

NATIONAL EMERGENCY RESPONSE, MITIGATION AND ADAPTATION PLAN (NERMAP)

January 2016 to March 2022



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ACRONYMS

BSRCS	Baphalali Swaziland Red Cross Society
EPR	Emergency Preparednes & Response
EW	Early Warning
EWS	Early Warning Systems
DPMO	Deputy Prime Minister's Office
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
NDMA	National Disaster Management Agency
MHCP	Multi Hazard Contingency Plan
MOA	Ministry of Agriculture
MOE	Ministry of Education
NERMAP	National Drought Mitigation and Adaptation Plan
UNDP	United Nations Development Programme
WFP	World Food Programme
WHO	World Health Organisation

EXECUTIVE SUMMARY

Swaziland is experiencing a severe El Niño induced drought characterized by below normal rainfall, prolonged dry spells and above normal temperatures, which have resulted in a poor harvest especially of the staple maize crop. For a second consecutive year, the country has had unfavorable weather conditions adversely impacting on food and water security.

The 2015 Vulnerability Assessment and Analysis Report estimated the number of food insecure people to be about 200,897 by March 2016, which is about 17 per cent of the country's total population. Due to a very poor rainy season in 2015 the number of food insecure people is expected to increase to at least 300,000 by April 2016. Recent rapid assessment reports indicate a significant reduction in the total area planted to crops in the current season, and deteriorating pasture conditions - with 38,000 cattle lost to drought during the past six months. Ground water is depleted and some rivers have dried up while others are at critically low levels together with major dams in the country, threatening irrigation of commercial crops, consequently economic stagnation.

In order to mitigate the above challenges, Government has developed a National Drought Mitigation and Adaptation Plan (NERMAP) in consultation with diverse stakeholders. The plan takes a sustainable approach towards disaster risk reduction outlining immediate actions and recommending long-term interventions. The NERMAP prioritizes food and water security through intensified local maize production and rehabilitation and expansion of water systems to increase access to potable water. It also challenges the nation to embrace adaptation measures to better confront the situation now and in the future.

Food and water sovereignty is an important aspect of development and essential to government's vision 2022. While the Government is committed to fund the NERMAP the cost of implementing it in full is beyond the capacity of the present-day Swaziland economy. It is therefore on this basis that support to implement this Plan is solicited from all development partners, local companies and Non-Government Organizations.

Initial estimates indicate that a total budget of E 345,363,948 is required for immediate to short-term needs, and E 852,902,861 for the medium to long-term activities. The bulk of this budget goes towards agriculture and food security which includes humanitarian food assistance to the vulnerable and hungry population whilst the second biggest need is for the water sector, especially provision of domestic water supply through rehabilitation and expansion of water systems and water harvesting.

1.0 INTRODUCTION

1.1 Background

Swaziland is vulnerable to several hazards and disasters including droughts, floods, food insecurity, disease outbreaks, hail and wind storms, among others. Food insecurity remains one of the major concerns for the country over the past two decades. As per the seasonal climate forecast issued by the Swaziland Meteorological Services in September 2015 and subsequent updates, the country is presently facing a strong El Niño, which is associated with long dry spells and affecting several other countries in the region. The occurrence of the El Niño phenomenon and associated poor rainfall has negatively affected the successful planting of the summer crops, upsetting the livelihoods of over 70% of the population who depend on agriculture for sustenance. The Meteorological Services is forecasting the El Nino conditions to persist to the end of the rainfall season, into the winter months (Figure 1), worsening the extreme dry and hot conditions, which the country is already experiencing.

Swaziland is facing a consecutive year (2015/16) of below normal rainfall following a poor 2014/15 cropping season which was characterized by long dry spells and uneven rainfall distribution and storm events which had a negative effect on subsistence farming. The impacts of the current El Nino induced drought are therefore compounding an already fragile situation of depleted water and soil moisture reserves, poor grazing conditions, and a poor harvest as at the end of the 2014/15 season.

Due to the current drought, the start of the 2015/2016-summer rainfall (October to April) has been delayed by about 30-60 days across the country, resulting in delayed planting, and will result in a significant reduction in area planted. Planting was reported to have been still going on in some areas up to the end of January 2016. The persisting extensive dry spells and frequent heat waves have adversely affected agricultural activities, including livestock and crop production activities.

Figure 2 below shows the poor rainfall amounts and distribution during the current El Nino season (2015/16) and the poor 2014/15 season compared to the long term average for this period.

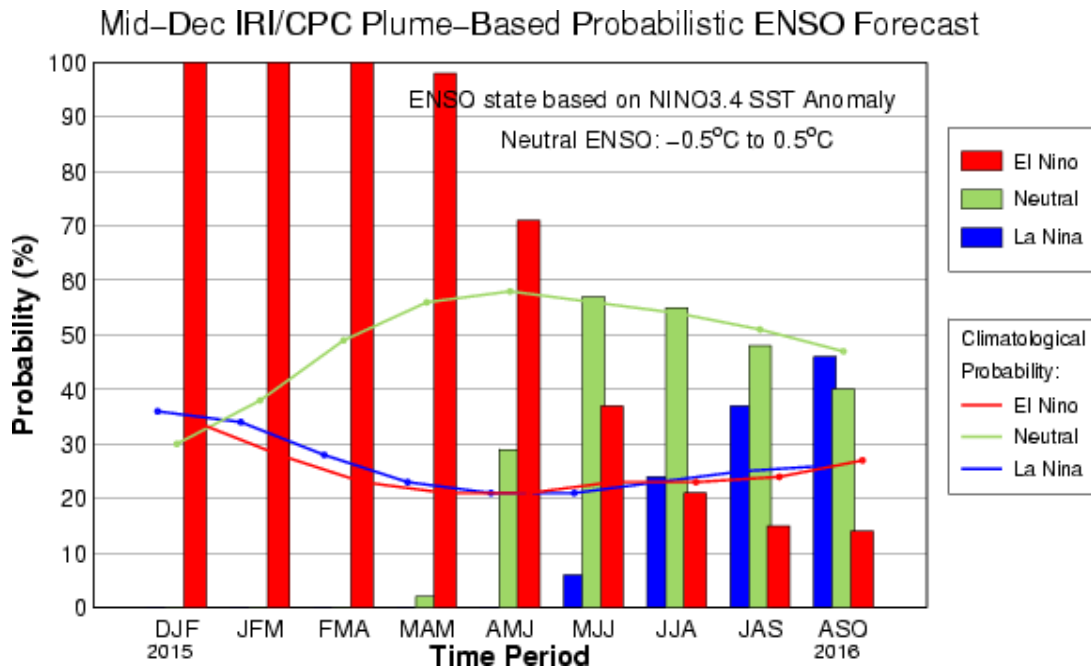


Figure 1: IRI El-Niño state and outlook published mid-December 2015

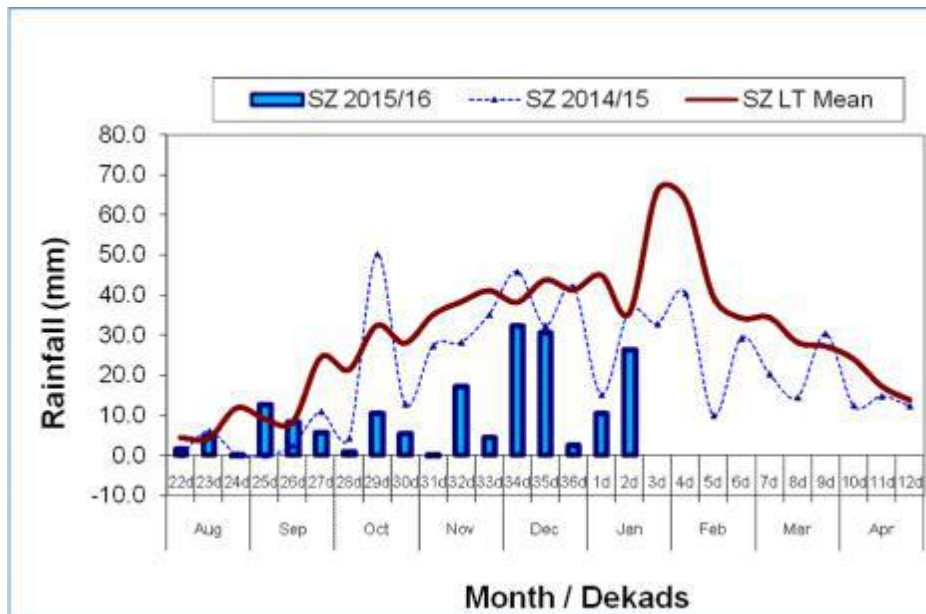


Figure 2: Seasonal rainfall distribution: 2015/16 season compared to 2014/15 and long-term average

Source: Swaziland Meteorological Services, 25/01/2016

Maize Production for the Past 5 Years

Swaziland maize production has shown a significant decline for the 2014/2015 season as compared to the previous five seasons (Figure 3), due to the prolonged dry spells and storm events that affected the maize crop at its critical flowering stage. The national maize production in 2015 was estimated at 81 623 metric tonnes, which is 31 percent below the bumper 2014 output, and 6 percent lower than the five-year average.

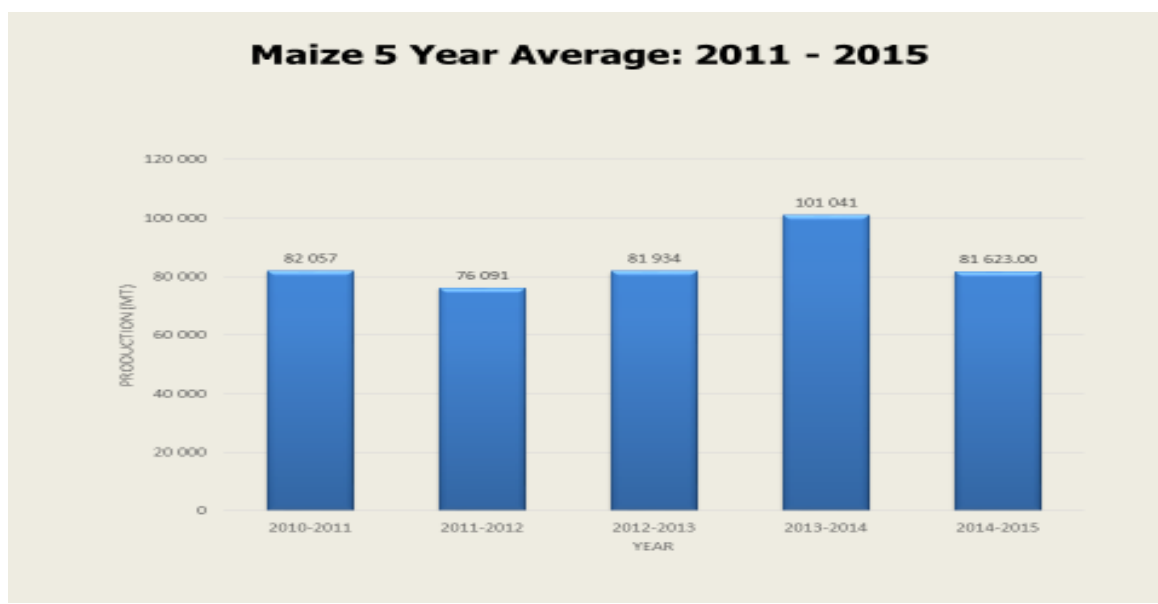


Figure 3. Maize 5-Year Average

The national Food Balance Sheet for the current marketing season (Figure 4), indicates that there will be a need for food aid in order to meet the country's requirements due to the huge shortfall.

