

FINAL DRAFT

SOMALILAND NATIONAL DROUGHT MANAGEMENT STRATEGY

Commissioned by the National Environment Preparedness and Disaster Management Authority (NERAD) supported by UNDP

July 2017

LIST OF ACRONYMS

EWS	Early Warning System
EWU	Early Warning Unit
FAO	Food and Agriculture Organization
FSNAU	Food Security and Nutritional Analysis Unit
GIS	Geographical Information System
MoA	Ministry of Agriculture
MoERD	Ministry of Environment and Rural Development
MoH	Ministry of Health
MoL	Ministry of Livestock
MoWR	Ministry of Water Resources
NDSC	National Drought Steering Committee
NDMC	National Disaster Management Committee
NERAD	National Environment Preparedness and Disaster Management Authority
SNDPII	Somaliland National Development Plan II
SWALIM	Somalia Water and Land Management Information Management
UNDP	United Nations Development Programme
WASH	Water Sanitation and Health

Somaliland is arid and semiarid country with chronic water deficit. Drought is one of the most common and most frequent natural disasters in the country and we cannot do anything to keep drought from happening. Most of climate models indicate that frequency and severity of drought will increase as a result of global warming. The impact will even more severe for the pastoral and agro pastoral communities who depend on rainfall and natural vegetation for their livelihood.

Somaliland suffered from severe and prolonged drought (2015 to 2017) that resulted death and destitution for large number of the rural communities.

Learning from the experience of the emergency response from the recent drought, the National Environment Research and Disaster Preparedness Authority (NERAD) felt the need for proactive and efficient national drought policy and strategy and hence prepared this document.

This National Drought Strategy and Policy document is a framework for identifying and dealing with drought in Somaliland. The document briefly summarises the current government policies and services within which the drought policy will operate. It presents the overall goals of reducing vulnerability to drought, minimising the impacts of drought, and facilitating post-drought recovery

The Policy provides guidelines for government responses to the different stages of drought, dealing with post-drought recovery, and reducing long term vulnerability to drought.

It is also planned and hoped to initiate all stakeholders in Somaliland to undertake all that is necessary to reduce drought effect in the immediate, medium and the long-term.

Mohamed M Mirreh, a NERAD consultant funded by UNDP and accepted for release by NERAD Authority, prepared this document.

We are calling all relevant stakeholders to support the successful implementation of all the stages of this national drought policy and strategy.

With Best regards

Mohamed Muse Awale
Commissioner of NERAD Authority

SUMMARY

The National Drought Strategy and Policy is a framework for identifying and dealing with drought in Somaliland. The document briefly summarises the current government policies and services within which the drought policy will operate. It presents the overall goals of reducing vulnerability to drought, minimising the impacts of drought, and facilitating post-drought recovery, and lists the specific objectives to achieve the goals. These are followed by a set of key principles upon which the drought management plans should be based.

The policy provides an objective definition of drought, based on cumulative rainfall, which will be used to determine when government assistance will be provided to farmers in the cropping areas. In the pastoral areas where factors other than current season's rainfall influence range and livestock productivity, an early warning system (EWS) will be used to identify drought related stress areas and population groups. The EWS will monitor a range of environmental, economic and human welfare indicators to designate four stages of drought status: Normal, Alert, Alarm and Emergency.

The Policy provides guidelines for government responses to the different stages of drought, dealing with post-drought recovery, and reducing long term vulnerability to drought. Finally, it provides an institutional structure for planning and implementing drought management activities, specifies the establishment of a national drought fund to pay for drought relief and recovery interventions, and recognizes the need to develop and maintain links with relevant institutes and agencies to improve the efficiency of drought management in Somaliland.

CHAPTER 1

INTRODUCTION

Somaliland occupies an area of 137,600 km² divided into 13 administrative regions or governorates, which are further subdivided into districts and sub-districts. Though there are no reliable census estimates of 3.5 million is frequently cited with pastoralists making more than 60% of the population.

