# REPUBLIC OF SOMALILAND

# SOMALILAND FOOD & WATER SECURITY STRATEGY

## SOMALILAND VISION 2030

**A Stable and Democratic Somaliland Where Citizens Enjoy Sound Quality of Life by 2030**

1. **Agriculture Vision** - A nation that utilizes agricultural (including livestock and fisheries) resources sustainably for income generation and food security;

2. **Water Vision** - A society whose citizens enjoy access to safe and sufficient water

***DMS/SDI 10/19/2011***

# ABBREVIATIONS

| | |
|---|---|
| **"DEYR"** | Short rainy season in Somali |
| **"GU"** | Long rainy season in Somali |
| **AFLC** | Acute Food And Livelihood Crisis |
| **CBS** | Cereal Balance Sheet |
| **CMR** | Rude Mortality Rate |
| **CPI** | Consumer Price Index |
| **DGs** | Director Generals |
| **EW** | Early Warning |
| **EWS** | Early Warning System |
| **FAO** | Food and Agricultural Organization |
| **FSNAU** | Food Security and Nutrition Analysis Unit |
| **FSWIS** | Food Security and Water Information System |
| **FWSS** | Food and Water Security Strategy |
| **FWSSO** | Food and Water Security Strategy Office |
| **GDP** | Gross Domestic Product |
| **HA** | Hectare |
| **HE** | Humanitarian Emergencies |
| **HFS** | Household Food Security |
| **HIV/AIDS** | Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome |
| **IDP** | Internally Displaced Persons |
| **IDR** | Import Dependency Ratio |
| **IFAD** | International Fund for Agricultural Development |
| **IGAD** | Intergovernmental Authority for Development |
| **KGs** | Kilograms |
| **KLM** | kilometer |
| **LTR** | litters |
| **MEB** | Minimum Expenditure Basket |
| **MMEWR** | Ministry of Mining, Energy and Water Resources |
| **MNPD** | Ministry of National Planning and Development |
| **MOA** | Ministry of Agriculture |
| **MOF** | Ministry of Finance |
| **MT** | Metric Ton |
| **NDP** | National Development Plan |
| **NGO** | Non-governmental Organization |
| **NPC** | National Planning Commission |
| **PCCC** | Per Capita Cereal Consumption |
| **PHL** | Post Harvest Losses |
| **SFR** | Strategic Food Reserves |
| **SLD SH** | Somaliland Shilling |
| **SSR** | Self Sufficiency Ratio |
| **SWALIM** | ***Somalia Water and Land Information Management*** |
| **TOT** | Terms Of Trade |
| **UAE** | United Arab Emirates |
| **UNDP** | United Nations Development Programme |
| **WFP** | World Food Programme |
| **WFS** | World Food Summit |

# FORWARD

The election of 2010 ushered new government into power. A great effort has since been directed at creating an enabling environment for rapid economic growth and development in keeping with the covenant made with the people of Somaliland during the election campaign. The Government of Somaliland has succeeded in producing two strategic documents that provide a road map for the future. These are the **Somaliland Vision 2030** and **National Development Plan 2012-2016**.The Somaliland **Food and water Security Strategy** (FSWS) is a crucial component of this long-term outlook. It is a response to the urgent need of the Somaliland people for a more food and water secure environment that is healthy for life and work.

This document lays out the strategic framework to enable Somaliland achieve sustainable food and water security. It is based on the fact that Somaliland's long-term food and water security is at risk. The objective therefore is to transform Somaliland into a food and water secure country by the year 2030.The goal is to improve the availability of, and access to, adequate and safe food and water in a sustainable manner, especially for rural communities and urban poor, and other vulnerable groups in the country.

Somaliland Food and Water Security Strategy (FWSS) 2030 is a process, not a product; a journey, not a destination. We believe that the bold strategies put forward in this strategy not only outlines a way forward, but also give people of Somaliland the means to make course corrections as the landscape changes, as it invariably will. In this way, FWSS 2030 will always remain fresh and relevant.

Making the vision a reality is a bold yet daunting task. It will require a sustained and combined effort from both the public and private sectors and from the civil society. Our developmental partners and friendly nations are invited to walk with us in this endeavor. My government is fully committed to the placement of the question of food and water at the heart of our national priorities. We will provide the support and urgent passion needed to consistently address the binding constraints to achieving the goal of sustainable food and water security. These constraints include: (i) stagnating food production and productivity; (ii) lack of access to rural finance, infrastructure, technology, markets, and non-farm income opportunities; (iii) climate change and (iv) frequent droughts, (v) rapidly degrading environment, (iv) increasing and volatile food prices and (v) poverty, rising and malnutrition and food safety

I am therefore confident we will collectively achieve the goals set out in this strategy and in the years to come will look back with the pride of accomplishment in a stable and secure Somaliland.

Allah Karim

……

H.E. AHMED MOHAMED SILANYO
PRESIDENT OF THE REPUBLIC OF SOMALILAND

## ACKNOWLEDGEMENTS

This strategy has been developed by the Government of Somaliland through a consultative and participatory process under the guidance of the Ministry of Planning and National Development. The consultative process involved multi-disciplinary stakeholders through several steps including preparation of technical papers, consultative strategy workshops and culminated with the preparation of the strategy. The aim of the process was to draw from our collective yet diverse international, regional and national experiences, and identify both existing and new strategic programmes that would contribute to an elaborate food and water strategy in Somaliland

The participants included technical staff of concerned government ministries and public agencies, representatives of Somaliland development partners, expert resource persons, national universities and the civil society.

We would like to pay our sincere tribute to members of different organizations who attended and contributed greatly towards the process. Although too many to individually mention, we acknowledge their individual contributions and are thankful for the able manner in which they represented their line ministries and specific disciplines. We gleaned lessons from other national food security documents from within the region which were very helpful in making us focus. That contribution must be acknowledged.

We take this opportunity to thank the IFAD, FAO, UNDP and WFP for supporting the preparation of technical papers and grateful for their participation in the consultative workshops. We are specifically grateful to Ali Ismail and George Matete (FAO) and Noel Harris (IFAD) for providing technical support on the behalf of their parent organizations during the writing of the strategy. We put forward our appreciation to Dr Mohamood A. Noor, Mohamed Haji Warseme and Dr. Elmi Adan for their contributions and willingness to lead discussion groups at the various workshops and share with us their knowledge and wisdom. Many individuals in the ministry of planning and development contributed invaluably to this exercise and we venture here to mention but a few of them. Dr, Elmi Mohamood and Farhan Abdi Ahmed

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DR. SAAD ALI SHIRE
MINISTER OF NATIONAL PLANNING AND DEVELOPMENT

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## EXECUTIVE SUMMARY

The Food and Water security strategy for Somaliland is premised upon the nation's vision 2030. It provides the mechanism through which the government facilitates, in a comprehensive and coordinated manner, the implementation of strategic actions to improve and ensure food and water for the people of Somaliland. It is a roadmap for bolstering the productive sectors of the country as a means of contributing to sustainable economic development. This strategy covers four dimensions:

1. Physical availability of food,
2. Economic and physical access to food entitlement,
3. Food utilization,
4. The stability of the other three dimensions (1, 2, 3 above) over time. It addresses food and water at two levels: the household level and the national level.

In Somaliland, we hope to address food either through self-sufficiency (growing within the country the food we need) or Self-reliance (importing food from the world market when international prices are lower than cost production at home). However, food security is intimately linked to the availability and access to water, particularly in the rural areas where livelihoods centre on agriculture and livestock production. Food security is an outcome of people's ability to secure access and utilize adequate quantities of food from either their own production or purchase. Both people's ability to feed themselves in the short term (risk to live), and achieve self-sufficiency in the long term (risks to livelihoods) are at peril at all the time.

A number of converging trends, including water scarcity, land degradation, lack of on-farm technological innovation, population growth and climate change explain the trend towards the increasing food and water insecurity. The combination of these factors over the years has substantially eroded the productive assets of communities and households. The majority of small farmers and pastoralists are unable to feed their families due to their narrow production base and unfavorable trade terms for their livestock. Their livelihood base is not sufficiently diversified in order to insulate them and their households from external shock drought; thus, Somaliland relies on imports as its main source of food supply.

With high global demand and low food domestic production, Somaliland is facing an upward pressure on food prices in the country with deteriorating terms of trade and a larger food import bill to pay. The people most likely to be negatively affected are urban poor, disabled people, elderly people, children and women, the unemployed, and IDPs. High food prices are also adversely impacting those producers (fishermen, small farmers, pastoralists ) who are net buyers in value terms, because they sell at low prices at harvest time to finance essential needs, and buy back at high prices later in the season when run out their own stocks. The gap in food security can be clearly seen from a comparison of the imports of staples and national production. Somaliland is totally reliant on imports of sugar and oil seeds and vegetable oil. With

regard to cereals and cereal products, Somaliland does not produce rice and does not have the climatic conditions to grow wheat. Although the deficit measured by cereal imports as a proportion of total estimated supply is large (average 87 percent over the period 2001 to 2008), the baseline for potential if not partial substitution may be better measured by comparing domestic sorghum and maize production with imports of wheat grain and flour. In this case, the deficit falls to an average of 73 percent.