National Food Balance Sheet				
Figures in '000 Metric Tonnes				
	Maize	Wheat	Rice	All
A. Domestic Availability	81.62	0.00	0.15	81.77
B. Gross Domestic Requirement	157.31	43.44	4.99	205.74
C. Domestic Shortfall/ Surplus	-72.89	-43.44	-4.84	-121.17
D. Planned Imports				
Commercial	43.00	36.00	76.00	155
Food Aid	0.81	0	0	0.81

Figure 2. National Food Balance Sheet for 2014/2015 Season

1.2 Humanitarian Consequences

The current drought situation will have humanitarian consequences as are outlined below:

- i. Negative coping strategies including sale of household assets, reduced expenditure for health care and education
- ii. Increased vulnerability to HIV/AIDS
- iii. Migration of the population in search of livelihood
- iv. Likely increase in number of school drop outs
- v. Increase in crime, gender based violence and abuse (sexual abuse and trafficking)
- vi. Likely reduced crop yield in the successive cropping season as people will spend most of their resources in sourcing the scarce food
- vii. Increased prevalence of diseases like diarrhea, acute respiratory tract infection combined with severe malnutrition
- viii. Increased malnutrition and consequently an increase in admission of children into therapeutic feeding
- ix. Negative changes in food consumption patterns, e.g. reducing meal frequency which might have dire effects to pregnant and lactating women, and further reducing productivity

1.3 Crop and Food Security Assessments

Assessments done by the Crop and Food Security Assessment Mission (CFSAM Report, May 2015) and the Swaziland Vulnerability Assessment and Analysis Committee (SVAA Report, July 2015) on the 2014/15 season food security situation estimated the numbers of food insecure people to be 44, 662 to 50,000 respectively. These are projected to increase to 300,000 by the end of the consumption year (March 2016), given the continuing impacts of the El Nino drought, and especially the poor rainfall received so far. The projections mean that about 17% of the country's population would be food insecure by end of March 2016 and to increase dramatically thereafter. The CFSAM and the SVAA Reports made a number of observations and recommendations, some of which have been incorporated into the national multi-sectoral response plan under the appropriate sector.

The Ministry of Agriculture, LVDS (Jan 2016) has estimated the number of cattle deaths since June 2015 to date, at 38 200.

1.4 Water Availability Assessment

Swaziland has not experienced an acute shortage of water in recent history as it has in the current summer season. The current drought has resulted in depleted surface and underground water reserves affecting agriculture, industrial and domestic water supply. Assessments by the Swaziland Water Services Corporation, The Ministry of Natural Resources and the Sugar Industry have reported that rivers were drying up and water level in reservoirs were at critical levels.

The Ministry of Agriculture has reported that due water scarcity the pasture has deteriorated resulting in decimation of livestock populations. Similarly the sugar industries have been adversely affected where irrigation has been reduced to below 20% and reserved for seeding and to keep the cane crop alive.

The 2015/2016 drought has equally affected four major cities in the country resulting in acute water shortage in Mbabane and Ngwenya Towns where water has had to be rationed. Matsapha and Manzini cities are on the edge and threatened with the plight of Mbabane.

2.0 THE NATIONAL DROUGHT MITIGATION AND ADAPTATION PLAN (NERMAP)

2.1 Development of the National Drought Mitigation and Adaptation Plan

The National Drought Mitigation and Adaptation Plan is the Government's response to the current drought situation and the plan has been put together by different stakeholders from diverse background. The plan also sets a foundation for adaptation to drought, as it has become a recurring hazard. Using a sector approach has ensured that each sector developed a plan and will participate in its implementation.

Leading Government Ministries have been the Deputy Prime Minister's Office, Ministry of Agriculture, Ministry of Natural Resources and Energy, Ministry of TiNkhundla, Ministry of Housing and Urban Development, Ministry of Health, and the Ministry of Education. The United Nations agencies participated through the World Food Program (WFP), United Nation's Children Fund (UNICEF), United Nations Development Program (UNDP), World Health Organization (WHO), and the Food and Agriculture Organization (FAO).

2.2 The National Drought Mitigation and Adaptation (NERMAP) Budget

The total budget presented in this plan is **E1, 208,310,809** (\$ 80,554,054) for eight sectors namely Agriculture and Food Security; Education; Water and Sanitation; Health and Nutrition; Social Protection; Environment and Energy; Storm damages; and Coordination. Government is committed to the response and has made an initial **E45 million** (USD \$3 million) available for the emergency response while considering an additional commitment. Indications are that there will be a shortfall to fully implement the plan especially to produce the stable crop and to feed those who are food insecure.

The Table that follows shows the budget summary of the National Drought Mitigation and Adaptation Plan. The ensuing sections of the document provide a narration and budget estimations of the drought mitigation and adaptation sector plans.

DROUGHT EMERGENCY RESPONSE, MITIGATION AND ADAPTATION PLAN - BUDGET SUMMARY									
S/N	Sector	Activity	Total Estimated Cost	Immediate	Supplementary Request	Medium Term	Available Budget		Gap
							Amount	Donor	
1	Agriculture and Food Security	Food assistance - Procurement and distribution of food	550,420,898	110,950,000	10,000,000	439,470,898	110,700,000	GoS	439,720,898
		Maize & livestock production support, assessment & recovery	265,128,000	100,948,000	6,300,000	164,180,000	13,500,000	GoS	251,828,000
2	Education	Augmenting school feeding, water and sanitation in schools	44,537,953	17,631,450	8,523,800	26,906,503	10,831,450	GoS	33,706,503
3	Urban water & sanitation	Augmenting water harvesting & availability in Mbabane, Ngwenya, Matsapha, & Manzini cities	169,768,434	66,801,973	28,561,888	92,966,460	61,391,000	GoS	108,377,434
	Rural water and sanitation	Rehabilitation of rural water schemes, water harvesting, drilling new boreholes & and extension of new schemes	51,565,000	11,215,000	9,970,000	40,350,000	13,715,000	GoS	37,850,000
4	Health & Nutrition	Management of acute Malnutrition, Management of cholera & diarrhoea, and robust disease surveillance	36,530,000	10,400,000	9,230,000	26,130,000	10,400,000	GoS	26,130,000
5	Social Protection	Strengthen security, systems and structures to limit all forms of abuse in emergency	6,287,500	34,000	6,287,500	6,287,500	34,000	GoS	6,253,500
6	Environment and Energy	Continuous and Consistent monitoring of weather and climate systems for provision of early warning and disaster risk reduction	6,250,000	250,000	250,000	6,000,000	250,000	GoS	6,000,000
		Additional cost of electricity imports as a result of reduced local generation	60,000,000	20,000,000	20,000,000	40,000,000	20,000,000	GoS	40,000,000
7	Storm Damages	Roofing of houses damaged by storms	12,900,000	4,650,000	4,650,000	8,250,000	4,650,000	GoS	8,250,000
8	Coordination	Coordination and monitoring of disaster management activities by NDMA and stakeholders	4,923,025	2,483,525	1,384,137	2,361,500	2,483,525	GoS	2,439,500
9	Total Budget		1,208,310,809	345,363,948	105,157,325	852,902,861	247,954,975	GoS	960,555,834
10	Total Budget in USD (\$1:£15)		80,554,053.95	23,024,263.23	7,010,488.33	56,860,190.73	16,530,331.67		64,037,055.62

3.0 AGRICULTURE & FOOD SECURITY DROUGHT RESPONSE PLAN

3.1 Project Overview

Project Title:	Agriculture and Food Security Drought Preparedness and Response Plan		
Sector Lead:	Ministry of Agriculture		
Co-Lead:	FAO/NDMA	UN Lead	WFP
Beneficiaries	More than 300,000 people and drought stricken farmers		
Total Budget Agriculture	E 265,128,000	USD 17,675,200	
Total Budget food	E 550,420,898	USD 36,694,726	
Total Food & Agriculture	815,548,898	USD 54,369,926	
Project Duration	January 2016 – December 2017		

a) Overall objective: To ensure national food security and support affected households (HHs) restore their agricultural productive capacity and eventually build resilience to future climatic shocks.

b) Stakeholders Involved: Techno serve, ACAT, World Vision Swaziland, and Save the Children were active in the development of this plan and are part of the Agriculture and food security sector and have committed to support the government in the implementation of the mitigation and adaptation plan.

3.2 Brief Situation Analysis

Recent reports from the Ministry of Agriculture show that over 38,000 cattle had died by end of January 2016 and many subsistent farmers lost their livelihood due to the drought. No significant ploughing occurred due to the drought in the 2015/2016 ploughing season before December 2015 hence the need to intensify maize production and supplement local production with maize import. NDMA estimates that more than 300,000 people will need food assistance in April 2016 as a result of the impact of the drought and heat waves.

The water crisis has also affected household water consumption and livestock drinking water, reduced agricultural irrigation capacity, adversely affecting the sugar industry. The Government

through the Ministry of Agriculture has since July/August 2015 provided water for livestock and hay in the most affected TiNkhundla. The Deputy Prime Minister's office has provided food to 75,000 people who were food insecure. This was through an initial funding of E45 million provided by the government.

3.3 Interventions

The main activities in the agriculture sector include intensifying irrigated local maize production, intensifying hay production, training on adaptation and on climate smart agricultural practices, and Food and Nutrition assistance. Recovery interventions are limited to support to farmers to strengthen their resilience and with water and hay for livestock and farm inputs for the next season.

The Ministry of Agriculture will identify arable and irrigable land on which to produce maize throughout the year. Two crops per year are targeted in 6000 hectares, which should produce a minimum of 96,000 tons (8tons/ha X 6000ha x 2crops/yr). This strategy will reduce maize import and incentivize local maize production. It will be implemented jointly with SWADE, Illovo, Royal Swaziland sugar companies and ACAT that have so far jointly made 600 ha available for planting maize.

Food will be distributed to food insecure and vulnerable families by NDMA working with non-governmental organizations after thorough assessment and targeting processes. Red Cross and World Vision have already raised resources from their international partners to support government in this endeavor.

a) Activities Outline

Objective	Output	Activities
a. To provide lifesaving food and nutrition assistance to affected populations	❖ % affected populations reached with food assistance ❖ Tonnage of food distributed ❖ Measurable improvement in (wasting, positive change in coping strategy index)	1. Define food baskets and explore possibility of using cash transfers as a modality 2. Set up logistics plans in the form of committees within existing structures.
b. To intensify maize production to meet national requirement	❖ % Increase area of land with irrigated maize production ❖ Tonnage of maize produced locally over the drought period ❖ Reduced expenditure on maize import	3. Identify 6000ha of land for potential development 4. Engage private sector to produce maize under irrigation 5. Mobilize resources to fund irrigated maize production

Objective	Output	Activities
c. To conduct regular assessments and monitoring of early warning indicators to provide real time information on the food insecurity situation as it progresses to enable timely decision making and action.	❖ Assessment reports produced ❖ early warning indicators defined ❖ Agricultural data collected and shared with stakeholders in a timely manner.	6. Conduct assessments to update knowledge on the drought situation as it evolves 7. Collect monitoring data 8. Disseminate information to stakeholders so they can also update their plans 9. Review implementation plan and other 10. Programmes based on monitoring data and assessment results
d. To restore agricultural production capacities of drought affected households through the implementation of climate smart agriculture	❖ Farmers from affected RDAs trained on climate smart agriculture ❖ Provide access to water for animals in drought stricken areas. ❖ Amount of water to be delivered in cubic litres for cattle. ❖ Efforts be made to maintain household production levels through C.A	11. Distribute agro forestry inputs and drought tolerant plants to affected farmers. 12. Sensitize farmers on adoption of climate smart agriculture (e.g. deficit irrigation, 13. Provide support to farmers in affected areas in the form technical assistance by extension officers. 14. Bring water sources closer for affected livestock and domestic use 15. Explore water harvesting techniques e.g. sand abstractions 16. Explore ground water for livestock usage 17. Sensitize on coping strategies 18. Explore possibilities of privately owned reservoirs to avail water to communities nearby.
e. To provide livestock protection strategies in response and preparedness regarding the drought situation.	❖ # of veterinary and livestock officers trained on disaster preparedness and management of diseases	19. Conduct trainings and research on strategies to feed livestock 20. Promote de-stocking of cattle

b) Medium-term strategies to enhance agriculture production and food security

- ❖ Demarcate and dedicate land hectarage (at least 6000ha) for optimum production of maize and pulses
- ❖ Incentivize farmers to grow maize for profit in order to increase local maize production and reduce imports
- ❖ Invest in and promote processing of drought tolerant crops through development of value chains
- ❖ Promote good rangeland management including destocking to carrying capacity of grazing land
- ❖ Produce hay locally for use during the dry season. Clear more land area, introduce irrigation of pasture and harvest periodically to produce large volumes of hay
- ❖ Drilling of boreholes and reticulation of water to strategic areas including in range land

c) Medium to Long-term Interventions

- ❖ The country recognizes the need to construct grain reserves for pulses and maize that will be used in the future when food production is low. NDMA and the ministry of Agriculture will pursue this activity as a long-term adaptation strategy.
- ❖ Demarcate land for and promote irrigation of horticultural crops to ensure a balance in crop production and nutritional demand of the population.

d) Implementation Approach

The Government will take the lead in the Agriculture Sector through the Ministry of Agriculture (MOA) to identify land for intensified maize production and engage stakeholders in irrigated maize production. The Ministry will intensify current programs on climate smart agriculture to strengthen adaptation to climate change and variability. The Ministry will, in collaboration with development partners mobilize resources for the sector response.