The overall climate of Somaliland is monsoonal with northeast and southwest monsoon influencing rainfall and wind direction. Majority of rains are the effect of southwest monsoon. The rainfall pattern is different in the regions, the eastern regions have bimodal pattern of rainfall with two distinct rainy seasons and two dry seasons. The GU season starting from late March with peak rainfall in May is followed by the Xagaa dry season followed by Dayr rains starting from September with peak in October followed by the dry Jilaal season. The eastern and the southern party with predominantly pastoral nomads is the drier part of Somaliland with total rainfall of less than 200mm per annum. Earlier reports indicated that climate is more severe in south and the eastern part of the country. The coast area of the country has rainfall much lower the eastern and southern parts with mean rainfall of less than 60mm.

The western part of the country in addition to the Gu and Dayr rains also receive Karan and some times Xays thus with the exception of the winter, the region receives rains for more than eight months though the quantity and the distribution is highly variable. This zone, which is an agro-pastoral area, receives more than 400mm. The western part of the country is therefore wetter than the east and the Haud.

The Golis-range Mountains running parallel to the coast receives relatively high rainfall. The high rainfall record in the mountainous Golis-range is attributed to orographic modification with high humidity and mist clouds. Rainfall is as high as 600mm in this zone.

Considerable variation of annual rainfall as indicated by the number of years where the rainfall was lower than the total mean annual with frequency of drought years seem to be more related to the degree of aridity of the different ecologic zones of Somaliland. As mean annual rainfall decreases, the variability of the rainfall increases. Hence drought is a recurrent phenomenon in Somaliland and particularly in the eastern and southern parts, which can be characterized as drought prone areas.

There are approximately 1.4 million hectares of land that are potentially cultivable. About 0.4 million hectares are actually cultivated, of which approximately 0.36 million hectares (90%) are rain fed and 0.04 million hectares (10 %) are irrigated. Normally irrigation is along the banks of streams using rudimentary canals and is mainly for vegetables. Few farmers supplement rain with pumped irrigation and normally for horticultural trees. Agriculture contributes 20-25% and is mainly subsistence farming with 70 % of rain fed under cereal sorghum and 25% maize. The remaining 5% of the rain fed is mainly Cowpea, millet, groundnut beans etc.

The rangelands cover about 10.0 million hectares. It is in the rangelands that the country's pastoral nomadic herders raise their livestock of 9.0-million sheep, 9.0 million goats 0.4 million cattle and 1.8 million camels. Rangelands also support high diversity of fauna some of which are endemic to Somaliland and near extinction

Drought is one of the most serious environmental problems affecting Somaliland. The impact of drought on agriculture can be understood as follows:

- 90 % of the cultivated areas are rain fed, hence any shortage of rain has a major effect on agricultural production
- The Livestock population is primarily dependent upon rain fed rangeland.
- The country has no perennial rivers and few horticultural crop irrigation sources are from ground water, the recharge of which is rainfall dependent.

As mean annual rainfall decreases, the variability of the rainfall increases. Hence drought is a recurrent phenomenon in Somaliland particularly in the rangelands. However, until now, there has been no official implemented drought management strategy. Frequent drought were experienced in many parts of the country, for example, seven drought were recorded for the last thirty five years in the primarily pastoral area of Togdher and six of these droughts occurred that last fifteen years. The recent drought of 2011, 2015, 2016 and 2017 were very severe and necessitated international relief assistance and stimulated this initiative for formulating a national drought management strategy.

Past drought management has tended to be limited to reacting to the impacts of drought, often when it has been too late and only a relief function could be performed. A critical factor in the effectiveness of disaster management is the preparation of policy, management strategies, intervention criteria, and emergency action plans.

The National Drought Strategy and Policy aims to provide a suitable framework for drought preparedness, response, and mitigation measures in order to minimise the impacts of drought and to facilitate post-drought recovery. The policy also pays attention to the need for longer term planning and research to reduce vulnerability to drought.

The policy is directed primarily at the pastoral and agricultural sector. For simplicity, the term “farmer” is used in this policy document to include livestock owners and herders as well as crop farmers.