The current food and water security challenge in Somaliland has three dimensions:

The first dimension seeks to maintain and increase the ability of Somaliland to meet its national food and water requirements. This involves meeting these needs from domestic agricultural production, import food items that cannot be produced locally, and the export commodities with comparative advantage (livestock/meat, fish, hides and skins and special gums and frankensnance).

The second dimension regards eradicating the widespread inequalities and grinding poverty that affects many households due to inadequate and unstable food supplies, lack of purchasing power, weak institutional support networks, inadequate safety nets, weak food emergency management systems and unemployment.

The third dimension requires dealing with cyclical variations in access to food and availability of water , and the impact of climate change and food price volatility.

The primary objectives of the FWSS are to promote the domestic food and water production capacity and improve accessibility thereof. This will improve the availability and reduced insecurity by increasing the participation of food insecure households in agriculture sector activities and thereby creating forward and backward linkages that will result in added value, rising incomes and economic growth.

Based on the situational analysis, review of best practices and proven effective interventions feasible in the challenging context of **Somaliland**, the following goals and outcomes for the strategy have been established:

1. **I**ncrease **A**gricultural **P**roduction and **P**roductivity (crops, livestock and fisheries);
2. **D**evelop **E**xport **M**arkets for **l**ivestock and **F**isheries with **A**dded **V**alue;
3. **I**ncrease **I**ncome and **J**ob creation **O**pportunities;
4. **I**mprove **N**utrition and **F**ood **S**afety;
5. **E**nhance **S**afety **N**ets and **F**ood **E**mergency **M**anagement **S**ystems;
6. **I**ncrease **S**ustainable **W**ater **R**esources **M**anagement;
7. **I**ncrease **I**nstitutional **C**apacity **B**uilding.

This is only achievable through the application of a multidisciplinary approach and creation of an economic environment that encourages farming and enables food-insecure households to insert themselves into the economic mainstream. SMART

partnerships between the private and public sector are required. Policies with regard to the provision of adequate safety nets, information management systems, and emergency management systems are also needed.

The development of the strategy is based on a number of guiding principles:

- ✓ Harmonization with ***vision 2030 and National Development Plan (NDP) 2012-2016;***
- ✓ Political leadership and commitment
- ✓ Adopt community-based, bottom up and participatory approach where the "food and water insecure" should be assisted and made agents of their own development;
- ✓ Investment in long term research to development (R & D) into the productive sector;
- ✓ Comprehensive and continuous capacity building for the food and water security strategy.

Critical issues to be considered in the implementation of the strategy include:

- ✓ Developing and implementing appropriate Food and Water Security Monitoring and Evaluation Systems at local, regional and national level, linked to other information systems, including disaster management, poverty and health information systems as part of broader strategy to mitigate, prevent and respond to food and water emergencies;
- ✓ Creating systems for sharing information among ministries and departments concerned with food and water security;
- ✓ Establishing and maintaining a register of food-insecure households as part of a larger food security information management system;
- ✓ Providing support to improve institutional and organizational capacity, with special consideration for human resource development. The goal is to improve programme planning, implementation, monitoring and evaluation.

To effectively plan and implement the Food and Water Security strategy as well as monitor and evaluate its progress, a strong infrastructure within Government is required. This will be necessary to guarantee the coordination, not only of government institutions, but also of all actors involved in the food and water Strategy.

Therefore, it will be appropriate to establish within the Ministry of planning, a special office to be known as the Food and water Security office (FWSO). This office will be supported by National Food and water Security Steering Committee representing government and international institutions responsible for the implementation of FWSS.

The ministers and the heads of the concerned institutions will represent their respective organizations in the committee. The Committee will appoint a chair and a co-chair and will be responsible for the formulation of policy and strategy on food and water security. They will be reporting to the National Planning Commission and the Council of ministries on regular basis.

# 1. INTRODUCTION

The Food and Water security strategy for Somaliland is premised upon the nation's vision 2030. It provides the framework by which the government facilitates, in a comprehensive and coordinated manner, the implementation of strategic actions to improve and ensure adequate food and water supply for the people of Somaliland. It is a roadmap for bolstering the productive sectors of the country as a means of contributing to sustainable economic development and a food and water-secure citizenry that are able to live longer and work productively.

This strategy has been developed by the government through a consultative and participatory process that was steered by a multi-disciplinary consultative committee under the guidance of the Ministry of Planning and National Development. The process went through several steps including literature review, consultative workshops, stakeholder consultative symposium, and preparation of the strategy. The aim was to draw from our collective yet diverse international and national experiences, and identify strategic programmes that would contribute to national food and water security

# 2. BACKGROUND

## 2.1 Somaliland topography

Somaliland topography consists of three main land forms:

(i) Piedmonts and the coastal plain (Guban) southward from the Red Sea with elevations ranging from seas level to 600m;

(ii) Hills and dissected mountains (Ogo) of rugged topography rising to more than 1,500m;

(iii) The plateau (Haud) with large areas of gently undulating Plains

In broad terms Somaliland can be divided into 10 agro-ecological zones. Of, these 8 constitute arid or desert zones with significant limitations that make them unsuitable for agriculture[1]. The total arable land area is estimated at around 350,000 ha. This is concentrated largely on the northwestern plateau (Southern Awdal ,Gabiley and Maaroodi-Jeex) and contains the main rain fed agricultural zones. This is further divided into two main sub-zones:

[1] There are small pockets in these agro-ecological zones that have potential for small irrigated crops such as dates, vegetables and forage crops

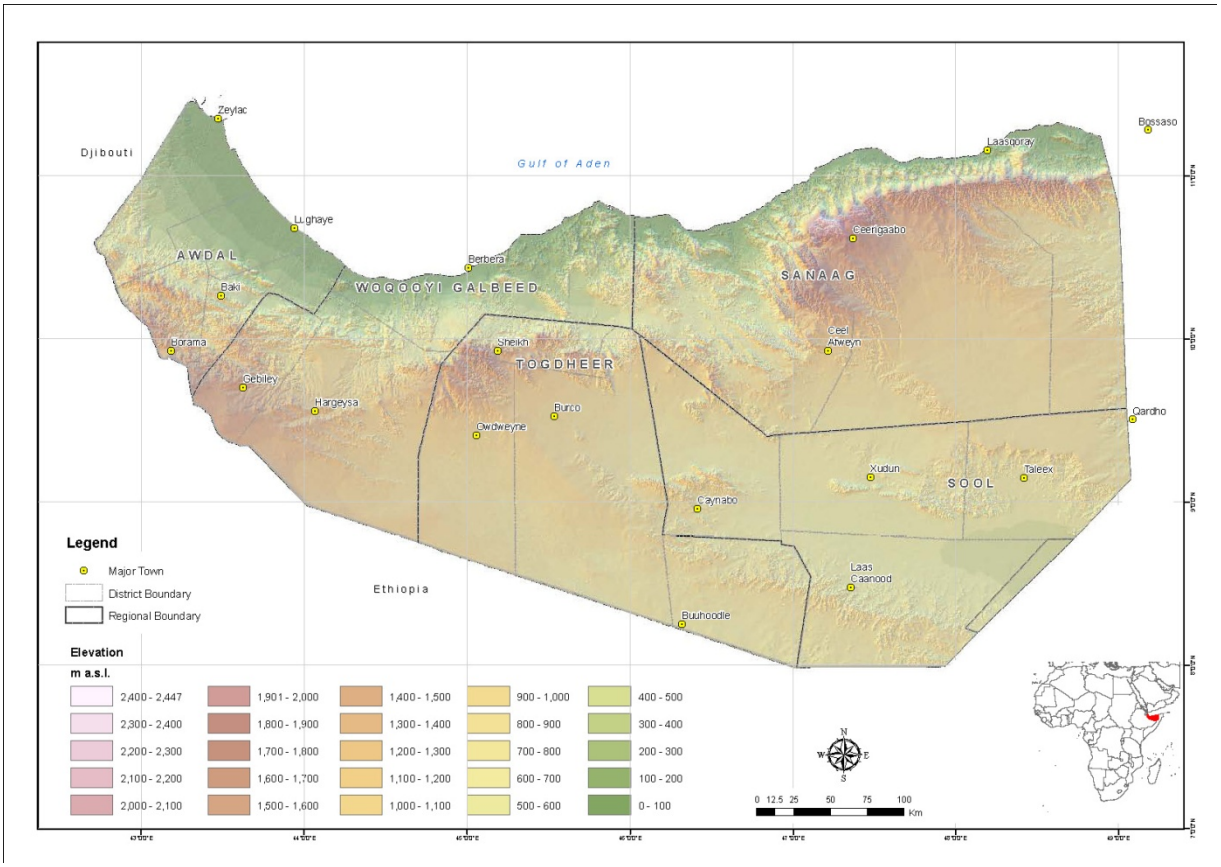
(i) The high potential rain-fed farming land, which covers the land on the plateau along the main road Hargeisa-Borama, and the area surrounding Borama town and Qulijeed village. The size of the cultivated farm ranges between 1.5-5 hectares for bigger farmers and between 0.5-1.5 ha for small farmers, and

(ii) The land which covers the northwest of Borama and the south and the east of Hargeisa, which has a small proportion of the agro-pastoral population. Cultivated areas range between 0.6-1.5 hectares, and from 0.4-0.6 hectares.