NDMA will assist in linking stakeholders with the government especially the sugar industry and NGOs and to ensure that important information is shared widely and accurately. NGOs will work directly with NDMA in distributing food to communities all of which will be at community level hence it will be carried out with the participation of communities to ensure ownership. This includes beneficiary selection criteria and food distribution.

A thorough plan will be developed by NDMA with support from UN agencies and participation of NGOs. The plan will include an assessment, targeting and verification of beneficiaries, training on food distribution and monitoring, and resource mobilization. WFP will provide technical support to NDMA and NGOs throughout the process.

e) Risks Associated with Assistance/Mitigation Measures

- ❖ Lack of resources to provide food assistance
- ❖ Scarcity/unavailability of food commodities in the market (including regional market)
- ❖ Lack of rainfall, restoration activities are dependent on rainfall (although minimal)
- ❖ Exclusion and inclusion errors in beneficiary targeting and selection – Verification will be undertaken to minimize/eliminate inclusion and exclusion errors
- ❖ Sexual exploitation during distribution/train members of staff who will be doing distribution on the identification and on how to deal with such challenges.

3.4 Agriculture and Food Security Sector Budget

The tables that follow show the basis for calculating the food needed to assist 300,000 people.

a) Food Requirement for Drought Response

MONTH	BENEF.	HH	MAIZE		BEANS		VEGETABLE OIL			Total MT
			MM-UNITS	MM- MT	BEANS-UNITS	BEANS-MT	OIL-UNITS	OIL - MT	Cartons	
Apr-16	300,000	60,000	60,000	3,000	15,000	750	360,000	270	30,000	4,020
May-16	300,000	60,000	60,000	3,000	15,000	750	360,000	270	30,000	4,020
Jun-16	300,000	60,000	60,000	3,000	15,000	750	360,000	270	30,000	4,020
Jul-16	300,000	60,000	60,000	3,000	15,000	750	360,000	270	30,000	4,020
Aug-16	300,000	60,000	60,000	3,000	15,000	750	360,000	270	30,000	4,020
Sep-16	300,000	60,000	60,000	3,000	15,000	750	360,000	270	30,000	4,020
Oct-16	300,000	60,000	60,000	3,000	15,000	750	360,000	270	30,000	4,020
Nov-16	300,000	60,000	60,000	3,000	15,000	750	360,000	270	30,000	4,020
Dec-16	300,000	60,000	60,000	3,000	15,000	750	360,000	270	30,000	4,020
Jan-17	300,000	60,000	60,000	3,000	15,000	750	360,000	270	30,000	4,020
Feb-17	300,000	60,000	60,000	3,000	15,000	750	360,000	270	30,000	4,020
Mar-17	300,000	60,000	60,000	3,000	15,000	750	360,000	270	30,000	4,020
TOTAL			720,000	36,000	180,000	9,000	4,320,000	3,240	360,000	48,240

Cash Requirement for procurement of food commodities

MONTH	BENEF.	HH	CASH REQUIREMENT FOR FOOD PROCUREMENT			
			MAIZE	BEANS	VEG OIL	TOTAL
Apr-16	300,000	60,000	18,228,000	12,837,000	7,761,600	38,826,600
May-16	300,000	60,000	18,228,000	12,837,000	7,761,600	38,826,600
Jun-16	300,000	60,000	18,228,000	12,837,000	7,761,600	38,826,600
Jul-16	300,000	60,000	18,228,000	12,837,000	7,761,600	38,826,600
Aug-16	300,000	60,000	18,228,000	12,837,000	7,761,600	38,826,600
Sep-16	300,000	60,000	18,228,000	12,837,000	7,761,600	38,826,600
Oct-16	300,000	60,000	18,228,000	12,837,000	7,761,600	38,826,600
Nov-16	300,000	60,000	18,228,000	12,837,000	7,761,600	38,826,600
Dec-16	300,000	60,000	18,228,000	12,837,000	7,761,600	38,826,600
Jan-17	300,000	60,000	18,228,000	12,837,000	7,761,600	38,826,600
Feb-17	300,000	60,000	18,228,000	12,837,000	7,761,600	38,826,600
Mar-17	300,000	60,000	18,228,000	12,837,000	7,761,600	38,826,600
TOTAL	-	-	182,280,000	128,370,000	77,616,000	465,919,200

b) Food Assistance Budget

FOOD ASSISTANCE ACTIVITIES AND BUDGET –JANUARY 2016- DECEMBER 2017							
S/N	Activity	Total Estimated Cost	Immediate	Medium Term	Available Budget		Gap
					Amount	Donor	
1	Multi-sectorial assessments on the impact of drought to inform programming for response and early warning	200,000	200,000	-	200,000	GoS	-
2	Targeting and verification of food assistance beneficiaries	500,000	500,000	-	500,000	GoS	-
3	Training of assessment and food distribution teams	250,000	250,000	-	-	-	250,000
4	Food Distribution (January - March 2016)	33,000,000	10,000,000	23,000,000	10,000,000	GoS	23,000,000
5	Procurement and distribution of food for 300,000 people for 12 months	515,536,400	100,000,000	415,536,400	100,000,000	GoS	415,536,400
6	Monitoring of food distribution in all distribution points during and at post distribution	715,000	-	715,000	-	-	715,000
7	Visibility and branding according to donor requirement	151,000	-	151,000	-	-	151,000
8	Stationery and Printing of documents	25,000	-	25,000	-	-	25,000
9	Communication of field team during distribution	43,498	-	43,498	-	-	43,498
10	Total Budget for food assistance	550,420,898	110,950,000	439,470,898	110,700,000	-	439,720,898

c) Agriculture and Food Security Budget

AGRICULTURE AND FOOD SECURITY RESPONSE PLAN BUDGET -JANUARY 2016 DECEMBER 2017							
S/N	Activity	Total Estimated Cost	Immediate	Medium Term	Available Budget		Gap
					Amount	Donor	
1	Multi-sectoral assessments on the impact of drought to inform programming for response and early warning	300,000	300,000	-	300,000	GoS	-
2	Information dissemination inter-sectoral and to the public	100,000	100,000	-	300,000	GoS	-
3	Inputs for recovery crops Legumes	15,000,000	0	15,000,000	-	-	15,000,000
4	Drought tolerant crops for recovery (Cassava and Sweetpotato cuttings)	15,000,000	5,000,000	10,000,000	-	-	15,000,000
5	Sand abstraction in rural areas	250,000	250,000	-	-	-	250,000
6	Supplementary feed for livestock breeding stock while grazing land is being restored	15,000,000	4,500,000	10,500,000	4,500,000	GoS	10,500,000
7	Drilling boreholes and erecting watering troughs for livestock within grazing land of severely affected areas (including ranches)	3,000,000	1,500,000	1,500,000	-	-	3,000,000
8	Development of 1800 ha irrigated land for year round maize production	180,000,000	80,000,000	100,000,000	-	-	180,000,000
9	Irrigated maize production on 1,350 ha land to supplement maize imports	6,000,000	6,000,000	-	6,000,000	GoS	-
10	Training on Climate Smart agriculture, Water Conservation, Rangeland management, Drought tolerant crops	600,000	250,000	350,000	600,000	Gos	-
11	Strengthening veld management and crop management practices	130,000	-	130,000	-	-	130,000
12	Promote water harvesting technologies through RDAs and Tinkhundla centres	648,000	648,000	-	-	-	648,000
13	Promote planting of perennial fodder trees and drought tolerant varieties among farmers and on government farms	2,500,000	-	2,500,000	-	-	2,500,000

AGRICULTURE AND FOOD SECURITY RESPONSE PLAN BUDGET -JANUARY 2016 DECEMBER 2017							
S/N	Activity	Total Estimated Cost	Immediate	Medium Term	Available Budget		Gap
					Amount	Donor	
14	Maximizing Local Production of hay bales (bush clearing, baling), at govt farms	6,000,000	1,800,000	4,200,000	1,800,000	GoS	4,200,000
15	Feasibility and design studies for large dam construction	20,000,000	-	20,000,000	-	-	20,000,000
16	Incentivize farmers to producing maize	-	-	-	-	-	-
17	Defer maize farm input programme for rain-fed production but support other crops	-	-	-	-	-	-
18	Acquire the additional irrigated land (4650) needed to produce 120,000MT of maize	-	-	-	-	-	-
19	Information sharing / dissemination to government and the public	-	-	-	-	-	-
20	Cattle destocking/culling as an adaptation measure	-	-	-	-	-	-
21	Drilling and installation of Boreholes on Government Ranches	600,000	600,000	-	-	-	600,000
	Total Budget for Agriculture Activities	265,128,000	100,948,000	164,180,000	13,500,000	-	251,828,000

4.0 EDUCATION SECTOR DROUGHT RESPONSE PLAN

4.1 Project Overview

Project Title:	Education Sector Drought Mitigation and Response Plan		
Sector Lead:	Ministry of Education and Training		
Co-Lead:	Save The Children	UN Lead	UNICEF
Beneficiaries	Education Institutions and Early Childhood Centres		
Total Budget	E 44,537,953	USD 2,969,197	
Project Duration	January 2016 – December 2017		

a) Overall objective

The overall objective of this education plan is to minimize the impact of the protracted drought in the school system and ensuring that learning continues

b) Stakeholders Involved

Other Government ministries working with education include the Ministry of Natural resources and Energy (Rural Water, Department of Water Affairs), Ministry of Health (School health, Environmental Health), Ministry of Agriculture (Nutrition Council) and the Deputy Prime Minister's Office (NDMA, Social Welfare, National Children's Coordination Unit). Other key development partners such as embassies, corporations will play a pivotal role in the education drought response plan.

4.2 Brief Situation Analysis

Schools will be opening in January 2016 and the sector needs to be prepared by ensuring that water and sanitation facilities are ready. The Ministry of education indicated that a rapid assessment has been carried out to identify the needs in each school in relation to the drought impact. Some of the needs identified were water and sanitation facilities. Although the Low veld was the hardest hit region, schools in Mbabane require priority as the Swaziland Water and

Services Corporation has started rationing water. Most schools in Mbabane do not have pit latrines and a shortage of water will lead to a sanitation problem for the schools.

In rural areas where most families subsist on agriculture food was identified as a need to ensure that learning is not disrupted but continues throughout the drought period. Although the government has a school feeding program, it needs to be strengthened and extended to all schools.

4.3 Interventions

The major interventions in this sector are as follows:

- ❖ Drilling of new boreholes in schools to constantly provide potable water
- ❖ Provision of water supply through tanks to schools and education institutions
- ❖ Supply of food commodities for breakfast to the school to supplement current government school feeding program.
- ❖ Awareness raising campaigns on the drought situation and how to respond (behaviour change, saving water techniques).
- ❖ Provision of alternative sanitary and hygiene facilities

a) Implementation Strategy

The Ministry of Education and Training is the Sector lead for the Education sector drought response plan. Schools are the targeted centres of operation for the implementation of this activity with children as the ultimate beneficiaries. These include the public ECCE centres, Primary schools, Secondary schools, colleges and higher education institutions. The general observation is that 817 primary and high schools shall be the key beneficiaries to ensure continuous learning throughout the drought period. 200 schools will be prioritized to benefit through the water project.