CHAPTER 2

POLICY CONTEXT

Livestock and farming sector (agriculture) contribute to 65% of the GDP, 85% of export earning and support 70% of the population. There has not been an integrated and coherent national policy of the agriculture sector (agriculture sector here means all renewable natural resources).

The present framework of government policies and services, within which the National Drought and Policy will operate are briefly summarized below.

The 2017 to 2021 SNDPII, consolidated policy of objective that will advance agriculture, livestock and fisheries and mitigate against the effects of climate change and impacts of drought on the livelihood and well being of the society through integrated and improved management of the environment (range, forest and wildlife and water resources).

Drought is a cross cutting issue that different institutions government and international organizations and NGOs play significant role in assessment, response and mitigation.

The two government institutions directly focused on environment are MoERD and NERAD. The MoERD is mandated to protect and conserve the environment and natural resources and in mitigation of drought impact through rangeland and forest management including establishment of reserves and protected areas that can be used by livestock during drought. NERAD's main responsibility is to coordinate among partners the implementation of national policies and on disaster mitigation and emergency preparedness.

The MoL program of holding grounds and fodder development and mobile veterinary clinics aim to promote animal health and nutrition in drought years including establishment of mobile slaughter houses and deep freezers.

The MoWR prepared a three year strategic plan for drought mitigation and immediate response which is focusing on rainwater / surface water harvesting. The MoWR is also the main coordinator of WASH sector involved in promoting adequate access to safe water supply and appropriate sanitation and hygiene facilities within rural and urban areas.

The MoH have the mandate of human health and nutritional policy issues while most of the regions of the country have reasonable health services, the regions of Sool and Sanag and most rural areas have few primary health units and these are the more drought prone setting and where contagious diseases are prevalent in drought years and where contingency plans including mobile clinics will be the focus.

CHAPTER 3

POLICY OBJECTIVES

3.1 Overall goals

The national drought policy has three overall goals:

- Reduce vulnerability to drought
- Minimise the impacts of drought
- Facilitate post-drought recovery

3.2 Specific objectives

Specifically, the policy seeks to meet the following objectives:

- a) Distinguish between aridity, which is a permanent feature of the lower rainfall areas of Somaliland and drought, which is not
- b) Collect, analyse and disseminate drought-related information in a timely and systematic manner
- c) Identify and prioritise the most vulnerable ecological zones, production systems and population groups
- d) Identify appropriate interventions to reduce vulnerabilities and drought impacts
- e) Encourage farmers to implement management practices adaptable to climate change and improve their resilience to drought and reduce their dependence upon external assistance to deal with drought
- f) Ensure that household food security is not compromised by drought
- g) Preserve the reproductive capacity of livestock flocks and herds in drought affected areas

- h) Ensure adequate supplies of water for livestock and people in drought affected areas
- i) Minimise degradation of the natural resource base during droughts and in the post-drought recovery period
- j) Enable the crop production sector to re-establish quickly after a drought
- k) Enable livestock herders or farmers to re-establish their flocks and herds after drought
- j) Finance drought relief programmes by establishment of a National Drought Fund

CHAPTER 4

KEY PRINCIPLES

4.1 Policy, strategy and management plan

For the purpose of this document, the following distinctions are made between a strategy, a policy and a management plan:

- A strategy sets the overall goals and objectives at national level, and the general orientation concerning instruments to be adopted in pursuing such goals;
- A policy specifies objectives (within the adopted strategy) and sets out instruments to be used in order to achieve the objectives, taking into account existing constraints;
- A management plan specifies details of how the policy will be implemented, and may be location and/or time specific.

For simplicity the policy and strategy are combined in this document. Management (contingency) plans will be formulated and revised by NERAD and the National Disaster Management Committee in accordance with the policy and strategy, and be geared to the needs of specific areas or target groups in relation to the drought conditions pertaining at a particular time.