The coastal plain has little agricultural potential and is sparsely populated. The eastern plateau (Togdheer) has very limited rain- fed and irrigated agricultural potential. The arid hilly terrain of the Far East (Sool) has practically no agricultural potential.

There is limited irrigated agricultural potential along seasonal streams with associated shallow aquifers. However, the eastern highlands of Sanaag around Erigabo which benefits from greater precipitation during the rainy season do have the potential for both subsistence and commercial farming.

## Map 1- Topography- Somaliland




Data source: FAO-SWALIM

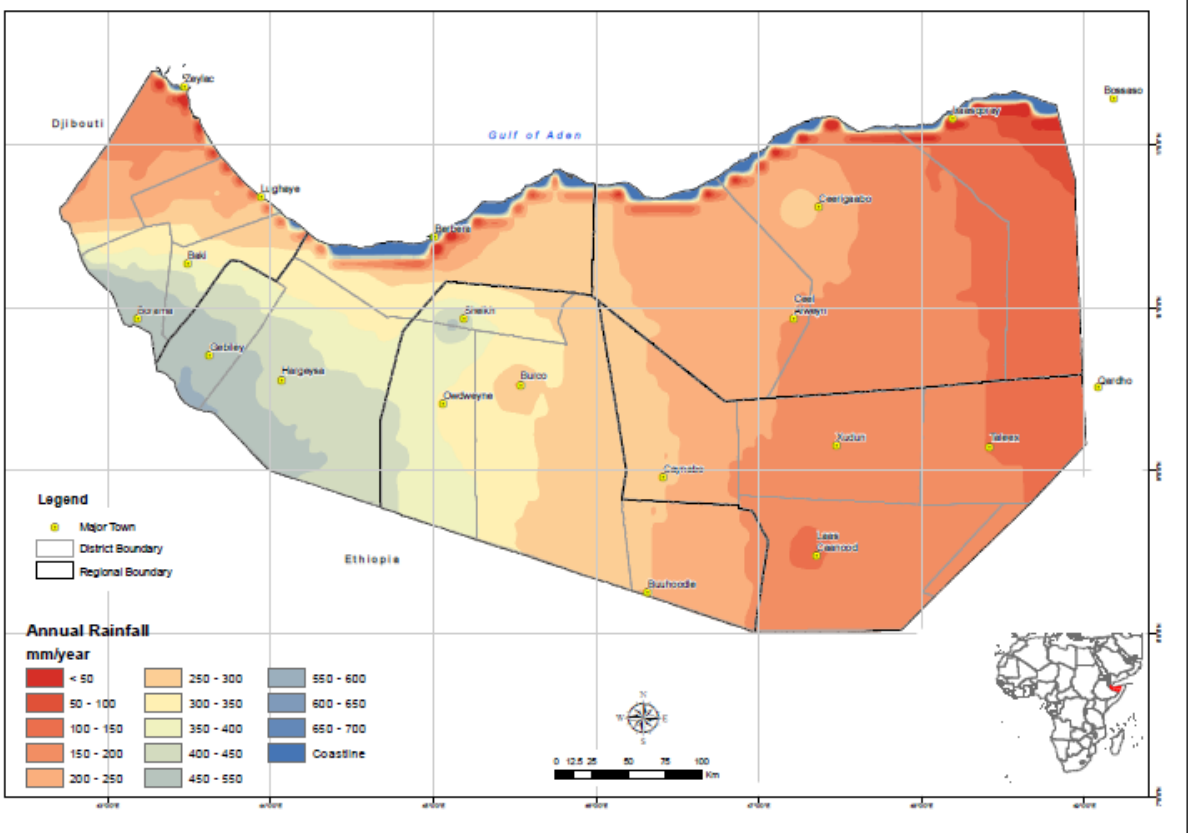
## 2.2 Climate

### 2.2.1 Rainfall

Somaliland has a bimodal rainfall distribution (***Gu*** and *Deyr).* The first main rainy season (*Gu*) occurs between April and June, when around 60 percent of rain falls, and the second rainy season (*Deyr*) from August to November. The months of highest rainfall within these seasons are generally from April–June and October–November. The two dry seasons in the country are *Jilaal* and *Hagga,* which occur between December and March and July and August, respectively.

Rainfall is low and erratic. The amount of rainfall received annually reduces further to the north except for areas around Sheikh, Hargeisa and Borama that receive between 500 mm and 600 mm per year. The area around Ceeregaabo receives up to 400 mm annually. The northern coastline is characterized by low rains of less than 100 mm per year. The rest of Somaliland receives an annual rainfall of 200 to 300 mm. (Refer to Map 1- Rainfall- Somaliland)

**Map 2- Rainfall- Somaliland**




Data source: FAO-SWALIM

### 2.2.2 Temperature

In the higher altitudes of the mountains and plateau areas temperatures vary considerably with the seasons, with a mean annual temperature of 20-24°C, while the coastal region has mean annual temperatures of 28-32°C. The hottest weather is experienced between June and September and temperatures get cooler in December, January and February. The highest long-term mean maximum value that has been recorded is 42°C in June and July at Berbera. The lowest can reaches 5-10 in Ceeregaabo Hargeisa and Borama

## 2.3 Soils

Soil types closely follow the geomorphology of Somaliland. Soils are characterized by poor structure, high permeability, low moisture retention capability and inadequate internal drainage. Soil erosion is a major problem. This is a result of land clearing for farming purposes, cutting trees for fencing, charcoal production from live trees and overgrazing of livestock. The result is reduced water infiltration and a corresponding increase in runoff. Both gulley erosion and stream bank erosion is prevalent. Gully erosion is a threat to both rain fed farming land and grazing land. It has already made large areas of farming land unproductive and is spreading at an alarming rate.

## 2.4 Vegetation

The vegetation of Somaliland consists mostly of grass, shrubs, and woodland. Grass and shrubs are mainly in the coastal plains. Shrubs and grass with scattered trees are dominant in the sub-coastal areas (north of the Golis Mountains). Evergreen trees and scattered shrubs, which are sometimes in clusters, can be found on the Golis Mountain. Open trees (woodland) are mainly in the plateau southeast and southwest of Hargeisa. The most common trees are Acacia and Commiphora species.

## 2.5 Land Use

All land belongs to the State. In the past the rangelands were held either under a system based on customary water rights in the traditional clan-based land ownership system in which land was considered to ‘belong’ to families although there was no formal title deed.

Land is mainly used for livestock production/rearing or mix farming (crop and livestock production). The use of different zones at different seasons is greatly influenced by fodder/pasture and water availability and by the seasonal activity of biting flies and ticks. The coastal grasslands are used for extensive livestock grazing especially in the dry season as water is more available in these areas than in the

wood land. The bushy grassland areas provide a good source of wet season grazing and are favored for camel and goats because of their browsing habits. Rain fed agriculture is the main agricultural production system, and is practiced in the Baki and Borama districts (Awdal region) and in Gabiley region and the Faraweyne and Hargeisa districts (Maaroodi-Jeex region). A smaller portion of the country has irrigated agriculture along the river valleys

The Somaliland authorities recognize the need for land use planning and zoning and consultations have been going on between relevant Government ministries and traditional leaders aimed at resolving the emerging conflicts between the spontaneous settlement and enclosure of rangelands. The major areas of concern are: (i) demarcation of pastoral rangelands and farmlands; (ii) abolition of all enclosures illegally held by communities and return to Common Property status; (iii) restoration of all previous governmental range reserves to the relevant agencies; and (iv) Promoting among concerned governments institutions , traditional leaders and communities.

## 2.6 Population and its characteristics

The population of Somaliland is estimated at around 3.85 million. The average population growth rate is 3.1%. Population density is approximately 25 persons per sq. kilometer. Fifty-five percent of the population is either nomadic or semi-nomadic, while 45% live in urban centers or rural towns.