Integration: Integration is a bigger part of the implementation strategy in the education sector. Both the water and food interventions to be carried out in schools will require experts to provide technical expertise to the Ministry of Education. The sector experts will interface at different levels (national, regional and communal) to ensure quality attainment of education outcomes. Nutritionists, water specialists, health inspectors and education experts will engage during the implementation of the plan. Periodic visits to schools shall be crucial for stakeholders to monitor and identify any emergency issues such as cholera, malnutrition, and other cases

4.4 Budget for the Education Sector

EDUCATION SECTOR RESPONSE PLAN BUDGET –JANUARY 2016 – DECEMBER 2017							
S/N	Activity	Total Estimated Cost	Immediate	Medium Term	Available Budget		Gap
					Amount	Donor	
1	Sensitization and awareness raising meetings with head teachers on drought mitigation measures	342,000	252,000	90,000	252,000	GoS	90,000
2	Rapid Assessment for the education sector	55,650	55,650	-	55,650	UNICEF	-
3	Health and Hygiene training of Trainers in schools	-	-	-	-	-	-
4	Procure and supply Breakfast commodities to schools to strengthen the school feeding program	18,116,503	8,000,000	10,116,503	8,000,000	GoS	10,116,503
5	Drilling and Installation of boreholes for 200 schools	17,000,000	6,800,000	10,200,000	-	-	17,000,000
6	Procure and supply portable water to schools with none functional boreholes	2,000,000	2,000,000	-	2,000,000	GoS	-
7	Procure and supply alternative sanitary and hygiene facilities for schools	5,000,000	-	5,000,000	-	-	5,000,000
8	Procure and supply hand washing buckets (for water preservation)	523,800	523,800	-	523,800	GoS	-
9	Procure and supply schools with water treatment kits	1,500,000	-	1,500,000	-	-	1,500,000
10	Redesign schools to climate smart/greener buildings	-	-	-	-	-	-
11	Training on application and adoption of water recycling technology	-	-	-	-	-	-
13	TOTAL	44,537,953	17,631,450	26,906,503	10,831,450	GoS	33,706,503

5.0 WATER AND SANITATION DROUGHT RESPONSE PLAN

5.1 Project Overview

Project Title:	Water and Sanitation Drought Mitigation and Response Plan		
Sector Lead:	Ministry of Natural Resources and Energy – Department of Water Affairs		
Co-Lead:	UNICEF	UN Lead	UNICEF
Beneficiaries	Population living in water scarce drought affected areas		
Total Budget	Urban E 169,768,434 /Rural E 51,565,000	USD 11,317,895/3,437,667	
Total Budget	E 221,333,434	USD 14,755,562	
Project Duration	January 2016 – December 2017		

a) Overall objective

To prevent the loss of life during the drought by ensuring the provision of potable water supply and sanitation facilities to citizens in order to prevent the outbreak of water borne diseases such as cholera, zoonotic and diarrheal diseases in all areas; Prioritizing special groups during the period of Dec 2015 to March 2017. The specific objectives are as follows;

- i. To maintain access to safe water and sanitation / hygiene facilities;
- ii. To provide strategic reservoirs and Sanitation where systems have failed or are none existent
- iii. To raise awareness on sanitation and hygiene related issues.
- iv. To put in place adaptation measures that promote sustainable usage of water and energy

b) Stakeholders Involved

Other key stakeholders in the implementation of this water sector response plan include the Ministry of Agriculture, Swaziland Sugar Industry, Ministry of Commerce and Trade, the Ministry of Environment and tourism, and the Swaziland Water Services Corporation (SWSC).

5.2 Brief Situation Analysis

The urban response of the WASH response plan is informed by SWSCs' recent assessment of their water sources and obligations to urban centres (October-November 2015). The assessment has shown the hot spots in the current situation within their supply network. DWA with support from UNICEF completed a rural mapping study of water points which informs the rural water supply response to the situation. Other supporting assessments include the VAC 2015 Report, CSO rapid assessment August 2015. DWA also issued a report "Effects of drought on water resources availability" (November 2015) tabled before cabinet highlighting dam water levels and river flows.

The Sector noted key gaps in the information available especially for rural water supply. The Water point mapping (DWA, 2015) showed that about 48% of rural households did not have confirmed sources of water supply, which is of great concern. This necessitates the need for an immediate rapid appraisal of the affected communities. The Sector also identified another key information gap in the lack of information on national ground water availability. There is also an urgent need to have a ground water study done to identify reliable ground water aquifers as well as ground water recharge points. DWA has noted that current ground water sources are drying up with some areas already dry especially in the Southeastern parts of Swaziland. There is need to explore the presence of water at depths beyond 100m. It's worth noting for the purposes of the latter that the Ministry of Natural Resources has three Drilling rigs which have the capacity to drill beyond 100m, however they are in need of repairs by experts.

According to the Meteorology Department Swaziland received below normal rainfall during Oct 2014 to Feb 2015 (Met 1st Quarter focus, 2015), which led to poor water storage in local dams, poor recharge of ground water sources and low agricultural yields as well as low vegetation cover.

Negative indicators confirming the lack of rainfall have been observed with major national dams supply water to urban centres and industrial centres having below 20% water storage capacity with varying available storage periods based on the demands from 20 days to 8 weeks. River flows are very low in all major rivers flowing below Normal. Worse than 1992 flows in the period August to November. Some river tributaries have been dry since the last rainfall season. Ground water levels – South East Swaziland – Bore holes have been confirmed as dry in Matsanjeni, Somntongo, Lubulini and others constituencies. The above indicators are clear signs that the country is severely affected by a dry spell and therefore there is an urgent need to respond to the current situation before the problem escalates further resulting in loss of humans lives due to water borne diseases.

5.3 Interventions

Interventions in the water sector are categorized into domestic water supply and bulk water resources management. Domestic water supply is further divided into urban and rural water supply. This section also includes Long-term adaptation interventions that the government has put in place.

a) Domestic Water and Sanitation Activities

No.	Water and Sanitation Activities
Short Term Interventions	
Urban Water Supply	
1.	Dredging of Hawane Dam to improve dam storage capacity
2.	Drilling, re-commissioning and installation of boreholes in Mbabane city
3.	Harnessing water from Mbabane River to Mbabane Treatment Plant
4.	Reviving Mbuluzi water falls daming to improve water supply to Mbabane
5.	Increasing storage capacity of Gobholo weir
6.	Procurement and placement of tanks and potable water distribution to strategic areas through mobile tankers
7.	Hiring and Procurement of water tankers/trucks to supply water in urban areas
8.	Conduct Nondvo dam feasibility study
Rural Water Supply	
9.	Conduct a rapid assessment to identify functional and none functional rural water schemes
10.	Rehabilitate non-functional rural potable water supply schemes
11.	Drilling and installation of new boreholes to meet urgent potable water needs
12.	Procurement of water tankers/browsers
13.	Repair 5 government drilling rigs
14.	Construction of reticulated rural potable water supply schemes (complete the under construction potable water schemes)
15.	Capacity Building and training for potable water supply beneficiaries
16.	Provide Household water treatment kits to households with access to untreated water supply
17.	Promote rainwater harvesting and recycling at household and community levels.
Medium – Long Term Interventions	
18.	Water pumping line from Maguga Dam to Hawane Dam
19.	Water pumping line from Luphohlo Dam to Hawane Dam
20.	Extend water services to peri urban areas and regulate rural water schemes
21.	Implementation of adaptation measures to build resilience to water scarcity

b) Water Resources Management

Construction of Dams: As a long-term plan Government will intensify investment to construct more dams to harvest and store water for domestic, industrial and irrigation purposes. The following table list dams proposed for construction according to the water resources management plan. The dams are listed according to preferred priority and the associated costs are estimates based on the capacity of the dam. The cost of such humongous infrastructure development is beyond this plan.

#	Name of Dam	Main Purpose	Capacity (M ³)	Cost Estimate	Status
1.	Nondvo Dam	Domestic water	90 M	E1.4 Bn	• Full feasibility study funded • Mkhondvo River Basin
2.	Ethemba Dam	Domestic & irrigation	330M	E5 Bn	• At feasibility stage
3.	Mpakeni Dam	Domestic & irrigation	15M	E500M	• Ngwavuma River Basin • Reconnaissance level
4.	Mbuluzi Falls Dam	Domestic & Irrigation	14M	E1 Bn	• Reconnaissance level
5.	Silele Dam	Domestic & Irrigation	44M	E710 m	• Mkhondvo River Basin • Reconnaissance level
6.	Silingane Dam	Domestic & Irrigation	150M	E2.4 Bn	• Reconnaissance level
7.	Mkhombane Dam	Domestic & Irrigation	24M	E386 M	• Reconnaissance level
8.	Ngonini Dam	Domestic & Irrigation	14M	E500M	• Reconnaissance level

c) Water and Sanitation Adaptation Measures

With the challenges of climate change and the increasing frequency of water related disasters, there is need to consider and implement a number of **adaptation** measures to build and strengthen the safety and resilience of communities to such disasters. Adaptation measures promoted include:

i) Legislative provisions entail erecting new laws and enforcing existing laws to compel proper usage and conservation of water in all sectors. E.g. compulsory conversion of furrow irrigation to drip irrigation. It also entails making considerations for companies to pay for irrigation water in order to reduce wastage and to compel adoption of water efficient irrigation systems. Considerations are also for government to be empowered to sanction water usage for domestic use only when the need arise.

ii) Government will consider increasing intake capacity to support growers En-route (Not Part of) a Scheme: Construction of canals should consider the possibility of providing extra capacity to support growers who are en-route the scheme. For example In LUSIP I, despite extra water capacity in Lubovane Dam this water cannot be utilized to support growers who are en-route the scheme as the canals only have capacity to carry water to the growers who are part of the scheme at the far end of the line.

iii) Investing in Infrastructure Development entails construction of mechanisms for inter-basins water transfers. For example transfer of water from areas where it is in abundance to the dry areas of the country or to high demand areas.

iv) Other equally important adaptation measures:

- ❖ Modeling and monitoring of all river basins in the country to strengthen local early warning systems.
- ❖ Exploring and advancing ground water potential especially in the Lowveld of the country and in some urban areas to supplement existing water systems.
- ❖ Promote home designs incorporating water harvesting technology in urban and rural settings
- ❖ Promote sustainable usage of water and energy through climate smart/green home designs that will reduce consumption
- ❖ Water Recycling which entails installing capacity and systems to process waste water for re-use in households and industries instead of waste water only being treated for release back to the river flows.

d) Implementation Approach

The Department of Water Affairs (DWA) in the Ministry of Natural Resources and Energy (MNRE) leads the Water, Sanitation and Hygiene (WASH) Sector.¹ Within the UN and NGO sector UNICEF is the designated Co-Lead supporting DWA to lead the Sector.

DWA will work closely with the Environmental Health Department in the Ministry of Health with a mandate for national sanitation. Swaziland Water Services Corporation is tasked with overseeing the response plan within the urban settings working closely with the Municipalities. The Response will work within existing structures, which will make the involvement of Ministry of TiNkhundla, Administration and Development very key.

Sector coordination is facilitated through the National WASH forum which was established at the onset of the 2007 drought. The Forum consists of the Ministries involved in the sector working

¹ MHCP 2015-2017

with NGOs such as World Vision Swaziland, Nazarene Compassionate Ministries, Adventist Development Relief, and many others. The forum also incorporates academia from the countries universities to facilitate research within the sector. Within the UN system other supporting agencies include UNDP, WHO and UNFPA.

The WASH Sector response plan recognizes its clear linkage to the Education Response plan as WASH in schools is critical in fulfilling the sector's obligations to children. Linking with the health and nutrition Sector is very critical as the Responses complement each other and the two sectors share critical key hygiene promotion messages.

5.4 Environment and Energy

There are two additional sectors that have been impacted by the drought and require a budget for their interventions. These are the environmental sector and the energy sector. Within government operation energy is under the Ministry of Natural Resources and Energy while meteorology department is under the Ministry of Tourism and Environment.

Environment Sector: The meteorology department needs **E6, 250, 000** to strengthen Meteorological database and information dissemination systems and to procure a back up generator to ensure consistent and accurate early warning messages are released.

Energy: - Operations of the Swaziland Electricity Company have been affected by the drought in that generation of power has been significantly reduced at Maguga Dam power generation while all other stations have stopped generation due to low head and river flows. The impact will be felt in the short to medium term affecting SEC's generation capacity. The Swaziland Electricity Company requested a budget of E287, 000,000 to provide some relief to the company. The relief is requested through a combination of subvention from government and a tariff increase. Budget provision of E60, 000,000 has been included in the plan.