4.2 Key principles

The key principles underlying the policy objectives, and upon which the management and implementation plans should be based, are as follows:

- a) Drought cannot be avoided but its impacts, such as famine, livestock mortality and household destitution, can be greatly reduced by timely and effective intervention.
- b) The determination of drought conditions will be based upon objective climatic, agricultural, hydrological and socio-economic criteria.
- c) For drought relief measures to be triggered the severity of drought conditions must exceed those that are expected and to be factored into normal risk management practices.

- d) The government responses to drought will be graduated according to the severity of the drought conditions pertaining.
- e) Government assistance for dealing with drought will be prioritised to the most vulnerable population groups.

CHAPTER 5

DEFINITION OF DROUGHT

The policy aims to distinguish between aridity, which is a permanent climatic feature of low rainfall zones (the major part of the country), and drought, which is not permanent and is not confined to the low rainfall zones. Drought is a periodically recurrent feature of most geomorphologic areas, but the frequency, duration and intensity tend to increase with aridity.

In conventional usage, drought is a loose term implying an unspecified negative departure from the long-term average precipitation. In order to distinguish between aridity, which should be assumed and planned for in normal management practices, and true drought, which is unpredictable and extreme and cannot reasonably be allowed for in normal management practices, a drought definition that excludes normal rainfall variability is required.

For the purpose of this policy, **drought is defined as an extended period of exceptional aridity beyond that which cannot reasonably be allowed for in normal management planning and practice.**

The policy recognises the different categories into which drought definitions normally fall, notably meteorological, hydrological and agricultural. In absence of suitable crop and pasture growth models for Somaliland, the policy adopts a meteorological definition which identifies drought conditions sufficiently severe that they are beyond what can reasonably be factored into normal risk management by agricultural and livestock producers, and which therefore justify state intervention.

A meteorological drought will be declared in a particular location when the cumulative rainfall to date in the current season is less than a determined percentage of the long-term average for the same period in that location. The cumulative rainfall deficit will be expressed as a Drought Index to enable comparisons between areas of different rainfalls, as well as monitoring over time.

Until sufficient data become available to determine more precisely the appropriate percentage reduction in cumulative rainfall for drought declaration in different ecological zones, and the minimum periods of the rainfall season to be considered, the following criteria will be used:

- Seasonal rainfall for the Gu will start from first of March until the end of May for the whole country and Karan and Deyr season for the Western Zone in first August to end of October and the start of the Deyr rains from First of September to end of October for the eastern zones.
- The rainfall threshold for meteorological drought will correspond to cumulative rainfall less than 50% of the long term mean cumulative rainfall for the same season
- The earliest that a drought will be declared will be the end of May for the Gu season and end of October for the Deyr season.

However, a meteorological definition of drought based on the current season's cumulative rainfall alone does not allow for poor rainfall distribution or for drought conditions that result from the carry-over effects of below average rainfall in one or more previous seasons. Nor does it allow for the exacerbation of drought effects by poor range condition. In view of these considerations, and the present imprecision of the thresholds given above, a range of other factors will be included in the evaluation of drought stress and in the triggering of drought relief measures. These are described in the following chapter.

CHAPTER 6

MEANS OF IDENTIFYING DROUGHT

The aim is to identify drought symptoms as early as possible in order to be able to do something about them before the situation becomes critical. In view of the spatial variability of rainfall in Somaliland and the low intensity of rainfall stations, as well as the difficulties of determining precise thresholds for the meteorological definition of drought that would be appropriate in all situations, a number of other factors will be taken into consideration in identifying drought conditions that justify government intervention. These factors will be assessed by means of an early warning system, as described below.

An Early Warning System (EWS) will be designed and established to:

- Identify drought and drought-related stress areas and population groups
- Assess the stage, scale and extent of drought stress
- Alert district, regional and national authorities and the local population of the risks to food security and the need for implementing contingency measures.

The country will be stratified into zones of similar agro-climatic characteristics and drought vulnerability, taking account of administrative boundaries where possible. The stratification will be derived from the best available data sets of agro-ecological zoning and vulnerability analysis, and will be revised when appropriate.