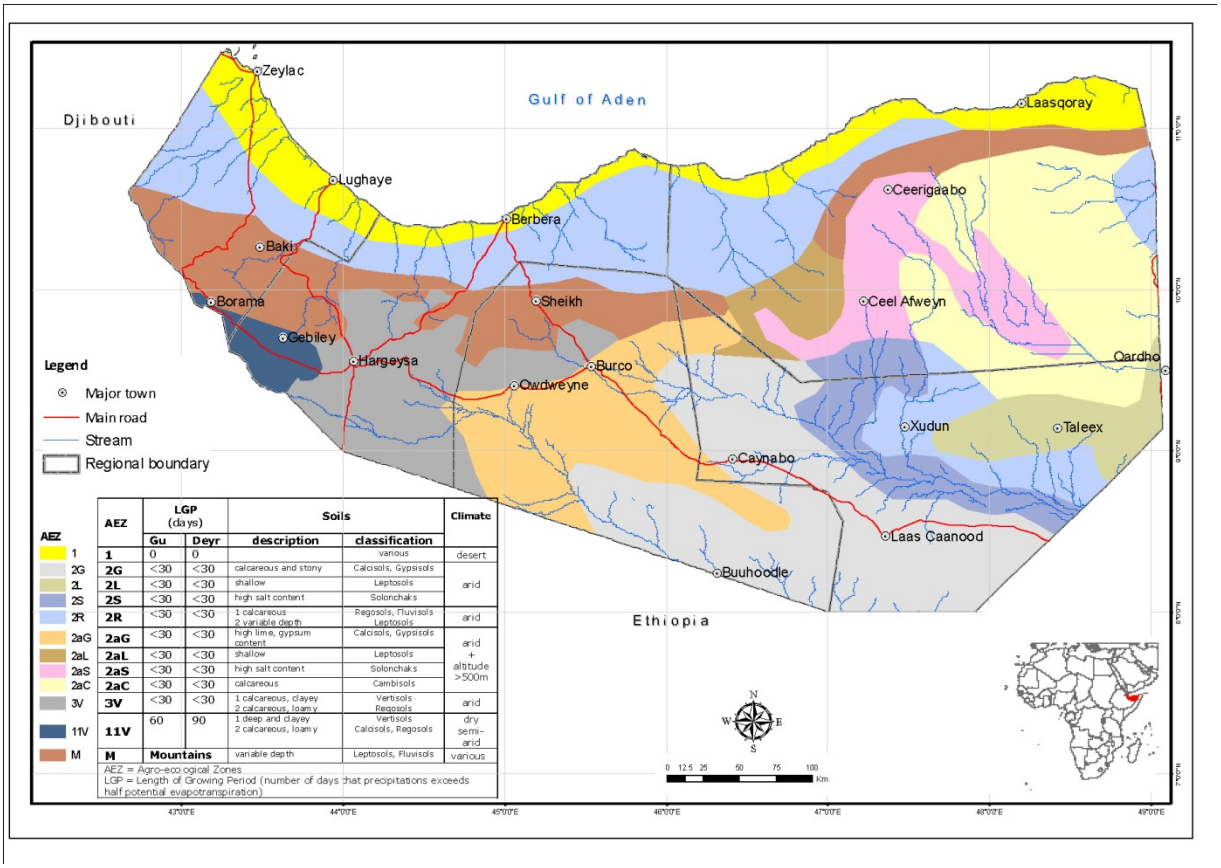
## 2.7 Livelihoods and livelihood groups

Table 1 and Map 3 show the major ecological zones, livelihood groups in these zones and their main sources of livelihood.

**Table 1-Geographical distribution of population (%), per ecological zone**

| Ecological zone | Livelihood group | Main Livelihood sources | Population | % of total population |
|---|---|---|---|---|
| Hawd(pastoral) | Pastoralists/livestock herders | camels, sheep, goats, boarder trade with Ethiopia, gum arabic | 925,000 | 25% |
| Coast(Guban) | Pastoralists fishermen | Camels, Goats, sheep, wild fruits, Artisan fishing ,salt production | 421,800 | 7% |
| Agro-pastoral | Agro-pastoralists/land-owning farmers | Agriculture, cattle, goats, boarder trade with Ethiopia, petty trade-milk for consumption and sales to meet other needs, firewood, fodder sales | 370,000 | 10% |
| Highlands Golis | Livestock herders | Goats, Sheep | 370,000 | 10% |
| Sool Plateau | Pastoralists | camels, sheep, goats, boarder trade with Ethiopia, gum arabic | 296,000 | 8% |
| Nugal Valley | Pastoralists/livestock herders | camels, sheep, goats, boarder trade with Ethiopia, gum arabic | 185,000 | 5% |
| Cities/urban centers | Urban dwellers | Petty trade, casual labor, dependence on relatives- remittance | 1,110,000 | 30% |
| Per-urban settlements | Horticulturalist | Small irrigated areas for Fruits and vegetables, milk sales | 22,200 | 5% |

## Map 3- Ecological Zones of Somaliland




| AEZ | LGP (days) Gu | LGP (days) Deyr | Soils description | Soils classification | Climate |
|---|---|---|---|---|---|
| 1 | 0 | 0 | | various | desert |
| 2G | <30 | <30 | calcareous and stony | Calcisols, Gypsisols | arid |
| 2L | <30 | <30 | shallow | Leptosols | |
| 2S | <30 | <30 | high salt content | Solonchaks | |
| 2R | <30 | <30 | 1 calcareous 2 variable depth | Regosols, Fluvisols Leptosols | arid |
| 2aG | <30 | <30 | high lime, gypsum content | Calcisols, Gypsisols | arid + altitude >500m |
| 2aL | <30 | <30 | shallow | Leptosols | |
| 2aS | <30 | <30 | high salt content | Solonchaks | |
| 2aC | <30 | <30 | calcareous | Cambisols | |
| 3V | <30 | <30 | 1 calcareous, clayey 2 calcareous, loamy | Vertisols Regosols | arid |
| 11V | 60 | 90 | 1 deep and clayey 2 calcareous, loamy | Vertisols Calcisols, Regosols | dry semi-arid |
| M | Mountains | | variable depth | Leptosols, Fluvisols | various |

Data source: FAO-SWALIM

### 2.7.1 Nomadic Pastoralism

Pastoralists comprise 55 percent of the population, are nomads who depend on livestock for their livelihood and move their herds from one place to another in search of water and pasture. They rear a mix of livestock types (camels, cattle, sheep and goats) that vary in composition depending on wealth, tradition and ecological zone and recently, market demand. Their main income is generated from the sale of live animals and animal products such as meat, milk, skin, hides, and to a lesser extent harvesting gums, wild fruits, and charcoal burning.

### 2.7.2 Agro-Pastoralism

*Agro-pastoralists* practice a varying mix of cropping (sorghum, maize, cowpea and sesame) and livestock husbandry depending on the agro-ecological zone. They are clustered in permanent or semi-permanent settlements around farm lands. Settlements expand at harvest-time or in the dry season, when livestock return from

grazing in the *Haud*. Herds are maintained in the traditional pattern, with unmarried men and boys undertaking long treks, while the rest of the family (mainly women and children) tend the crops and small livestock around the domestic base camps.

### 2.7.3 Horticulture farmers

Small irrigation farmers grow fruits and vegetables, irrigated maize (limited to fertile soils on the banks of the seasonal rivers); and raise small numbers of cattle and goats. They are concentrated in the Baki, Borama, Gabiley, Hargeisa, Sheikh, Burco and Ceeregaabo districts.

### 2.7.4 Urban dwellers

Recent exodus from the rural areas has led to burgeoning urban population. Urban dwellers secure their food through purchases rather than production. The urban poor have limited access to income-earning opportunities and rely on petty trade, casual laborers, and social support from relatives to meet their sustenance needs.

# 3 FOOD AND WATER SECURITY- CONCEPTUAL FRAMEWORK

What is food security? In 1996, countries at the World Food Summit agreed to the following definition:

**'***Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy lifestyle*.**' (FAO), 1996.**

## 3.1 The Main Dimensions of Food Security

From above definition, four main dimensions of food security[2] are as identified below:

### Table 2: The Four Main Dimensions of Food security

| | |
|---|---|
| Physical **AVAILABILITY** of food | Food availability addresses the "supply side" of food security and is determined by the level of food production, stock levels and net trade. |
| Economic and physical **ACCESS** to food entitlement | An adequate supply of food at the national or international level does not in itself guarantee household level food security. Concerns about insufficient food access have resulted in a greater policy focus on incomes, expenditure, markets and prices in achieving food security objectives. |
| Food **UTILIZATION** | Utilization is commonly understood as the way the body makes the most of various nutrients in the food. Sufficient energy and nutrient intake by individuals is the result of good care and feeding practices, food preparation, diversity of the diet and intra-household distribution of food. Combined with good biological utilization of food consumed, this determines the *nutritional status* of individuals. |
| **STABILITY** of the other three dimensions over time | Even if your food intake is adequate today, you are still considered to be food insecure if you have inadequate access to food on a periodic basis, risking a deterioration of your nutritional status. Adverse weather conditions, political instability, or economic factors (unemployment, rising food prices) may have an impact on your food security status. |

[2] http://www.fao.org/docrep/013/al936e/al936e00.pdf

Based on this broad conceptual framework, food and water security is built on the following four broad pillars:

i) **Food availability**: sufficient quantities of food are available to people on a consistent basis;

ii) **Food access:** people have sufficient resources to obtain appropriate foods for a nutritious diet;

iii) **Food utilization**: people have sufficient knowledge of nutrition and care practices and access to adequate water and sanitation to derive sustenance food;

iv) **Resilience/stability:** food security needs to withstand increasing scarcity of water and the impacts of climate cha**n**ge and associated climate variability and food price volatility.

To achieve food and water security all four pillars should be fulfilled simultaneously. Thus, food and water security will be realized when all people in Somaliland at all times have access to enough food that is affordable, safe and healthy; food that is culturally acceptable and meets the specific dietary needs of the growing population; and that the food is produced in ways that are environmentally sound and socially just.

Household food security[3] is the ability of a household to acquire adequate food with its ability to produce or purchase food through the efficient and profitable utilization of available resources. Another major component of household-level food security is production of farm and non-farm outputs, using the resources available such as land and labour. When land is limited, the labour resource of a household determines the income to be earned from non-farm employment to supplement own-farm production.

Households may also generate income from own farm or non-farm product sales. In addition to improved production, there should be improved in-house food distribution to attain food and water security at the household level. When improved food and water availability and access is achieved, and food is appropriately used, improved nutrition and health will follow.

[3] This implies the nature and extent of endowment of resources, production processes, income accrued from production of farm and non-farm outputs, and the level and methods of consumption. Household food availability is influenced by own-production, production by other households (which influences the availability of loans and gifts), and food resources (inputs) available. The resources may be natural, physical, human, technical and financial.