5.5 Water and Sanitation Budget

The budget in the water sector is presented in two categories; Urban WASH budget and Rural WASH budget.

a) Urban WASH Budget

URBAN WATER SANITATION & HYGIENE (WASH) SECTOR RESPONSE PLAN BUDGET –JANUARY 2016 – DECEMBER 2017							
S/N	Activity	Total Estimated Cost	Immediate	Medium Term	Available Budget		Gap
					Amount	Donor	
1	Mbabane, Ngwenya water provision and Sanitation interventions	48,277,434	19,310,973.40	28,966,460	-		48,277,434
2	Hawane Dredging to increase water storage capacity of the dam	15,000,000	5,000,000	10,000,000	5,000,000	GoS	10,000,000
3	Purchase of Water Tanks (231*10,000L)	3,003,000	3,003,000	-	3,003,000	GoS	-
4	Procurement of water tanker trucks	12,000,000	12,000,000.00	-	-		12,000,000
5	Hiring of water tankers for water distribution	6,588,000	6,588,000	-	6,588,000	GoS	-
6	Drilling & Installation of boreholes (accessorize the boreholes)	2,800,000	2,800,000	-	2,800,000	GoS	-
7	Pholinjane and Mbabane river harnessing and Treatment plant installation	10,000,000	10,000,000	-	10,000,000	GoS	-
8	Procurement/Rental of mobile toilet units for urban response	8,100,000	8,100,000	-	-		8,100,000
9	Reviving of Mbuluzi falls water daming	20,000,000	-	10,000,000	-		20,000,000
10	Increase the storage capacity of Gobholo Weir	10,000,000	-	10,000,000	-	GoS	10,000,000
11	Regulate the drilling of boreholes in peri-urban areas	-	-	-	-	GoS	-
12	Extend water services to peri-urban areas (provide mandate to SWSC)	-	-	-	-	GoS	-
13	Conduct a comprehensive study for improved water storage and accessibility in Swaziland and list sites for possible Dam Storage (Future)	-	-	-	-	GoS	-
14	Regulate rural water schemes – SWSC	-	-	-	-	GoS	-
15	Nondvo Dam feasibility study	9,000,000		9,000,000	9,000,000	GoS	-
		25,000,000		25,000,000	25,000,000	ADB	-
16	Grand Total	169,768,433.50	66,801,973.40	92,966,460.10	61,391,000.00	GoS	108,377,433.50

b) Rural WASH Budget

RURAL WATER SANITATION & HYGIENE (WASH) SECTOR RESPONSE PLAN BUDGET –JANUARY – DECEMBER 2017							
S/N	Activity	Total Estimated Cost	Immediate	Medium Term	Available Budget		Gap
					Amount	Donor	
1	Rapid WASH Sector Assessment	90,000	45,000	45,000	45,000	GoS	45,000
2	Communication	75,000	-	75,000	-		75,000
3	Print Media	50,000	-	50,000	-		50,000
4	Procurement and rental of water tanker trucks	12,000,000	-	12,000,000	-		12,000,000
5	Repairs for five drilling rigs	2,500,000	-	2,500,000	-		2,500,000
6	Ground water exploration & fuel for drilling rigs	1,800,000	-	1,800,000	-		1,800,000
7	Sampling kits and reagents	2,400,000	-	2,400,000	-		2,400,000
8	Rehabilitation of Rural Water Systems/ Schemes	13,500,000	4,050,000	9,450,000	4,050,000	GoS	9,450,000
9	Drilling & Installation of new boreholes to meet water needs	3,750,000	1,500,000	2,250,000	-		3,750,000
10	Provision of water treatment kits	5,400,000	1,620,000	3,780,000	1,620,000	GoS	3,780,000
11	Promote Rain Water harvesting at household and community level	-	-	-	-		-
12	Procure portable water from SWSC for all services	10,000,000	4,000,000	6,000,000	8,000,000	GoS	2,000,000
13	Grand Total	51,565,000.00	11,215,000.00	40,350,000.00	13,715,000.00	GoS	37,850,000.00

6.0 HEALTH AND NUTRITION SECTOR DROUGHT RESPONSE PLAN

6.1 Project Overview

Project Title:	Humanitarian health and nutrition support for malnourished food insecure households		
Sector Lead:	Ministry of Health		
Co-Lead:	Swaziland Nutrition Council	UN Lead	WHO
Beneficiaries	Under- fives with SAM, MAM and pregnant and lactating mothers, and 30% populations at risk including adults aged 60 years and above		
Total Budget	E 36,530,000	USD 2,435,333	
Project Duration	January 2016 – December 2017		

a) Main Objective

To mount a timely and coordinated response to hazards related to anticipated adverse climatic conditions and resultant epidemiological impact from April 2016 to March 2017.

The specific objectives are as follows;

1. To prevent and reduce incidence of epidemiological hazards; and other outbreaks associated with the anticipated adverse climatic conditions;
2. To mount a coordinated emergency preparedness and response system and ensure early recovery to affected communities.
3. To reduce mortality and morbidity by timely identification and appropriate management of acutely malnourished children (6-59 months) and pregnant and lactating women and PLWH.

b) Stakeholders Involved

The Ministry of health is the lead supported by the World Health Organization, the National Nutrition council, and Baphalali Swaziland Red Cross Society.

6.2 Brief Situation Analysis

Poor health status and malnutrition are among the biggest threats to the achievement of Sustainable Development Goals (SDGs). They increase people's vulnerability to shocks, weaken their capacity to resist and recover, and keep the majority below the poverty line. Children are undoubtedly disadvantaged compared with other age groups and experience multiple deprivations of their rights. The survival of children and pregnant women is often used as a measure of success for development and human rights.

The health status in Swaziland is below expectations, with life expectancy at birth estimated at only 54 years (52 years for males, and 55 years for females) according to the WHO 2014 World Health Statistics.

Children's nutritional status is a reflection of their overall health. When children have access to adequate food supply, when not exposed to repeated illness, and are well cared for, they reach their growth potential and are considered well nourished.

Under-nutrition is associated with more than half of all child deaths worldwide. Undernourished children are more likely to die from common childhood ailments, and for those who survive, have recurring sicknesses and faltering growth. Three-quarters of children who die from causes related to malnutrition were only mildly or moderately malnourished – showing no outward sign of their vulnerability. The Millennium Development Goal target is to reduce by half the proportion of people who suffer from hunger between 1990 and 2015. A reduction in the prevalence of malnutrition will also assist in the goal to reduce child mortality.

According to the Multiple Sector Indicator Survey (2014) there are almost six percent (5.8%) moderately or severely underweight children under five years and about two percent (1.6%) are classified as severely underweight. Overall, 25.5 percent of children are stunted or too short for their age and two percent are wasted or too thin for their height. Nine percent of children are overweight or too heavy for their height. Children in Shiselweni region are more likely to be underweight and stunted than other children. In contrast, the percentage wasted is higher in Lubombo region. Those children whose mothers have secondary or higher education are the least likely to be underweight and stunted compared to children of mothers with no education.

According to MICS 2014, stunting remains high at 25.5% while wasting and underweight are 2% and 5.8% respectively. A higher proportion of older (12-23 month old) children (67.9 percent) were achieving the minimum dietary diversity compared to younger (6-8 month old) children (33 percent). The overall assessment using the indicator of minimum acceptable diet revealed that only 38.1 percent were benefitting from a diet sufficient in both diversity and frequency.

Due to the decreasing access to and availability of food and water, combined with existing poor food preparation and utilization practices in terms of food frequency, energy density, active feeding and hygiene (especially for young children) there is a severe threat of an increase in malnutrition in the drought-affected areas. The levels of micro-nutrient deficiency are also likely to increase, impacting in particular upon lactating and pregnant women and children under five.

Main causes of mortality and morbidity

Reduced food intake and lack of varied diet leading to:

- ❖ Protein-energy malnutrition- such as kwashiorkor and marasmus conditions
- ❖ Micronutrient deficiency:
 - Vitamin A deficiency increases the risk of death from measles;
 - Severe iron-deficiency anaemia increases the risk of child and maternal mortality.
 - Outbreaks of scurvy due to vitamin C deficiency; of beriberi due to thiamine deficiency, or of pellagra due to niacin deficiency can also occur.
- ❖ Communicable diseases. Lack of water supply and sanitation services, malnutrition, displacement and higher vulnerability of the population all increase the risk of infectious diseases such as cholera, typhoid fever, diarrhoea, acute respiratory infections and measles.
- ❖ Socio-economic issues - Migration, loss of buying power and erosion of coping and caring capacities limit people's access to health services and can contribute to an overall increase in morbidity and mortality
- ❖ Some common medical conditions during drought;

Medical Condition	Effects
1. Respiratory illnesses mostly allergic conditions i.e. asthma, hay fever	Droughts can reduce air quality and compromise the health of people with certain conditions, During a drought, dry soils and wildfires increase the amount of airborne particles, such as pollen and smoke. These particles irritate the airways and worsen chronic respiratory illnesses
2. Water borne infection such as gastrointestinal illnesses- cholera, dysentery, amoebiasis, hepatitis A, salmonellosis, schistosomiasis, shigellosis, typhoid and paratyphoid (enteric fever)	In a drought, people may feel the need to reduce hand washing and other hygiene practices to conserve water, and this may increase the spread of water borne diseases
3. Skin disorders	Skin infections associated with lack of water for washing include scabies and impetigo – though we found no clear drought-associated

Medical Condition	Effects
	references for the latter. Eye infections including conjunctivitis were also associated with drought-related lack of water for washing.
4. Mental health condition Socio-economic -related stress and worry can cause depression, anxiety, and a host of other mental and behavioral health conditions i.e. suicides, violence	According to CDC findings –“Those whose livelihood is directly tied to the water supply — including farmers, horticulturalists and nursery owners — may suffer adverse mental health effects during a drought.
5. Unhealthy eating behaviour	Reduced rainfall can limit the growing season for farmers, and further reduce crop yields by creating ideal conditions for insect infestations that damage crops. This can bring increases in food prices, or shortages of certain foods, potentially leading to malnutrition
6. Vector-borne diseases- malaria	Drought can shrink bodies of water, and cause water to become stagnant, providing breeding grounds for mosquitoes. The mosquitoes are the most arthropod vectors involved in the transmission of various vector-borne pathogens, and increased precipitation can cause mosquito densities to increase through provision of additional aquatic habitat.
7. Vector-borne diseases Rift Valley fever virus (RVFV).	Transmission of (RVFV) is reported to be epizootic during wet years, especially following droughts. The virus survives in the eggs of Aedes mosquitoes which has a potential of severe outbreak on both animals and people

Critical issues to address

- a) Universal access to health care service delivery focusing on Under- fives with SAM, MAM and pregnant and lactating mothers, and all affected populations including adults aged 60 years and above.
- b) Capacity of health facilities to respond to drought The Ministry of Health’s “Safe Hospitals” programme is aiming at protecting health facilities to ensure business continuity during emergencies and /or disasters. Determining the Hospital Safety Index will assist the Ministry to manage risks in the health sector. It will allow the health facility’s level of safety and ability to respond in terms of structural, non-structural and functional vulnerabilities using the hospital safety index, as well as the vulnerability, functional, accessibility and resilience of the health facility in disasters and emergencies.
- c) Appropriate delivery models that promote equity in health service delivery: Equity in service delivery requires special measures to reach the most remote and marginalized communities.

‘Appropriate’ delivery means mechanisms that not only reach the populations concerned but are also socially and culturally acceptable.