The EWS will monitor cumulative rainfall totals at selected rainfall stations on a biweekly basis from the start of each rainfall season and compare them with the longterm averages over the same period to provide a drought index for each zone.

Simultaneously, a range of survey indicators will be monitored to provide information on:

- Availability of grazing and water
- Crop and livestock productivity
- Trends in marketing and economics
- Household food security and nutritional status

The data and data collection techniques should meet the criteria of being:

- Cheap

- Reliable
- Sensitive to change
- Easy to interpret

In order to detect trends, surveys will be repeated regularly in the same areas but separate sets of indicators, and means of assessment, may be appropriate in different ecological zones or production systems. Consideration will be given to sample size and avoidance of bias in order to obtain reliable data. Sampling intensity may be higher for more vulnerable groups or zones.

Routine monitoring will be conducted at a relatively low level of intensity and frequency but will be stepped up when either the drought index or the survey indicators warn of an impending drought situation. The EWS will be used to designate a particular drought status for each stratification zone, and there will be four warning stages: normal, alert, alarm and emergency.

Normal	-	Indicators remain generally within the expected seasonal ranges
Alert	-	Environmental indicators are markedly below normal, or reserves are unusually low due to previous depletion
Alarm	-	Environmental indicators and rural economy indicators are markedly below normal
Emergency	-	Environmental indicators, rural economy indicators and human welfare indicators are markedly below normal

There will be precise contingency plans and lines of responsibility for each of the three stages of actual drought concern. However, **the whole programme should be geared to avoid reaching the emergency stage, which would mean that the strategy has failed.**

Application of the drought definition and criteria given in Chapter 5, in conjunction with evaluation of relevant early warning parameters, will facilitate distinction between genuine drought and the occurrence of drought-like conditions resulting from poor management. If the EWS indicates drought stress when rainfall is well above the drought threshold, the implication will be that the drought-like conditions are mainly attributable to poor management (e.g. inappropriate crops in the croplands, or overgrazing in the rangelands), and that the current management practices are unsustainable.

CHAPTER 7

RESPONSES TO DROUGHT

Government assistance and strategies in time of drought will be based on four distinct programmes:

- Food security and human health
- Assistance to livestock owners
- Assistance to crop farmers
- Emergency water supply

Contingency plans based on these categories will be prepared by NERAD and in collaboration with the National Disaster Management Committee (NDMC) and international organizations (and particularly Food and Agriculture Organization (FAO SWALIM & FSNAU) for each of the three stages of drought identified by the EWS (alert, alarm and emergency), taking into account the needs of different production systems and vulnerability levels. Experience from other countries and the opinions of stakeholders will be considered in formulation of the plans. Priority will be given to preserving food security and minimising livestock mortality.

The EWS will specify the thresholds of the various monitoring parameters to trigger different drought stages, and the contingency plans will specify the nature of the responses in both qualitative and quantitative terms as well as setting the criteria for eligibility.

When the EWS issues a warning of a particular stage of drought for an area, the relevant contingency plans will become action plans. The action plans will be time and location specific. They will quantify the areas, people and livestock affected, and the resources needed.

The contingency and action plans will be based on the strategy options shown below for the different drought stages. The categories of assistance will not be mutually exclusive, and households may be eligible for more than one type of assistance. For example, resource poor livestock owners could receive food aid as well as water in an emergency situation.

7.1 Food security and human health

The main concern will be to avoid drought related malnutrition, ill health, destitution and death in the human population. Particular consideration will be given to the young, the old and others incapable of work.

<u>Drought stage</u>	<u>Intervention possibilities</u>
Alert	tap food/ cash to be planned in place , consider food for work or cash for work programs (No free lunch)
Alarm	as above food ready for emergency distribution school feeding programmes in rural areas started
Emergency	as above food distribution started to affected communities emergency healthcare started

7.2 Assistance to livestock owners

The principle strategy in assisting livestock keepers will be to facilitate and encourage the sale of livestock **before** they lose too much condition to command a reasonable price, or become too weak to walk to other areas with forage. If animals die, those capital assets are permanently lost but if they can be sold, the herder or farmer can buy food for his family and some replacement stock after the drought.