At the community level, food security is essentially a matter of access to food. At the national level, food insecurity arises from inadequate production or imports of food and lack of capacity to predict, assess, or respond to impending food shortages.

At the global, regional and national levels, food supply can be affected by climate change, drought, civil unrest, population growth, lack of effective agricultural practices, and restrictions to external trade. Government initiatives that encourage a policy environment based on macroeconomic stability and competitive markets will improve food availability. Essentially food security strategy is multi-sectoral in approach and deals with multiple causes of food and water insecurity at both the national and household levels.

Food Insecurity can be temporary or chronic. It may vary with age, status, gender, income and geographic location. Chronic food insecurity occurs in localized geographical areas due to unfavorable agro-climatic conditions, adverse ecological conditions or widespread rangeland degradation that constrain production and productivity. On the other hand, transient/temporary food insecurity may be as a result of recurrent drought or disruptive conflict. Food insecurity also results due to rapid population growth, rural urban migration flows, inflation as well as generalized economic decline.

Poverty is the main cause and sustainable progress in poverty reduction is critical to improving access to food. Individuals need access to sufficient, safe and nutritious food. They need adequate health services, and a healthy and secure environment, including a safe water supply for human, livestock and agricultural use. The economic and social health of a nation, society and individuals is, therefore, closely linked to Food and Water security.

National food security strategy is pursed through one of two options namely:

1. Food self-sufficiency through domestic production (growing within the country all the food the country needs)

2. Self-reliance (importing food from the world market when prices are cheaper than growing it at home, so as to release land for other uses for which Somaliland has a comparative advantage).

The latter option is becoming more unviable as more countries are restricting exports of basic food eg rice.

## 3.2 Malnutrition and food insecurity

People are malnourished if their diet does not provide adequate calories and protein for growth and maintenance or they are unable to fully utilize the food they eat due to illness.

Malnutrition is a significant underlying cause of child mortality.. It affects the development of the child, increases the risk of women dying during pregnancy/childbirth and contributes to neonatal mortality. In fact, it impacts on the society at large, affecting school performance, healthcare costs and productivity.

The provision of micro-nutrient enriched foods to specific age groups such as adolescent girls, pregnant women and six-24 month old children would be a cost effective intervention that would significantly impact on the nutritional status of children and women.

The traditional pastoral diet consisting predominantly of milk, meat and wild fruits occasionally supplemented with purchased grains no longer describes the typical food consumption pattern amongst pastoralists. Milk and meat still play a significant role in the pastoral diet, although they tend to supplement rather than dominate the diet as they used to.

The consumption of Khat, a relatively expensive, mild recreational stimulant chewed mostly by men, symbolizes the change in the expenditure pattern of the household budget in recent times. The habit reduces drastically the ability of families to feed and clothe their children, and pay for their health care. It also diminishes the ability of farming households to pay for land preparation, and purchase seeds and other inputs during the sowing period.

## 3.3 Water security

Water underpins the very fabric of human life – the food we eat, the beverages we drink, the clothes we wear, our health, houses, transport, energy etc. Water Security is defined as the capacity of a population to ensure that they continue to have access to enough water fit for human and animal consumption as well as industrial and agricultural use. The essential role that water plays in national life makes water a central concern of the government.

Access to sufficient and safe water supports achieving the different dimensions of food security, e.g. reducing vulnerability to shocks; increasing food availability and access; and enhancing the utilization components by improving health and sanitation.

Food security is intimately linked to water availability and access, where rural livelihoods centre on agriculture and livestock production .Water has an impact on food security through three main pathways:

1. Lack of access to an adequate quantity and quality of water for hygiene is a leading cause of water-related disease, which in turn causes malnutrition as it reduces the body's absorption of nutrients.

2. Lack of access to adequate water for livestock watering, irrigation and small-scale productive purposes reduces the opportunities for household food production and/or income generation.

3. Lack of adequate nearby water sources results in a long time being spent in daily water collection, principally by women and girls, which reduces the time available for work or education, and can also negatively affect health.

# 4. SITUATION ANALYSIS

## 4.1 Food Production: Analysis And Constraints

### 4.1.1 Agriculture

#### Farming Practice

Somaliland agriculture sector contributes to 25% of the country's livelihoods and is dominated by subsistence farmers, who practice rain-fed farming and grow mainly sorghum and maize. Dry land farming accounts for nearly 90% of all agricultural activities. Irrigated agriculture accounts for only 10% (Master plan for Somaliland agriculture sector, 2007 and Somaliland in figures 2011).

The most common crops grown in Somaliland are maize, sorghum, millet and cowpea. Typically local varieties, including *Elmijama*, the late maturing sorghum variety are grown. Intercropping of different plants in the same field is common. Water melons and vegetables are also cultivated in some developed watersheds using rainfall runoff harvested in reservoirs along seasonal river banks.

The geophysical characteristics of the shallow and stony soils in the mountains and piedmont areas and lack of adequate soil moisture in the coastal zone cannot sustain growth of most crops. Other limitations for crop production include soil erosion and low soil fertility due to the increasing trends of land degradation that further limits the suitability of marginal land for crops.

#### Cereal Production

The relatively high rainfall areas of the plateau (Awdal and Waqooyi Galbeed regions as well as Odweine) suitable for sorghum and maize production constitute the food basket of Somaliland. Rain fed agriculture is practiced around Gabiley, Borama and Hargeisa. It is characterized by low inputs, which is a traditional low risk practice for staple food production under erratic rainfall conditions.

Cereal crop production serves a dual purpose by meeting both human consumption and livestock feed needs. Extra production obtained from extended land put under cultivation or better rains in the critical period of production, is normally destined to the local market or stored as stocks to cover future household needs. Post-harvest residues are cut and stored as animal feed. The stalks of crops that fail to mature are also used as animal feed.

The statistical data available for cereal crop production in Somaliland is shown in **Table 3**. The average annual cereal production (sorghum and maize) is estimated at 25,362 metric tons (MT) grown in an area of approximately 35,087 hectares.

**Table 3- Cereal crop production (Sorghum and Maize)**

| year | W.Galbeed | | Awdal | | Tog Dheer | | **Total** | |
|---|---|---|---|---|---|---|---|---|
| | Area (HA) | Production (MT) | Area (HA) | Production (MT) | Area (HA) | Production (MT) | **Area (HA)** | **Production (MT)** |
| 2005 | 32,640 | 19,767 | 8,380 | 5,004 | 1,660 | 944 | **42,680** | **25,715** |
| 2006 | 27,596 | 19,821 | 6,380 | 4,578 | 1,064 | 602 | **35,040** | **25,001** |
| 2007 | 27,786 | 20,260 | 6,655 | 4,008 | 1,573 | 968 | **36,014** | **25,236** |
| 2008 | 22,350 | 15,080 | 3,300 | 1,565 | 1,780 | 907 | **27,430** | **17,552** |
| 2009 | 20,000 | 9,667 | 2,360 | 884 | 585 | 205 | **22,945** | **10,766** |
| 2010 | 37,100 | 40,441 | 5,700 | 4,086 | 3,540 | 3,377 | **46,410** | **47,904** |
| **Average** | **27,912** | **20,841** | **5,474** | **3,354** | **1,700** | **1,167** | **35,087** | **25,362** |

Source: FAO- FSNAU

**Land Preparation and Planting**

Farmers with sufficient resources hire tractors for land preparation or use oxen. Others, the poorest in particular, prepare their land manually. Seed is planted by hand either broadcast or in rows. Fertilizers are rarely used, crop rotation is not generally practiced, and weed control is done manually. Harvesting is done using hand held knives. Similarly, threshing (sorghum), shelling (maize) and grinding for flour at household level are done by hand with basic equipment.

**Pests and Diseases Control**

Major pests include army worms, the maize stalk borer, locusts, and weaver birds (*Quelea Quelea*) which attack cereal crops at the milk stage with devastating results.

**Crop Yields**

Food crop yields are very low due to low input levels, moisture stress, poor farming techniques, pests and diseases and poor seeds. The yield of the traditional crops in the rain fed farms is rainfall dependant. In wet years, the average grain yield of the main local variety, Elmi jama, is estimated at 500 to 600 kg per hectare and in bad years, the yield drops to 100-200 kg per hectare or less.

**Decision Making and Labour Allocation within the Farming Systems**

Normally farms divide harvest into two. They store one portion, mainly for sale, in a larger underground pit, and the second portion mainly for household consumption in a smaller pit.

Men make decisions about the sale and storage of grain in the larger pits, while women manage grain in the smaller pits. They make decisions on how much to

consume and how much to sell to meet the daily expenses.

In the case of farming activities in which men contribute no labour, such as vegetable plots, women normally have total control over the use of products. It is evident that women play a crucial role in all aspects of agricultural activities. While men are mostly responsible for land clearing and ploughing, women focus on weeding, transplanting, post-harvest work in addition to land preparation. Both take part in sowing and harvesting.

Other duties consist of growing secondary and horticultural crops, gathering food and firewood, processing, storing and preparing family food, and fetching water for the family.