- d) Capacity to expand and contract services in response to drought: An important part of strengthening human capital in drought-prone areas is enabling the expansion of services to meet additional demand during drought and their subsequent contraction. In the past international humanitarian actors have provided surge capacity. Building this capacity into government service delivery mechanisms, together with agreed monitoring and trigger mechanisms, will facilitate earlier and faster response.
- e) Demand for health services: The prevailing attitude in many communities is that seeking assistance from health professionals is a last resort; the value of appropriate hygiene, nutrition and health-seeking behavior is not well recognized. Therefore intensive efforts are needed to create demand for health and nutrition services.
- f) Coordination and knowledge management: There are many agencies in the health sector with diverse mandates, leading to poor coordination of activities, inefficient use of resources, and ineffective provision. Strong coordination mechanisms are essential at both national and county level, including for sharing experience of new approaches

Need analysis, justification and prioritization

In the present context, the main health impacts of the drought in high risk area are:

- ❖ Increased number and severity of outbreaks of water borne diseases, measles and, in winter, acute respiratory diseases.
- ❖ Increased morbidity of communicable diseases and malnutrition creating increased burden on the health facilities resources (mainly medicines)
- ❖ Displacement of affected communities in search for work, food and water, thus resulting specific health needs.
- ❖ Acute malnutrition, and micronutrients deficiency and sub sequent impact
- ❖ Increased pregnancy related complications and maternal and newborn deaths due to poor nutrition and micronutrient deficiency
- ❖ Increase in skin and eye infections (lack of water, displacement and poor living conditions)

6.3 Interventions

Interventions in the health and nutrition sectors are summarized in the activities below

- ❖ Management of Acute Malnutrition in all affected areas
- ❖ Active Disease Surveillance and Response
- ❖ Health Systems Strengthening

- ❖ Emergency stock-piling and pre-positioning
- ❖ Health promotion and Child Health day campaigns
- ❖ Capacity Building for Emergency Response
- ❖ Health & Nutrition Sector Coordination
- ❖ Monitoring and Evaluation

a) Implementation Approach

Implementation Strategy	Activities
1. Management of Acute Malnutrition in affected areas	▪ Robust screening for malnutrition at community and facility level ▪ Manage severe and moderate acute malnutrition among children under 5, pregnant and lactating women. ▪ Protect, promote and support appropriate infant and young children feeding ▪ Procurement of therapeutic foods (F100, F75, plumpy nut, etc.) ▪ Procurement of anthropometric tools (weighing scales, heights boards, etc.) ▪ Nutrition and disease surveillance ▪ Protection breastfeeding by prevention of donation and distribution of breast-milk substitutes in emergency affected areas
2. Active Disease Surveillance and Response	▪ Train all health workers on Integrated Disease Surveillance and Response (IDSR) ▪ Activate and strengthen IDNS ▪ Food safety inspection ▪ Activate NETF & RETF
3. Health Systems Strengthening	▪ Provision of portable water to health facilities ▪ Waste management interventions ▪ Infection Prevention and Control ▪ Sanitation Facilities in health facilities ▪ Mobilize Human resource ▪ Assessment of facility capacity to handle emergencies
4. Procurement of emergency mobile centres, cholera kits, health facility water tanks, temporal toilets, micronutrients supplements and supplies	▪ Procurement of Medicines, Cholera Kits and supplies, handwashing sanitizers ▪ Procurement of Mobile Clinics
5. Health promotion and Child Health day campaigns	▪ Development of IEC materials ▪ Capacity building (Sensitize Rural Health Motivators) trainings of stakeholders ▪ Health education of communities ▪ Sensitize Media houses (Communication strategy)

Implementation Strategy	Activities
6. Capacity Building for Emergency Response	▪ Activate and strengthen first line emergency responders and systems ▪ Strengthen Referral systems
7. Sector Coordination	▪ Revive National Epidemic Task Force ▪ Strengthen Health and Nutrition Sector
8. Safe disposal of the dead	▪ Safe disposal of the dead interventions

6.4 Health and Nutrition Sector Response Plan Budget

HEALTH & NUTRITION SECTOR RESPONSE PLAN BUDGET – JANUARY 2016 - DECEMBER 2017							
S/N	Activity	Total Estimated Cost	Immediate	Medium Term	Available Budget		Gap
					Amount	Donor	
1	Management of Acute Malnutrition in affected areas and procurement of micronutrients supplements and supplies	13,000,000	3,900,000	9,100,000	3,900,000	GoS	9,100,000
2	Robust Active Disease Surveillance and Response	650,000	650,000	-	650,000	GoS	-
3	Health Systems Strengthening & augmentation of water & sanitation facilities	5,200,000	1,560,000	3,640,000	1,560,000	GoS	3,640,000
4	Cholera Emergency mobile center.	1,300,000	-	1,300,000	-	-	1,300,000
5	Cholera kits (8)	7,800,000	2,340,000	5,460,000	2,340,000	GoS	5,460,000
6	Personal Protective Equipment (PPE) for highly infectious diseases	3,900,000	1,170,000	2,730,000	1,170,000	GoS	2,730,000
7	Hand washing sanitizers (10, 000 units)	2,600,000	780,000	1,820,000	780,000	GoS	1,820,000
8	Health promotion and Child Health day campaigns	650,000	-	650,000	-	-	650,000
9	Capacity Building for Emergency Response	650,000	-	650,000	-	-	650,000
10	Health facilities' Coordination	650,000	-	650,000	-	-	650,000
11	Monitoring and Evaluation	130,000	-	130,000	-	-	130,000
12	Total	36,530,000.00	10,400,000.00	26,130,000.00	10,400,000.00	GoS	26,130,000.00

7.0 SOCIAL PROTECTION SECTOR DROUGHT RESPONSE PLAN

7.1 Project Overview

Project Title:	Humanitarian Social Protection Drought Response Plan		
Sector Lead:	Deputy Prime Minister’s Office- Department of Social Welfare (DPMO-DSW)		
Co-Lead:	Royal Swaziland Police	UN Lead	UNFPA
Beneficiaries	Children, women, visible pregnant women, elderly, persons with disabilities, people living with HIV (PLWHIV), young persons (out of school youth).		
Total Budget	E 6,287,500	USD 419,167	
Project Duration	January 2016 – December 2017		

a) Main objective

The main objective is to provide social protection to all affected people especially vulnerable groups such as children, OVC, women, elderly and people living with vulnerable groups, from exploitation, violence abuse and neglect resulting from emergency situation. Social protection is to bring back self-esteem and dignity to all affected groups by preventing and addressing violence, exploitation, abuse and neglect especially for women, children and other vulnerable groups during emergency. The specific objectives are as follows;

- i. To put in place measures for prevention of sexual, economic abuse and exploitation of all vulnerable groups in affected areas.
- ii. To facilitate the protection care and wellbeing of affected groups.
- iii. To facilitate access to all affected groups to basic social services and relief interventions.

b) Other Stakeholders Involved:

Umbutfo Swaziland Defense Force, Ministry of Home Affairs, World Vision Swaziland, Baphalali Swaziland Red Cross Society, Save the Children, World Food Program, UNICEF, CANGO and others.

7.2 Brief Situation Analysis

Levels of gender-based violence (GBV) are high. One in four females between the ages 18- 24 years has experienced physical violence in their lifetime and 9% had experienced coerced sexual intercourse before the age of 18. In another study by UNICEF and the U. S. Centres for Disease Control and Prevention (CDC) in 2007, it was found that one-third of females aged between 13 and 24 years had experienced sexual violence before the age of 18. This clearly shows how GBV is a severe social and public health problem. Evidence indicates a link between GBV and vulnerability to HIV and sexually transmitted infections particularly among young girls, as 9.2% of youths reported forced sex at the first sexual encounter.

Natural and man-made disasters tend to have a disproportionate impact on special groups. These groups of people can be at risk during disasters, affecting their access to services and may be grossly affected in cases of evacuation if assistance is not available.

While more research is needed, available evidence suggests that the stress and disruption caused by limited resources as a result of natural disasters may lead to a rise in gender-based violence, particularly sexual violence. It is advised that health workers and other field staff assume that sexual violence may be a problem unless they have conclusive proof to the contrary.² This necessitates the need for stronger preventative measures including ensuring that women and girls are adequately protected against abuse. Women and girls have adequate privacy in shelters and women that are traditionally stigmatized against on account of their ethnicity, religious preference or employment are not discriminated against. Sexual violence can result in sexual trauma, undesired pregnancy, HIV infections, mental health disorders, sexually transmitted infections including HIV transmission stigma and discrimination among other social consequences.

According to RSPS annual report 2014, 2253 cases of GBV cases were recorded covering rape, Grievous Assaults, Murders and other forms of violence within the domestic setting. This translates to 49.8% reported cases of rape.

7.3 Interventions

Some of the interventions that will be implemented in this project will be on the following areas:

- ❖ Awareness raising/education on protection issues
- ❖ Community Protection and Security Structures
- ❖ Beneficiary Identification and accountability
- ❖ Address Gender based Violence
- ❖ Psychosocial Support

²Enarson, Elaine. *Surviving Domestic Violence and Disasters*. The FREDa Centre for Research on Violence against Women and Children, January 1998 (<http://www.harbour.sfu.ca/freda/reports/dviol.htm>, accessed 3 January 2005).

a) Implementation Strategy

The project will be implemented in all drought affected areas where there are emergency activities being conducted. The targeted areas are hot spots where vulnerabilities are high in all four regions but mainly in Lubombo and Shiselweni and some parts of Eastern part of Hhohho and Manzini.

- ❖ Training identified structures, peer educators and community at large
- ❖ Conduct a rapid assessment to identify and register to all affected groups as a result of disaster to provide number of affected people by , age, sex, visibly pregnant women, disabled, PLHIV on ART
- ❖ Ensure security of human and assets associated with food and water distributions.

The project will be implemented through the following mode of delivery:

- ❖ Support groups
- ❖ Out rich/Community meetings
- ❖ Media
- ❖ IEC
- ❖ Security (RSP, USDF etc.) will protect the responders on site
- ❖ Security will patrol on sites to protect existing structures and other equipment's as well during food distribution.
- ❖ Mainstreaming of Protection to other Sectors.
- ❖ Record, investigate and send for prosecution all cases of child labour, human trafficking and neglect.
- ❖ Provide counseling to all affected groups.
- ❖ Advocate for children and women's rights

b) Proposed activities

OUTPUTS	PROPOSED ACTIVITIES
1. Decreased incidences of Sexual abuse, GBV in all vulnerable affected groups.	▪ Identify and train educators in the community ▪ Facilitate trainings on GBV to all affected groups ▪ Facilitate formations of support groups

OUTPUTS	PROPOSED ACTIVITIES
2. Increased knowledge in sexual abuse, Economic abuse and exploitation among community members of affected areas.	▪ Dissemination of IEC materials ▪ Training in school and out of school youth on life skills ▪ Facilitate Community dialogues ▪ Create awareness using radio programmes and breakfast shows ▪ Sensitize Community leadership on sexual abuse, Economic abuse and exploitation
3. Strengthened capacity for relevant community structures to respond to sexual abuse, economic abuse and exploitation in affected areas.	▪ Identify existing community structures relevant to protection issues in affected areas ▪ Train identified relevant structures on sexual abuse, economic abuse and exploitation ▪ Facilitate the establishment of reporting and referral mechanism ▪ Sensitization of community on established reporting and referral mechanisms
4. Enhanced capacity of local social service centres to deliver basic social services among affected groups	▪ Make consultation with MoH on the essential services required to respond to GBV cases ▪ Identify gaps in service delivery among local social services providers ▪ Mobilize relevant sectors to address existing gaps
5. Increased awareness about available social services among all affected groups	▪ Sensitize affected communities on available social services ▪ Create / strengthen linkages between social service providers and community structures
6. Increased security of assets and affected groups	▪ Facilitate the formulation of security systems

7.4 Budget for the Social Protection Drought Response Plan

SOCIAL PROTECTION SECTOR RESPONSE PLAN BUDGET – JANUARY 2016 – DECEMBER 2017							
S/N	Activity	Total Estimated Cost	Immediate	Medium Term	Available Budget		Gap
					Amount	Donor	
1	ICT Material	34,400	-	34,400	-		34,400
2	Skills training	32,000	16,000	32,000	16,000	GoS	16,000
3	Awareness raising	36,000	18,000	36,000	18,000	GoS	18,000
4	Response fees	35,100	-	35,100	-		35,100
6	Purchase and distribution of dignity packs	150,000		150,000	-		150,000
7	Fuel/transport cost for protection sector team	1,000,000	-	1,000,000	-		1,000,000
8	Strengthening security at INkhundla level through Police presence	2,000,000	-	2,000,000	-		2,000,000
9	Setting up temporal half-way houses (Tents) (sponges, blankets, cooking facilities, water, food, etc.)	3,000,000	-	3,000,000	-		3,000,000
10	TOTAL BUDGET	6,287,500.00	34,000.00	6,287,500.00	34,000.00	GoS	6,253,500.00

8.0 COORDINATION OF DROUGHT MITIGATION AND ADAPTATION PLAN

8.1 Project Overview

Project Title:	Strengthening Coordination Capacity for National Drought Response		
Sector Lead:	National Disaster Management Agency (NDMA)		
Co-Lead:	UN Resident Coordination’s Office UNDP	UN Lead	All UN Agencies
Beneficiaries	All affected communities, National and Regional Administration of Government, UN Agencies, NGOs		
Total Budget	E 4,923,025	USD 328, 202	
Project Duration	January 2016 – December 2017		

a) Objectives

- ❖ Strengthen coordination in response and recovery planning and implementation at all levels
- ❖ Strengthening information management systems at all levels to inform strategic decisions
Support effective delivery of planned interventions
- ❖ Strengthening humanitarian performance monitoring and reporting
- ❖ Strengthen the capacity of the NDMA to enhance disaster prevention, preparedness, response and recovery

b) Stakeholders Involved

Coordination will involve all stakeholders affected by the drought and who have a role to play. Amongst them are various Government Ministries and Departments, UN Agencies, none governmental organization and the private sector.