<u>Drought stage</u>	<u>Intervention possibilities</u>
Alert	assess water and pasture status and alert
Alarm	as above incentives to sell livestock assisted movement of livestock, or water
Emergency	as above

mobile slaughter facilities & educate communities
to burning of dead carcasses

7.3 Assistance to crop farmers

Assistance to farmers growing crops (cereals & fruit trees,) will generally be limited to post-drought recovery measures as described in Chapter 8.

7.4 Emergency water supply

Livestock rarely die from lack of water in a drought. They are more likely to die from starvation but the availability of water determines the accessibility of grazing resources. However, rural communities can be threatened by shortage of drinking water during a drought. The first priority will be to ensure that all people have access to adequate drinking water, and the next priority will be to provide water for livestock in areas with grazing resources that cannot be utilised without water provision.

Permanent water sources, such as boreholes, become foci for permanent settlement and cannot readily be closed down in between drought periods, and so can contribute to overgrazing .Water development by MoWR should therefore be done with the advise of the MoERD. The short-term provision of emergency water for people and livestock will, as far as is practicable and economic, be implemented through the transport of water in tankers and lorries. Longer-term emergency water supply schemes financed from drought relief provisions should be designed to conform to the long-term water development goals and strategies for the area, and not be used to favour any particular individuals, groups or localities.

<u>Drought stage</u>	<u>Intervention possibilities</u>
Alert	nil response
Alarm	assessment of water supply and demand
Emergency	water transport emergency water development

CHAPTER 8

POST-DROUGHT RECOVERY

Once a drought is over, there is likely to be a need to help some crop and livestock farmers with the process of recovery back to self-sufficiency. Household and community surveys will be conducted in severely drought-affected areas to identify those in genuine need of government assistance, and the nature and level of assistance required. The purpose of the exercise will be to assist capable farmers who have lost their production resources due to the drought, rather than through bad management, by providing them with sufficient means to restore adequate production capability to sustain themselves and their families. The nature of the government assistance will fall into two categories:

- Credit or loans, or subsidies to purchase essential inputs

The post-drought assistance will be limited to farmers and should not be confused with poverty alleviation programmes. The levels of government assistance will be geared to ensuring self-sufficiency and not necessarily to restoring pre-drought production levels. Assistance will be prioritised to the farmers considered most deserving by their communities [local drought committee]

Government assistance for post-drought recovery will be based on two separate programmes but in some instances mixed farmers may be considered eligible for assistance from both. The two programmes will be:

- Assistance to livestock keepers
- Assistance to crop farmers

8.1 Assistance to livestock keepers

The principal requirement for livestock keepers who have lost substantial portions of their flocks in a drought will be stock replacement. However, requests for restocking assistance should be endorsed by the MoL & MoERD and tied to the acceptance to grazing management including establishment of grazing reserves.

Except in extreme circumstances, government assistance will be limited to credit or loans to purchase replacement stock. However, where livestock keepers become destitute by drought-related stock losses, consideration may be given to government sponsored restocking schemes involving the purchase and allocation of breeding stock to the most needy.

8.2 Assistance to crop farmers

The principal requirements for crop farmers who have suffered serious crop failure during a drought will be seed (or seedlings for tree crops) to replant. However, consideration should be given to the suitability of the planted crops to the local ecological conditions, and requests for government assistance should be endorsed by the relevant Extension Officer in the MoA or experts of international organization or none governmental organization supporting the program.

Except in extreme circumstances, government assistance will be limited to credit or loans to pay for necessary inputs or services. However, where crop farmers have become destitute by drought-related crop losses, seed and seedlings may be issued.