**Horticulture**

A limited but potentially active market for horticulture production exists in most of the Somaliland urban centers. Vegetables and fruits are produced as irrigated cash crops for the fresh markets in urban centers. Although there is no formal market chain, most communities have their own informal mechanisms through which they get information on prices and demand from member**s** residing in the main urban market centers.

Irrigated orchards are found in river valleys and are characterized by the use of supplementary irrigation from dams and shallow wells, and the extensive use of farm manure and, in some cases, fertilizer and river silt. Crops are grown mostly for commercial purposes and consist of fruits such as citrus, guava, papaya and custard apple, intercropped with watermelon and vegetables. The orchard farms are mostly less than 2 ha in size.

Crop conditions within irrigated fields are generally better than in rainfed fields. However, in most cases poor yields are attributed to incidences of pests (insects and animals such as monkeys) and diseases, or shortage of water.

The production is not sufficient to cover the local demand. 11,094 tons of fresh vegetables and 4,411 tons of fruits were imported from Ethiopia in 2010 to fill the gap in local demand (Ministry of Finance, Customs Department, 2011).

**Crop Calendar**

**Table 4** shows the crop calendar for various rain fed and horticultural crops in Somaliland. Sorghum as a late maturing crop is planted at the beginning of the Gu season and carries through to the Deyr season. About 60 percent of the average maize plantings (and sesame and cowpeas) takes place in the Gu season. Planting in the Deyr season tends to be opportunity cropping depending on residual soil moisture and anticipation of reasonable Deyr rains. The growing period for local cereal varieties is longer than the rainy season period.

## Table 4: Somaliland – Crop growing Calendar

| Season | *Jilaal* (dry season) | | | *Gu* (long rains) | | | *Haggai* (low rainfall) | | | *Deyr* (short rains) | | | *Jilaal* (dry season) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Crop | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| Sorghum | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| 1st Maize | | | | | | | | | | | | |
| 2nd Maize | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| 1st Sesame | | | | | | | | | | | | |
| 2nd Sesame | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Water Melon | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| 1st Cowpea | | | | | | | | | | | | |
| 2nd Cowpea | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Qat | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Vegetables | | | | | | | | | | | | |
| Fruits | | | | | | | | | | | | |

Modified from: FAO/SWALIM; Land suitability in selected areas in Somaliland. Project report n° L-06, July 2007

### Constraints

There are climatic as well as geophysical constraints. These are the fundamental limiting factors in the way of expanding agricultural production. Soil moisture, even in the more favorable areas, is generally below optimum crop requirement due to low and erratic rainfall patterns; soil structure and fertility is also poor. This is compounded by widespread soil erosion due to insufficient plant cover and inappropriate tillage practices.

It is estimated that no more than some 10-20 percent of the population is actively growing staple food crops.

In agriculture, the extension services are weak and the absence of national research institutions means that there are no linkages between research and extension. In short, increased production may be realized through incorporating research and farming practice.

Low cereal production is attributed to fragile soils, irregular rainfall, short growing periods, low inputs, lack of quality seeds, lack of credit and inadequate equipment. Many farmers are not able to pay for tractor hours, yet they have no alternative means for land preparation.

Other constraints to production and productivity include poor storage facilities, inadequate marketing incentives, lack of understanding of investment opportunities in agriculture by relatively wealthy traders and depletion of soil fertility as a result of extensive land degradation.

While the farmers themselves are often food-self sufficient they do not produce large surpluses due to lack of means to expand production.

In general there is inadequate coordination among the people and institutions involved in the agriculture sector. Farmer cooperatives need to be organized in order to pool resources to realize economies of scale efficiencies.

## 4.1.2 Livestock

The economy of Somaliland is based primarily on livestock which contribute between 60 and 65 percent of the Gross Domestic Product. Somaliland is currently estimated to have about 1.7 million camels, 0.40 million cattle 8.4 million goats and 8.75 million sheep. These livestock are reared in pastoral and agro-pastoral areas although a minor fraction is raised in peri-urban areas. About 80 percent of population directly or

indirectly depends on livestock and livestock products. Out of these, 55 percent lead a nomadic lifestyle and the remaining 45 percent live in urban and rural settlements

In 2010 total Livestock exports were 2,626,000[4] animals of which sheep and goats were 2,415,000, cattle 126,000 and camels 85,000 respectively.

**Table 5: Somaliland Livestock export**

| Year | Sheep and Goats | Cattle | Camels |
|---|---|---|---|
| *2005* | 1,030,095 | 148,061 | 5,069 |
| *2006* | 1,199,611 | 97,631 | 23,865 |
| *2007* | 1,350,054 | 88,143 | 14,245 |
| *2008* | 1,224,533 | 81,181 | 26,363 |
| *2009* | 1,565,522 | 89,686 | 20,202 |
| *2010* | 2,520,294 | 131,251 | 95,575 |

Somaliland in figures 2011, Ministry of finance, customs Department, 2011.

For the same period, an estimated 981,360 heads (cattle 32,760, camels 36,000 and 912,600 sheep and goats) were slaughtered for local consumption (Source: Somaliland Department of Animal Health). This is done in towns like Hargeisa, Burco, Berbera and Boroma, Togwajaale and Gebiley.

Currently there is one chilled meat exporting plant in Burco. It exports an average of about 1820 tons per year.

Industrial processing to add value in the livestock sector is limited, except for the processing of hides and skins into wet blue. An Estimated 912,600 skins and 68,760 hides are produced by the six slaughter houses/slabs in the six regional towns surveyed. (Source: Berbera Port Authority, Livestock Export Statistics, 2009).

## Milk Production

Agro-pastoral households normally have 4-5 milking cows, and some goats and camels for milking. Milk collection and delivery systems are operated by private enterprises in the environs of most major towns. Local buses collect milk from these settlements (4-10 liters on average per household) and bring it to women agents in urban centers for selling. These agents buy food provisions for the suppliers (rural households) from their daily milk sales and send them back with returning buses in the afternoon.

4 14,830 camels; 9,399 heads of cattle and 248,310 sheep and goats are recorded to have been exported to Djibouti at the Lowya-Caddo customs office (Somaliland Chamber of Commerce, 2010).

Milk delivered daily to the two major urban centers of Hargeisa and Burao is estimated at approximately 25,000-31,000 liters and 10,000 liters respectively. These originate from settlements and townships in the surrounding areas of these cities.

Despite the huge number of livestock in the country, milk production is not sufficient to cover national demand and is subject to seasonal fluctuations. Hence, Somaliland currently imports both milk powder and fresh milk to fill the gap between supply and demand. During 2010, approximately 4,424 tons of milk powder and 4,782,500 liters of fresh milk were imported from Yemen, UAE and Saudi Arabia (Ministry of Finance, Customs Department, 2011)

At the moment, there is only one modern integrated dairy farm with 200 dairy cows that was recently established outside Hargeisa.

## Poultry

The production of poultry meat and of table eggs is extremely limited. Some rural Households close to urban centers keep 5-10 layers and bring their eggs to market to supplement their income. The Chicken and eggs consumed in major urban centers like Hargeisa are mostly imported from UAE, Ethiopia and Yemen. During 2010, 178,030 dozen eggs were imported from Yemen and Ethiopia. The price of an imported egg from Yemen is Sld Sh.1200 (equivalent to US$ 0.2)

## Constraints

Pastoralists are experiencing rapid changes in their environment and welfare as a result of the changing climate. The incidence of severe back-to-back droughts is increasing, resulting in the death of large numbers of livestock as pasture and water resources dry out.

A large number of pastoralist households have to cope with declining herds. Restocking to restore numbers is constrained by frequent droughts and disease outbreaks.

At the same time, the population and number of settlements are increasing, encroaching onto traditional grazing areas, blocking pastoral migration routes and competing for water resources. Loss of prime pasture lands has put a strain on pastoral livelihoods that pivots on access to grazing and water sources. Cyclic and more frequent droughts lead to the deterioration of range conditions and loss of natural resources.

As a result of cumulative pressures on the environment, there is growing evidence that the ability of Somaliland's ecosystem to support current livestock levels may soon be reached, if it has not already been surpassed. It is estimated that

Somaliland's rangeland capacity is far below the level required to support its Livestock populations.

The structures regulating international trade in livestock and livestock products require credible certification practices, procedures and documentation from public sector veterinary services. Somaliland is currently engaged to install this capability in the country.

The proliferation of invasive species such as Prosopis spp and loss of pastures due to extensive land degradation and over grazing further contribute to Pastoralist livelihoods becoming less resilient.

### 4.1.3 Fisheries

Somaliland has a coastline spanning over 850 kms. The maximum potential catch that could be harvested from Somaliland's marine resources is estimated to be between 90-120,000 MT a year. (Feasibility Study Report on the Fishery Sector in Somaliland April – June 2004, p13). It is estimated that a maximum sustainable yield of 10,000 metric tons annually could be harvested without endangering stocks.

The fisheries sector is not fully developed in Somaliland. Fish production is quite low compared to the estimated potential. Production of fish constitutes less than 2% GNP (Somaliland in figures, 2011). Total landing is estimated at 4224 metric tons per year.

Artisanal fishermen undertake most fishing activity in Somaliland. According to the Ministry of fisheries, approximately 17,000 people are engaged/involved in artisanal fishing. They practice fishing along Lowyaado/Zeila, Berbera/ Karin and Las Qorey coastal areas.