8.2 Brief Situation Analysis

Humanitarian response in Swaziland has been implemented by many different organizations using different standards both at national and community levels. For coherent and coordinated response across sectors, stakeholders are now coordinated through specialized sectors. The coordination sector is responsible for coordinating all the stakeholders during humanitarian

response operations. The Coordination Sector Response Plan therefore aims at coordinating the implementation of the 2016/2017 Mitigation and Adaptation Drought Response Plan to ensure coherent response operations.

This Drought Mitigation and Adaptation plan has been prepared with the participation and consultation of stakeholders. NDMA is mandated by law to ensure proper coordination of disaster risk reduction activities in the country. Only established in November 2015, the agency is at its infancy stage currently putting in place strong operational systems and structures.

8.3 Interventions

a) The main activities of the coordination sector are consultative meetings with stakeholders for purposes gathering and disseminating important information. The following summarizes the key activities.

- ❖ Establish a National Disaster Management fund for preparedness, response and recovery;
- ❖ Explore accessing the proposed SADC Regional Disaster Response Fund
- ❖ Regional meetings to develop subnational level operational plan
- ❖ Organize monthly inter-sector coordination meetings
- ❖ Develop a cross Sector information management strategy and information management tools
- ❖ Prepare and disseminate situation reports on the drought response
- ❖ Undertake information management training at regional level
- ❖ Undertake joint monitoring visits to targeted TiNkhundla for spot checking
- ❖ Review and support regional coordination structures
- ❖ Support regions to undertake monitoring and evaluation of response interventions
- ❖ Conduct end of project evaluation
- ❖ Organize a lessons learning session to document lessons learnt

b) Measures to strengthen the capacity of the NDMA to enhance disaster prevention; preparedness, response and recovery include the following:

- ❖ Strengthen the capacity of NDMA to mobilize and manage resources;
- ❖ Strengthen NDMA monitoring and financial systems and structures;
- ❖ Build capacity on research and development to support information based decision-making processes.
- ❖ Strengthen preparedness and response capacity through the National Disaster Management Agency
- ❖ Consider accessing the Africa Risk Capacity (ARC) drought and floods insurance scheme and other disaster risk insurance options.

c) Implementation Approach

The strategy aims to build on existing coordination structures and the Coordination Sector will facilitate inter sector meetings nationally and regionally. NDMA will sanction meetings when the need arise to address any concern or adequately address problems that have arisen in any sector. The meetings will also be useful in information dissemination in areas of response and recovery.

NDMA will monitor performance of all sectors against their own plans and the need on the ground. With regards to food distribution, NDMA will monitor distribution in all sites during and post distribution to ensure accountability on resource utilization.

d) Communication Strategy

- ❖ The government of Swaziland through the NDMA shall convene all stakeholders at administrative level to communicate the plan and the modality of the implementation. This will be further scaled down to regional, constituency and community level meetings by the sector working groups.
- ❖ The NDMA will have a mass media engagement to facilitate the dissemination of information on planned and ongoing interventions as well as the key messages during the drought. All print articles, radio interviews and programmes, television interviews, social media releases, website updating, print and electronic advertisement from none government entities shall be released through the NDMA.
- ❖ The NDMA shall ensure other means of visibility such as branding in order to acknowledge Government and partners who will contribute to the response
- ❖ The NDMA shall put together a communication team (who may come from the stakeholders/partners) who will design, pre-test and run the key messages for dissemination and raising awareness.
- ❖ All persons that have been selected or delegated to do media briefings will be thoroughly trained so that they communicate the right message to a specific target group.
- ❖ Communication shall be through telephone, mobile phone, email, and other media depending on the message and target group thereof and feedback maybe received in the same manner. This information maybe meetings, updates on progress and changes on planned activities
- ❖ All relevant communication (messages, media, and target audience) shall be endorsed and released by the NDMA on behalf of the government and stakeholders.

8.4 Budget for Coordination of Drought Mitigation and Adaptation Plan

BUDGET FOR COORDINATION OF DROUGHT MITIGATION AND ADAPTATION PLAN – JANUARY 2016 – DECEMBER 2017							
S/N	Activity	Total Estimated Cost	Immediate	Medium Term	Available Budget		Gap
					Amount	Donor	
1	Establishment of a Disaster Management Fund with relevant regulations	-	-	-	-	GoS	-
2	Regional coordination meetings/trainings	216,000	-	216,000	-	-	216,000
3	Multi-sectorial & Inter-sectorial coordination meetings	71,500	-	71,500	-	-	71,500
4	Situation Analysis and Reporting	19,500	19,500	-	19,500	GoS	-
5	Strengthen regional and TiNkhundla Coordination Structures on disaster risk reduction	118,000	59,000	59,000	59,000	GoS	59,000
6	Support regions to undertake monitoring and evaluation of the response interventions	2,340,000	2,340,000	-	2,340,000	GoS	-
7	Develop cross-sector information management strategy	65,025	65,025	-	65,025	GoS	-
8	Monitoring, documentation and post project evaluation	533,000	-	455,000	-	-	533,000
9	Learning event and documentation of best practices	1,560,000	-	1,560,000	-	-	1,560,000
10	Resource mobilization	-	-	-	-	-	-
11	Total	4,923,025	2,483,525	2,361,500	2,483,525	GoS	2,439,500

9.0 REHABILITATION OF STORM DAMAGED BUILDINGS

9.1 Project Overview

Project Title:	Household Assistance with Rehabilitation of Damaged Houses		
Sector Lead:	National Disaster Management Agency (NDMA)		
Co-Lead:	Swaziland Red Cross Society	UN Lead	
Beneficiaries	Poor, vulnerable and elderly households, community schools affected by storm		
Total Budget	E 12,900,000	USD 860, 000	
Project Duration	January 2016 – December 2017		

a) Objective

The objective is to assist vulnerable families cope with the tragedy of losing their house due to a storm by protecting their assets from bad weather and helping to rehabilitate damaged houses.

b) Stakeholders Involved

NDMA works very closely with the Swaziland Baphalali Red Cross Society during all assessments and in the actual response. The Regional Disaster Management teams, Regional Administration, and TiNkhundla are key stakeholders in the regions while community leaders are key at community level.

9.2 Brief Situation Analysis

An assessment by the BSRCs indicate that there are currently more than 500 homesteads that need assistance with rehabilitating their houses after they had been damaged by storms. These are new homesteads that have been recently affected by the storms. There are more damaged houses whose owners have not fixed them from early 2015 because of lack of resources. Usually such owners are elderly and very poor people who are not employed. The number of homesteads affected by storms is expected to increase towards the end of the 2015/2016 summer months when the El Nino subsides and rain fall returns.

9.3 Interventions

The main interventions are the assessment of the extent of damages at community and homestead level to determine the level of vulnerability of the victim and rehabilitation of the damaged houses for qualifying victims.

Depending on the level of vulnerability and the extent of the damage, NDMA will construct a two-roomed house to replace one that has been destroyed or simple replace a damaged roof.

a) Implementation Approach

The Baphalali Red Cross Society will lead assessments of storm victims in affected areas because of the proximity of their volunteers to most communities in the country. NDMA participates in such assessments through the Regional Disaster Management Committees (RDMC) and coordinators. The assessment teams work in collaboration with community leaders to ensure that only deserving people get assistance. Deserving victims are then identified based on the report and assistance is offered. NDMA will procure and facilitate construction.

9.4 Budget for Storm Damages Response

STORM DAMAGES RESPONSE PLAN BUDGET – JANUARY 2016 – DECEMBER 2017							
S/ N	Activity	Total Estimated Cost	Immediate	Medium Term	Available Budget		Gap
					Amount	Donor	
1	Rehabilitation of schools, damaged roofs	3,000,000	-	3,000,000	-		3,000,000
2	Redesign Schools to climate smart structures	1,000,000	1,000,000	-	1,000,000	GoS	-
3	Reconstruction of houses destroyed by storm	7,500,000	2,250,000	5,250,000	2,250,000	GoS	5,250,000
4	Purchase of emergency stock	1,400,000	1,400,000	-	1,400,000	GoS	-
5	Rehabilitation of rural road infrastructure	-	-	-	-		-
6	Total	12,900,000	4,650,000	8,250,000	4,650,000	GoS	8,250,000

10.0 REFERENCES

- a) Food Security Rapid Assessment Report, 2015
- b) Swaziland Vulnerability Assessment and Analysis report (SVAC), 2015
- c) Crop and Food Security Assessment Mission report, 2015
- d) Multiple Indicator Sector Survey (MICS), 2014
- e) AEC, 2013
- f) Multi Hazard Contingency Plan (MHCP, 2015)
- g) Education In Emergencies Response Plan
- h) Water Point Mapping Report, 2015
- i) Royal Swaziland Police Service annual report, 2014
- j) Gender Based Violence Survey, 2007
- k) Surveillance Quarterly Reports
- l) Disaster Management Act, 2006
- m) Disaster Risk Management Policy, 2010

SWAZILAND DROUGHT MITIGATION AND ADAPTATION PLAN - COMMITMENT MAXTRIX											
IMMEDIATE INTERVENTION - 1-3 MONTHS											
S/N	Activities	Cost	Proposed revised budget	Proposed Funding Source	Location	Proposed Implementer	Coordinator	Justification	Status To date	Support/TA/Procurement	Cabinet Action
1	Establishment of a Disaster Management Fund with relevant regulations	0	0		NDMA	NDMA	DPMO	Manage operations of all disaster related interventions	Consultations commenced on draft regulations	TA support from Attorney General and Finance	To Approve regulations
	Sector: Urban Water & Sanitation										
2	Hawane Dredging (to increase water storage capacity of the dam)	15,000,000	5,000,000	GoS	Mbabane	SWSC	SWSC	Staggered payment	Engagement with land development in using their heavy plant		Budget provision & Approval
3	Purchase of Water Tanks (231*10,000L)	3,003,000	3,003,000	GoS	Mbabane, Manzini, Matsapha , Ngwenya	NDMA	NDMA	To mitigate Water shortage in towns	Water rationing in effect	SWSC to support NDMA	Budget provision & Approval
4	Procurement of water tanker trucks	12,000,000	-	GoS	Nationally (2 trucks per region)	NDMA	NDMA	28 Gov trucks already assigned to other commitments	people are without water in Mbabane	Refurbishment of the Trucks	Propose re-assignment of the 28 trucks to the emergency operations
5	Hiring of water tankers for water distribution (Rental)	6,588,000	6,588,000	GoS	Nationally	SWSC	NDMA	Hiring of water tankers to complement Gov trucks (Rental)	Inadequate water tanker trucks	waiver on procurement processes	To Approve Budget & waiver
6	Drilling & Installation of boreholes (accessorize the boreholes)	2,800,000	2,800,000	GoS	Mbabane	DWA,SWSC	SWSC including future maintenance	Sharing of scarce resources	15 boreholes drilled, but not accessorized	to accelarte the procurement process	To Approve Budget & ensure proper regulation of boreholes
7	Pholinjane and Mbabane river harnessing and Treatment plant installtion	10,000,000	10,000,000	GoS	Mbabane	SWSC	SWSC	To augment Mbabane Water although its not a viable project for future water services	River flows are still	charge a levy to user to recoup investment	To approve budget and principle of 20c/20L