CHAPTER 9

REDUCING VULNERABILITY TO DROUGHT

The government recognises that drought is a recurring phenomenon and therefore there is a need to take steps to reduce the long-term vulnerability of crop farmers, livestock keepers and the national economy to drought. Drought losses and drought relief measures can be very costly, yet do nothing to prevent recurrence of similar problems. Hence, an important component of the government's strategy in dealing with drought is to place considerable emphasis on reducing vulnerability. It is considered that this approach will prove to be more cost effective in the long-term than merely dealing with the consequences of drought.

Government initiatives for reducing vulnerability to drought will fall into four main categories:

- Promoting drought mitigating technologies and practices
- Conducting drought related research
- Creating a favourable socio-economic climate for responsible management
- Building up reserves

9.1 Promoting drought mitigating technologies and practices

The first priority is to encourage the use of crops and livestock that are well suited to the environmental conditions of each ecological zone, and to discourage those that are not. The indigenous livestock breeds in Somaliland are well suited to the environmental conditions and care must be taken not to introduce blood from less hardy breeds. On-farm risk minimisation through diversification and the use of early maturing, high value crops and crop varieties with low water demand will be encouraged. Agricultural irrigation accounts for less than 10% of total water use in Somaliland and the government should place greater emphasis on improved irrigation efficiency and increased rainwater harvesting.

One of the best ways of reducing drought impact on the rangelands is to practise conservative grazing through monitoring of range utilization measures and seasonal utilization checks and sustainable range management, and the government will look for ways to persuade stock owners accordingly. Fodder reserves in the form of on-farm or off-farm crop residues, standing biomass or reserved grazing areas are also considered effective possibilities for mitigating drought impact, as long as they can be accessed by those who need them most. The planned government reserves and protected areas will allow for carryover dry season feed and drought years as bulk feed to sustain animals.

The MOPE will produce guidelines for their use. Future designation of seasonal reserves and protected areas should take into consideration their suitability as drought reserves.

9.2 Conducting drought related research and extension

More research, extension and training emphasis will be put on the development and implementation of drought mitigating technologies and management practices such as those listed above, notably suitable crops and fodders, improved irrigation efficiency and techniques of water harvesting. Livestock research, breeding and selection will pay attention to hardiness and to less frequent watering requirement. Attention will be given to improved delivery of livestock extension services through pastoral community participation on issues such stock sales long before drought is declared and stock sales as cash reserves for household in normal years. This will also be useful in range stocking and will impact on sustainable rangeland resource

Additional foci will include improved rainfall/drought forecasting, the possibilities of remote sensing and GIS for mapping and monitoring, the relationships between rainfall and plant growth (for crops and rangeland) to determine critical rainfall levels and periods, the relationships between primary production and carrying capacity in rangelands and the short term carrying capacities (grazing days) of the reserves and planned protected areas. Attention will also be given to improved accuracy and sensitivity of vulnerability analysis for population groups, and to possibilities of economic diversification outside of agriculture.

Post-drought evaluations will be conducted to learn from each experience of dealing with drought, in order to improve planning and budgeting for future droughts. The evaluations will determine the impacts of the drought on water supplies, grazing, crops, livestock and household food security; review the success or failure of the EWS and summarise the costs to the farmers and the government of the drought impacts and drought interventions; and make recommendations for improvements in the procedures for dealing with drought.

9.3 Creating a more favourable socio-economic climate

The government encourage a favourable socio-economic climate for farmers and herders to adopt drought-mitigating technologies and practices developed by research and promoted by extension. Government policies can be designed to provide incentives for sound management practices and disincentives for unsustainable ones.

Management practices and drought coping ability include those on land tenure, land use, water use, subsidies, marketing and taxation. Possibilities and incentives for responsible

natural resource management include conservation agriculture, seasonal reserves, school reserves or community initiated village based reserves.

Banning cultivation of the rangeland to prevent encroachment of cropping into the grazing lands of the marginal areas as it tends to occupy the best soils as well as posing an erosion risk, so weakening the grazing resource.