Fishermen in the Lowyaado/Zeila area take their catch to Djibouti market and sell their fish through informal arrangements. The indication is that 2,500 to 3,000 kg of fresh fish are exported to Djibouti per day. Fishermen operating around Berbera and Karin supply local markets in Burao, Hargeisa, and Berbera through 3-4 small fishing companies in Berbera. Approximately 90 tons of fresh fish is delivered to these three towns per month, making the yearly consumption (9 month fishing season) about 810 tons.

The Las Qorey Tuna Canning Plant is the biggest buyer for artisan fisheries in the Sanag region. When the plant operates at full capacity, it processes 16 tons of fresh tuna per day.

There are normally licensed foreign fishing companies operating offshore in Somaliland sea waters. The actual fish landing of these companies is not available. Their trawlers do not come on shore, and the Ministry of Fisheries does not have

adequate capacity to monitor their activities. Currently Djibouti is the main export market. Local fishermen do not have access to other external markets apart from South-East Asia where they export dried, salted shark fins.

Somaliland fishing industry has the potential to supply global markets for fish. Nearby land-locked Ethiopia with a huge population is a ready market. The Arab Gulf cooperation Council states (GCC.) is another potential market. In spite of its export potential, Somaliland is currently a net-importer of fish. During 2010 a total of 1453 tons of canned tuna fish were imported from Thailand (Ministry of finance, Customs Department, 2010)

### Constraints

Some of the major constraints impeding development of the fishery sector in Somaliland are:

- Inadequate knowledge and assessment of Somaliland marine resources;
- Lack of dedicated fishing training centers;
- Lack of funding for marine research;
- Poor access to capital by fishermen;
- Lack of market information;
- Poor infrastructure for fish production – lack of ports, cold stores, roads, etc.
- Absence of private sector investment in fisheries;
- Lack of formal organizational structures, in the form of fishing cooperatives;
- Illegal foreign fishing companies depleting stock.

## 4.2 Water Resources: Analysis And Constraints

Water resources of Somaliland are limited both in quantity and quality. There are no major rivers or other permanent surface waters in the country. The main sources of water are:

### 4.2.1 Water Harvested

The local communities in Somaliland have adopted different means of coping with water shortages. Agro-pastoralist households harvest and store rainwater in underground **ditches** with capacities of about 6 cubic meters. The ditch is lined with a plastic sheet to prevent water from percolating into the soil. The water is used for household consumption and in some cases for irrigation.

**Berkads** (cement and gravel tanks built into the ground) and earth dams contribute significantly to water availability in rural Somaliland.

Berkads are the major water sources in the Hawd plateau since there are no permanent water sources. There are thousands of berkads of various sizes in Galbeed, Sool and Togdheer regions, the highest concentration being in the last-named region. Evaporation accounts for significant water loss from berkads due to the high temperatures experienced in Somaliland. To reduce loss, local people cover berkads with locally available material e.g. tree branches and shrubs. The rate of Berkad failure is very high. It is reported that in almost all districts less than 50% of berkads are functioning

**Reservoirs** are the other surface water structures used in Somaliland. They range in size from small harvesting Balley and warro to big earth dams of up to a capacity of 150 000 m3.

Water extraction from most surface water sources is manual, using a bucket and rope. Water is then transported on donkey- or camel-back, and sometimes by women.

### 4.2.2 Surface Water

Surface water supply in Somaliland is mainly dependent on rainwater in the months of April to June (the *Gu* season), and August to October (the *Deyr* season). The pattern of the rainy seasons is however changing with time, with periods of prolonged rain and drought now being frequently experienced. Rains can last for several hours, sometimes resulting in flash floods, which, if harvested, can provide water for months afterwards. Hills and highlands generate most of the runoff water. The potential for harvesting runoff water for agriculture, livestock and human consumption is quite considerable.

In Somaliland, springs are mostly found in the mountainous and coastal regions. They are used to irrigate farm land, like Dur Dur in Awdal, and supply urban centers like Berbera, where spring water provides up to 40% of the city's needs. Springs are also an important source of water for livestock.

### 4.2.3 Groundwater

Groundwater availability varies from place to place, depending on the geology and hydrogeology of the area. In mountainous regions, the water table is only a few meters below the surface, making shallow wells a common source of water. The depth of shallow wells in this area range from 5–20 m. On the plateaus, the water table is quite deep, and only boreholes can be used for subsurface water supply during dry periods. Boreholes can reach depths of 400 m below the surface. Groundwater recharge in Somaliland occurs mainly during the *Gu* season. Runoff from the higher rainfall mountainous areas infiltrates into alluvial fans formed by *Toggs* in the coastal plain. Considerable amounts of runoff water are lost through

evaporation as the water spreads out in the floodable areas of the coastal plains. Water in the deep permeable layers is generally under semi-confined conditions.

### Shallow wells

There are two types of shallow wells - those dug along the dry beds of seasonal rivers, and those dug or occurring naturally away from river beds. Either type may be permanent or seasonal. The distribution density of shallow wells in different regions depends on the depth of the water table. In the mountainous regions of Somaliland the water table is generally shallower than on the plateaus, hence there are more shallow wells. It is rare to find shallow wells in the plateau. Along the coast, the water table is shallow but water quality is a major factor limiting use of groundwater.

### Boreholes

Boreholes are main water sources supply for both rural and urban centers particularly during dry seasons in rural areas. The majority of the boreholes have depths varying between 150 – 350m.

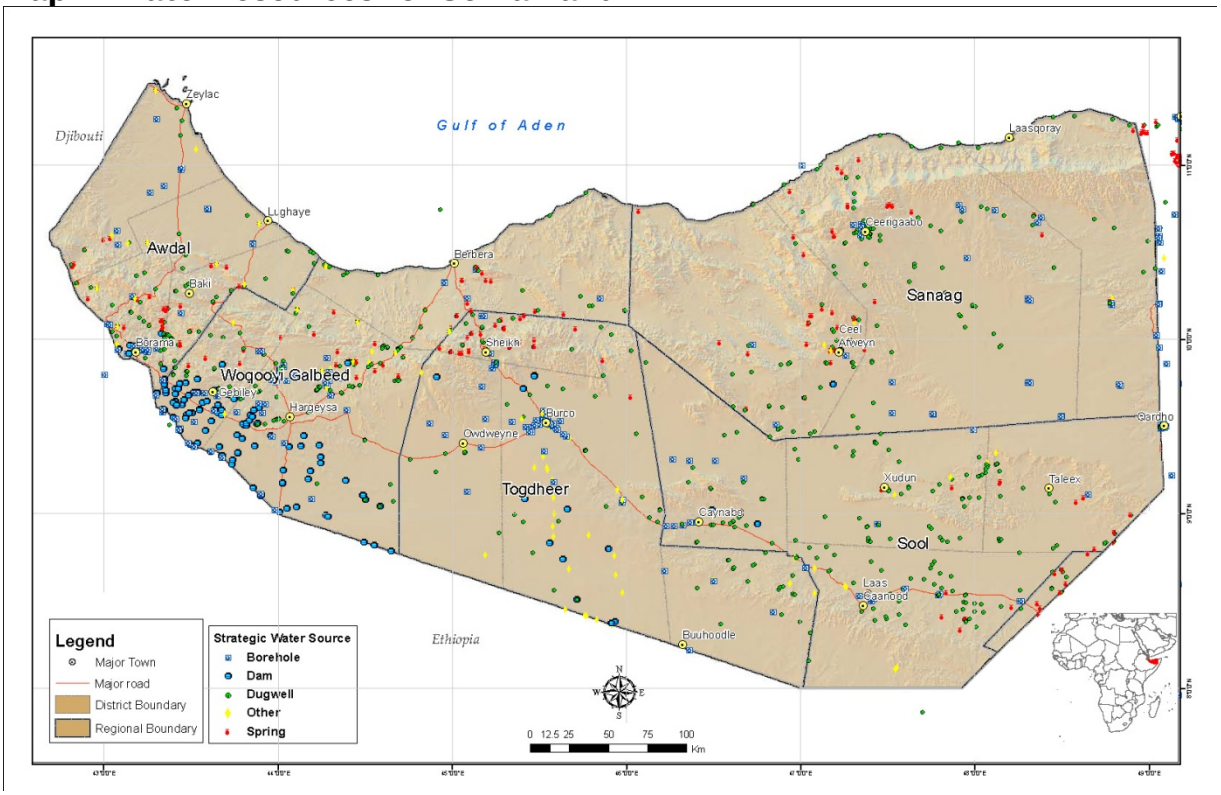
According to strategic water points inventory survey conducted by FAO SWALIM and Ministry of Mining, Energy and Water Sources in 2008, many of the groundwater sources were found to have high salinity which limits the usefulness of such water for human and animal consumption, as well as crop production. The survey identified 877 ground water sources: boreholes, shallow wells and springs. **Table 6** and **Map 4-**gives a summary of the sources by Region.

