises. FEWS NET products include: monthly reports and maps detailing current and projected food insecurity; timely alerts on emerging or likely crises; and specialized reports on weather and climate, markets and trade, agricultural production, livelihoods, nutrition, and food assistance.

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