8	Procurement of mobile toilets in Mbabane excluding operational cost - to be provided by government staff	1,170,000	1,170,000	GoS	Mbabane	SWSC	NDMA	To alleviate the sanitation problem in Mbabane - daily management to be done by SWSC		Procurement	To approve the budget and user pay principle
9	Rental of mobile toilet units - preferred option	8,100,000	0	SME	Mbabane	FSE / CC & CCM	CCM	Hygienic provision of sanitation services		Procurement & structure of contract	To approve the budget and SZL5 per user pay principle
10	Strengthen on Health, Hygiene and Sanitation communication				Mbabane	MoH, NGOs	MoH	Information dissemination			
11	Shift system	0	0	N/A	Mbabane	Labour, Public service & Stakeholders	Public Service	Water shortages and sanitation challenges	Ongoing water rationing and eminent system shut down in Mbabane	Human behavioral management system in place	To Mandate GNT to engage with stakeholders
12	Shift system in schools	0	0	N/A	Mbabane	MoET, Parents and Teachers Association	MoET	Water shortages and sanitation challenges in Mbabane	Ongoing water rationing and eminent system shut down in Mbabane	Human behavioral management system in place	To Mandate Education to engage stakeholders
13	Transportation of pupils & administration	0	0	N/A	Mbabane	SCARTA	MoET & MoPWT	None availability of water and sanitation issues for clustered schools around Mbabane and boarding facilities		Clear plan on how the opening of schools will be managed	Approval of principle, should need arise
14	Rural Water & Sanitation										
15	Rehabilitation of Rural Water Schemes	13,500,000	4,050,000	GoS	Nationally	DWA / SWSC	DWA	Provision of water to drought stricken areas	Discussions ongoing	Abolishment of office and transfer of assets	To approve budget and transfer of the rural water function to SWSC

16	Drilling & Installation of new boreholes to meet water needs	3,750,000	0	GoS	Nationally	DWA	DWA	Provision of water to drought stricken areas	Ongoing	To accelerate procurement	To note cashflow constraints and delayed procurement process
17	Provision of water treatment kits	5,400,000	1,620,000	GoS	Nationally	NDMA	MoH	Provision of water purification alternative	Health has recommended suppliers	procurement of other alternative kits	To approve budget and note the alternatives
18	Rain Water harvesting - all government structures and private	0	0	GoS	Nationally	DWA / MoA	DWA	Provision of water to drought stricken areas	Ongoing	N/A	To increase advocacy
19	Procure portable water from SWSC for all services	10,000,000	8,000,000	GoS	Nationally	NDMA	DPMO	Provision of water for all services to drought affected areas	Ongoing	To accelerate procurement	
20	Agriculture & Food Security										
21	Irrigation of 1350 ha land for crop production	6,000,000	0	GoS	Lowveld	SWADE, Uboombo	MoA	Self sustainance on maize production and reduce import	Cabinet paper under preparation to utilize current SWADE subvention budget allocation		Approval of utilization of existing subvention
22	Incentivize farmers	0	0	N/A	National	NMC	MoA			Review the price per tonnage to local farmers to match or exceed the cost of importing	
23	Defer maize farm input programme for rainfed production but support other crops		0	GoS	National	MoA	MoA	Seasonal forecast points to further reduction in rainfall			To Approve deferment immediately into the next planting season
24	Explore apportionment of required area for other crops										

25	Acquire the additional irrigated land (4650) needed to produce 120,000MT of maize										
26	Conduct rapid assessment	300,000	300,000	GoS	Nationally	NDMA & MOA	MoA	Update of food security situation	Annually activity but will be comprehensive this year	TA from FAO and WFP	Approval
27	Sharing of research material with Cabinet	0	0	GoS	Nationally	MoA	NDMA	Evidence based programming and policy formulation	ongoing	Advocacy	To note
28	Information sharing / dissemination to the public	0	0	N/A	Nationally	MoA	MoA	Continuously update the public on pertinent issue related to Agric production	Ongoing	Revisit timeslots on radio	To approve prioritization of these programmes on radio
29	Provide supplementary feed to livestock in affected areas to ease pressure on grazing land and restore degraded land	15,000,000	4,500,000	GoS	Lubombo & Shiselweni	MOA		Minimising attrition/death rate of livestock			
30	Deliver livestock drinking water near grazing land	3,000,000	-	GoS	Lubombo & Shiselweni	MOA		Share resources with those for portable water	ongoing	release of all available tanker trucks	Facilitate release of tanker trucks
31	Maximising Local Production of hay bales (bush clearing, baling), borehole drilling at govt farms, Destocking/culling	6,000,000	1,800,000	GoS	Government ranches & Private Farms	MOA & Private Livestock farmers	MoA	Adaptation	ongoing	Private sector participation	Approval
32	Cattle destocking/culling	0	-	0	Nationally	MOA		Reduce pressure on rangelands			Note
33	Food Distribution	33,000,000	10,000,000	GoS	Nationally	NDMA	DPMO	Food supply for 300000 people for 12 months	Ongoing	Capacity building and improved targeting (involvement of all community structures)	Approval budget and related regulations

34	Education											
35	Drilling and Installation of boreholes	8,000,000		GoS	Mbabane-Ngwenya corridor	MOET	MoET	To meet the water shortage in schools	Ongoing	support from MNRE	To approve the procurement of accessories	
36	Procure and supply Breakfast commodities to schools to strengthen the school feeding program	18,116,503	8,000,000	GoS	National	MOET	MoET	All schools to accommodate children on ART, retention	Ongoing	N/A	Approval	
37	Procure and supply portable water to schools (purchasing water costs)	2,000,000	-	GoS	National	MOET	MoET	complementing the ongoing drilling programme	Ongoing		Approval	
38	Procure and supply alternative sanitary and hygiene facilities for schools	5,000,000	0	GoS	National	MOET		Spread the resources fairly as articulated above			Approval	
39	Procure and supply hand washing buckets (for water preservation)	523,800	523,800	GoS	National	MOET	MoET	Provision of water and Sanitation to ensure learning continues			Approval	
40	Procure and supply schools with water treatment kits	1,500,000	0	GoS	National	MOET		Spread the resources fairly as articulated above			Approval	
41	e-learning			GoS	National	MOET	MoET	To ensure students continue with curriculum even when schools are not operating	ongoing	Graphic boards and all material related to production of educational content	Approval	
42	Storm Damages											
43	Rehabilitation of schools,	3,000,000	0	GoS	National	Micro Projects	MoET	Facilitate learning and welfare of learners	Schools already identified by MoET		Approval	
44	Redesign Schools to climate smart structures	1,000,000	1,000,000	Micro Projects	National	MOET & MoPWT, MTAD	NDMA	Adaptation to withstand the adverse weather & climate conditions		sustainable Architectural designs	Approval	
45	Reconstruction of houses	7,500,000	2,250,000	GoS	National	NDMA	NDMA	Restoring houses for storm victims			Approval	

46	Purchase of emergency stock (tents,	1,400,000	1,400,000	GoS	National	NDMA		Prepositioning NDMA for emergency response			Approval
47	Rehabilitation of road infrastructure			GoS	National	MOPWT					Approval
48	Social Protection										
49	Fuel/transport cost for protection sector team	1,000,000		GoS	National	DPMO		Ensure social protection of assets and people			
50	Strengthen security at Inkhundla level, Intensify patrols	2,000,000		GoS	National						
51	Coordination										
52	Produce Situation Analysis Reports	19,500	19,500	GoS	National						
53	Conduct Monitoring Spot Checks led by NDMA	78,000	78,000	GoS	National						
54	Support regions to undertake monitoring and evaluation of the response interventions	2,340,000	2,340,000	GoS	National						
55	Develop cross-sector information management strategy	65,025	65,025	GoS	National						
56	Resource mobilization	0	0		NDMA	All stakeholders	DPMO	to pool resource to support government contribution	ongoing	developing robust financial systems to manage and monitor all resource flows	Approve as and when requested
57	ERNEGY										
58	Purchase of power shortfall from ESKOM	60,000,000	20,000,000	GoS	National	SEC	MNRE	Reduction of local generation to stretch water availability locally	ongoing		Approval
59	Use of renewable energy							immediate diversification of energy sources	Ongoing	TA support and immediate diversification of energy sources	To Approve CDMA or get aid / donor support
60	Industry										
61	Sensitization of Industry about the drought	0		Industry	National	FSC&CC, SIPA		Trigger Assistance from private sector			Note
62	Health										

63	Management of acute malnutrition	13,000,000	3,900,000	GoS	National	MOH					Budget provision & approval
64	Robust Active Disease Surveillance and Response	650,000	650,000	GoS	National	MOH					Budget provision & approval
65	Health Systems Strengthening & Health facility water tanks, temporal toilets,	5,200,000	1,560,000	GoS	National	MOH					Budget provision & approval
66	Procurement			GoS	National	MOH					Budget provision & approval
67	1. Cholera Emergency mobile centre.	1,300,000		GoS	National	MOH					Budget provision & approval
68	2. Cholera kits (8)	7,800,000	2,340,000	GoS	National	MOH					Budget provision & approval
69	3. Personal Protective Equipment (PPE) for highly infectious diseases	3,900,000	1,170,000	GoS	National	MOH					Budget provision & approval
70	4. Hand washing sanitizers (10, 000 units)	2,600,000	780,000	GoS	National	MOH					Budget provision & approval
71	Environment										
72	Procurement of backup generator	250,000	250,000	GoS	National	MTEA-MET		To ensure constant information provision			
73	Totals										
74		302,853,828	105,157,325								

GOVERNMENT DROUGHT MITIGATION PLAN -MEDIUM TO LONG TERM														
S/N	Sector	Outcome	Activities	2016/17 Cost Implication	2017/18 Cost Implication	Proposed revised budget	Funding Source	Location	Implementer	Coordination	Justification	Status To date	Support/TA/Procurement	Cabinet Action
Water & Sanitation														
1	Nondvo dam feasibility study			90,000,000	2,000,000,000		ADB-2.5 million EUR & GoS-300000 EUR	Siphocoini	DWA		Augmenting of water supply to matsapha-manzini corridor	On-going feasibility study-AfDB Grant		
				25,000,000										
2			Maguga to Hawane pipeline	100,000,000	200,000,000		GoS	Mbabane	SWSC		Augmenting of water supply to mbabane and Support Hawane			Budget provision & Approval
3			Reviving of mbuluzi falls water daming	20,000,000	1,000,000,000		GoS	Mbabane	DWA		Improving water storage capacity for Mbabane			Budget provision & Approval
4			Increase the storage capacity of Gobholo Weir		500,000,000		GoS	Mbabane	DWA		Improving water storage capacity for Mbabane			
5			Regulate the drilling of boreholes in peri urban areas				GoS	National	DWA		Enforce issuance of permits by DWA			

6			Extend water services to peri urban areas (provide mandate to SWSC)				SWSC	Peri Urban	SWSC		Improve on water and sanitation in peri urban areas			
7			Conduct a comprehensive study for improved water storage and accessibility in swaziland and list sites for possible Dam Storage (Future)	0			GoS	National	DWA, MTEA, SWSC,		To Implement as a relief to over dependence on urban infrastructures			
8			Regulate rural water schemes - SWSC				GoS	National	SWSC		To ensure sustainability of rural water schemes and Management by SWSC			
9			100% coverage in Water Supply Country wide				Aid	National	MEPD, DWA					

10	Agriculture & Food Security		Conduct Studies for construction of Water reservoirs (Dam)	20,000,000			GoS	National			To increase water storage in the country			
11			Develop 1800 ha land under irrigation for maize in the lowveld aiming at 2 harvests per year	100,000,000	80,000,000		GoS	Private Farms			meeting national requirement for grains			Budget provision & Approval
12			Fodder Trees Planting focusing first on Government farms	3,000,000	10,000,000		GoS	Government Farms			Sustaining of livestock			Budget provision & Approval
13			Drilling of Boreholes on Government Ranches and accessories	600,000			GoS	Government Farms	DWA		Water provision for sustaining livestock		Procurement	Budget provision & Approval
14			Construction of national grain reserves	840,000,000			GoS				Grain storage for maize, beans and sunflower			

15			Annual Vulnerability Assessment				GoS							
16			Food Distribution	461,084,600	100,000,000		GoS	Nationally	NDMA	DPMO	Food supply for 300000 people for 12 months	Ongoing	Capacity building and improved targeting (involvement of all community structures)	Approval budget and related regulations
17														
18	Education		Drilling and Installation of boreholes nationally	42,000,000			GoS, UNICEF, ROC	Nationally	MOET, Microprojects	MOET	Provision of water and Sanitation to ensure learning continues			Approval
19														
20	ERNEG Y	Use of renewable energy									immediate diversification of energy sources	Ongoing	TA support and immediate diversification of energy sources	To Approve CDMA or get aid / donor support
21														
22	Industry	Sensitisation of Industry about the drought		-			Industry	National	FSC&CC, SIPA		Trigger Assistance from private sector			Note
23														

2														
4	Health													
2														
5				1,701,684,600	3,890,000,000									



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