In the long term, poverty alleviation in the rural areas is considered the most effective way of ensuring that food insecurity does not result from drought, and the government should focus its policy in addressing poverty. Through information campaigns, formal and informal education and extension activities, the government will be able to promote good nutritional, health and sanitation practices in rural areas to enable households to make the best use of the resources available to them.

9.4 Building up strategic reserves

An effective means of reducing vulnerability to drought is to maintain some reserves of essential commodities, or the funds with which to purchase them. Similarly, financial reserves are essential for funding post-drought recovery. Non-drought years should be used to build up strategic reserves at national, district and household level. A national drought fund will be built up in non-drought years to be available when needed for drought relief and recovery interventions.

The government should promote improved food and feed storage and preservation methods and encourage farmers and pastoralists to accept more responsibility for drought planning. At district, regional and national level, the government will work through suitable authorities such as NERAD to maintain emergency food and feed supplies. The government should maintain adequate water reserves in reservoirs and should prevent excessive depletion of water tables and water development programs should be tied to sustainable use of other renewable natural resources.

CHAPTER 10

INSTITUTIONAL ARRANGEMENTS AND FUNDING PROCEDURES

10.1 Implementation of the National Drought Strategy and Policy

An inter-ministerial National Drought Steering Committee (NDSC) coordinated by NERAD will be established. This will report to the National Disaster Management Committee (NDMC) under chairmanship of a representative of the Office of the vice President, and will have ultimate responsibility and decision making authority for overseeing all drought management activities in the country, for allocating resources and making policy decisions.)

The NDSC will be established with technical representation from relevant ministries, institutes and agencies, and will be chaired by Commissioner of NERAD. This will report to the NDMC. External advisers or projects, as considered appropriate may support the NDMC.

The NDMC will be responsible for preparing and reviewing - in concordance with the National Drought Strategy and Policy - guidelines for dealing with drought in Somaliland. In particular, the NDMC will elaborate:

- criteria for eligibility for drought relief and drought recovery assistance
- contingency plans and unit costs for each of the three stages of actual drought alert
- guidelines on the nature and levels of post-drought assistance, with unit costs
- recommendations on means of reducing vulnerability to drought
- lines of responsibility from national to district to community to household level

When formulating the above guidelines, the NDMC will ensure representation from crop farmers and pastoral communities in the different ecological zones and particularly those considered most vulnerable to drought.

An Early Warning Unit (EWU) need to be established in Burao as recommended earlier by Kimetrica Limited as it is centrally located to the relatively more frequent drought prone areas of Somaliland. The EWU require funds and staffing that may initially be requested from external sources for example UN agencies such as UNDP and technical support of FAO SWALIM and SFNU programs.

10.2 Funding procedures

Under the Policy, farmers will be expected to take reasonable responsibility for planning for, and coping with, drought. Government assistance will be focussed primarily on small-scale subsistence farmers whose livelihoods are threatened by drought.

In order to avoid the disruptive effects and delays of financing emergency assistance from other budget lines, and to accommodate funds from different sources including international donors, the government will establish a National Drought Fund. This fund will be used to finance drought relief and recovery interventions, which are in accordance with the National Drought Strategy and Policy.

Existing rainfall records will be analysed to determine the expected frequency of occurrence (probability values) of seasonal rainfall being less than 50% of the long term mean in each of the agro-climatic zones. This analysis will indicate for each zone the average number of years in which drought funds can be accumulated between droughts.

A technical committee will be established by the NDMC to assess previous drought expenditures and contributions, set a target size for the fund and make recommendations on government contributions and other sources of funds, as well as on management, control and disbursement procedures. The NDMC will be responsible for overseeing the establishment and disbursement of the fund.

10.3 Links to other institutions

The government recognises that:

- a) Technologies for predicting, assessing and monitoring drought impacts are evolving over time
- b) Droughts are regional phenomena not confined within country boundaries
- c) Various institutes and agencies based within Somaliland have experience and expertise in EWS and neighbouring countries in East Africa and particularly Kenya have experience in drought management, therefore the government seek to develop and maintain consultation and capacity building support programs.