**Table 6- Strategic ground water sources summary by Region in Somaliland**

| Region Names | Borehole | Dug well | Spring | Total |
|---|---|---|---|---|
| Awdal | 25 | 104 | 37 | 166 |
| Togdheer | 40 | 86 | 20 | 146 |
| Woqooyi Galbeed | 43 | 212 | 34 | 289 |
| Sanaag | 32 | 107 | 30 | 169 |
| Sool | 18 | 86 | 3 | 107 |
| **Total** | **158** | **595** | **124** | **877** |

FAO/SWALIM/MMEWR, 2008

## Map 4-Water resources- of Somaliland




Data source: FAO-SWALIM

### Constraints

Below are some of the major constraints:

- **Lack of hydro geological information**: groundwater data which would identify potential aquifers for new boreholes is lacking.

- **Lack of conservation technology:** the use of water efficient technologies such as drip irrigation, and water efficient appliances: faucets, showers, toils and washing machines are lacking. Water recycling and other conservation practices and policies are also absent.

- **Poor quality**: in some parts of the country, particularly in Sool and Sanaag, water quality is so poor due to salinity that it is unsuitable for human consumption, livestock or agriculture.

- **Climate change**: Somaliland is becoming hotter and drier with changes in the seasonal and spatial distribution of precipitation. It also experiencing increasing incidence of extreme weather events such as drought.

- **Scarcity**: Somaliland has a semi-arid climate. Average annual precipitation is between 200mm and 300mm. Hence, even in normal years water is barely sufficient, and in below normal years it becomes scarce.

- **Inadequate water storage capacity**: despite substantial surface runoff generated in some of the dry rivers during the rainy season, there are no storage facilities in the form of reservoirs, and dams. Developing such facilities would require significant capital resources.

- **Risk of floods**: excessive runoff of rainwater during the wet seasons have, in the past, damaged water sources – boreholes, shallow wells, irrigation systems, flood protection structures, pumps, etc. Flooding events have led to eroding riverbanks and protection walls for intakes and pumps. Conveyance canals are often located at risk flooding plains which can cause loss of equipment and damage the irrigation systems in general.

- **Uncontrolled exploitation of groundwater:** This has led to falling water tables, abandoned wells, dried-up springs and salt-water intrusion. Opportunities for expanding irrigated cultivated lands are, therefore, limited.

- **Weak institutional capacity and absence of regulatory framework**: the authorities responsible for water in Somaliland lack the capacity (technical and professional) to develop and manage water resources in the country. Water extraction and development of new water sources is done without a regulatory framework. The water act, developed by the Ministry of Water is yet to be approved.

# 5. FOOD AND WATER INSECURITY: ANALYSIS AND CONSTRAINTS

## 5.1 Food imports

Imports constitute the main source of food supply for Somaliland. **Refer to Table 7.** The country imports 100% of the sugar, rice, wheat, cooking oil and dates consumed. Somaliland lacks the climatic conditions required for growing these commodities except for dates.

**Table 7 - Food Imports (MT)**

| year | Sugar | Rice | Wheat Flour | Wheat | Sorghum | Maize | Cooking oil | Pasta | Dates | Biscuits | Milk powder | Fresh milk |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2010 | 140,688 | 157355 | 143555 | 35 | 4765 | 93 | NA | 21137 | 4161 | 20978 | 4424 | 4,782,500 ltrs |
| 2009 | 155965 | 59645 | 53475 | 115712 | NA | NA | 17210 | 18776 | 3015 | 4232 | NA | NA |
| 2008 | 194523 | 61288 | 51596 | 11509 | NA | NA | 31506 | 18903 | 3474 | 5575 | NA | NA |
| 2007 | 174076 | 89762 | 46817 | 3411 | NA | NA | 33388 | 19033 | 3866 | 3548 | NA | NA |

Source: Berbera Port Authority, Customs, Ministry of Finance, Customs Department, 2010

60-80% of pastoralist's food needs are met through market purchases( cereals), the remaining 20-40% of their diet comprises of livestock products such as milk and meat available from own production. Additionally, livestock sales are the major source of income (50-65) for the poor pastoralists

Agro-pastrpolist's main source of food (86%) is derived from own production – including crop and livestock products and derived other income from livestock sales (14%) and crop sales (4%) as well as fodder and grass sales (FSNAU Report no vi.42, October 2011, page 87).

At present, the influence of high global food prices, low food production and increasing population in Somaliland is putting an upward pressure on food prices in the country. Since Somaliland is a net-importer of food, it will experience deteriorating terms of trade and a larger food import bill to pay.

The population groups most likely to be negatively affected are those who live on fixed or limited income in urban and rural settlements, the unemployed, IDPs, women and children in particular. High food prices are also impacting adversely those producers (fishermen, small farmers, pastorals selling their livestock) who are net buyers. Even most of the agro-pastoralists in crop producing regions/areas have no

cereal stock-carryover from previous seasons, and are, therefore, vulnerable to failure of seasonal rains.

## 5.2 Food Aid

The levels of food aid imports by WFP for the period 2006-2011 is given in **table 8**

**Table 8-Summary of Food-Aid to Somaliland 2006-2011(MT)**

| **Year** | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|
| **Mt.** | 4757 | 8295 | 13146 | 24447 | 11220 |

Source: WFP Office, Hargeisa, 2011

WFP food aid is mostly utilized for food for work programmes, feeding programmes and for emergencies. Other food aid provided by other relief agencies is not currently available

## 5.3 Food Deficit

Trends for food demands and deficits can be seen from a comparison of the imports of cereals and domestic production as shown in **table 9**. These figures are derived from data on domestic production, official/commercial imports, food aid and cross-border flows between Somaliland and neighboring countries-Ethiopia and Somalia

**Table 9: Cereal Demand- imports and domestic production (MT)**

| **Year** | **Imports Commercial + Food Aid/c** | **Domestic Cereals production** | **Total Demand** | **SSR %** | **IDR %** | **PCCC (kg)** |
|---|---|---|---|---|---|---|
| 2000/a | 219110 | 18,739 | 237849 | **7.8** | **92.1** | **64.2** |
| 2001 | 82702 | 14,935 | 97,637 | **15.3** | **84.7** | **26.3** |
| 2002 | 127547 | 8,873 | 136,420 | **6.5** | **93.5** | **36.8** |
| 2005 | 113586 | 27,715 | 141,301 | **19.7** | **80.3** | **38.1** |
| 2006 | 163616 | 19,915 | 183531 | **10.8** | **89.1** | **49.6** |
| 2007 | 167318 | 26,744 | 194062 | **13.7** | **86.2** | **52.4** |
| 2008 | 156442 | 17,527 | 173969 | **10.** | **89.9** | **47.0** |
| 2009/b | 272055 | 10,856 | 282911 | **3.8** | **96.1** | **76.4** |
| 2010 | 338160/d | 47,904 | 386064 | **12.4** | **87.5** | **104.3** |
| Average | 182281.7 | 21467.5 | 203749.3 | **11.1** | **88.8** | **55.0** |

Sources: constructed from Somaliland in Figures, 2010 and Ministry of Finance, Customs Department, 2011

Notes:

a) Food trans-shipments to Ethiopia included
b) Food trans-shipments to Ethiopia included

c) WFP food aid data for 2006-2010 is included while Food aid provided by other relief agencies is not available
d) 4858 MT (Sorghum and Maize) where imported from Somalia and Ethiopia

1. The self-sufficiency ratio (SSR) is defined as SSR= production*100/(production +Imports – exports). The SSR indicates the extent to which a country relies on its own production resources.
2. Import dependency ratio (IDR) is defined as IDR= Imports*100/(production +Imports – exports)

This data reveals the broad picture of supply and demand of cereals in Somaliland. Somaliland's reliance on its own production is extremely limited. The average self-sufficiency ratio (extent to which Somaliland relies on its own production resources) for the period 2000-2010 was 11.1%. Similarly, during the same period Somaliland dependency on imports was 88.8%. Average per capita cereal consumption during this period was 55 kgs, but locally grown cereals could cover only a small fraction of that amount. The deficit is covered by imports from Thailand, Ethiopia and Somalia. At times, when cereal production in these countries is interrupted due to natural or made causes, prices increase significantly affecting specially the poor households who depend on them for their daily sustenance.

**Table 10- Highlights of Somaliland imports-2010:**

| | | |
|---|---|---|
| Fish | 1453 tons | imported from Thailand |
| Sourghum - imports | 4765 MT | Imported from Ethiopia |
| Maize- imports | 93 MT | Imported from Ethiopia |
| Eggs | 178,030 dozen eggs | Imported from Ethiopia |
| vegetables | 11094 tons | Imported from Ethiopia |
| Fresh fruits | 4411, tons | Imported from Ethiopia/Somalia |
| Fresh milk | 4,782,500 liters of fresh milk | imported from Yemen and UAE |
| Milk Powder | 4,424 tons of milk powder | imported from Yemen and UAE |
| Khat | Daily imports of khat are approximately 60,000 kg (Quantities declared through customs). The selling price of 1 kg of khat is sld sh 120.000 (approx. US$ 20) | Imported from Ethiopia |

Source: Ministry of Finance, Customs Department, 2010

## 5.4 Declining sources of income and terms of trade (TOT)

The TOT of local quality goats to rice declined form June 2011 to August 2011 in the affected livelihood of northwest zone. Namely the TOT declines are observed in Burao (from 56kg to 36kg/head) Ceerigaabo (from 35kg to 30kg/head) and Las Canood (55kg to 51kg/head) markets. Furthermore, the prices of imported staple food commodities have also increased compared to a year ago, rice (7%), sugar

(8%) and vegetable oil (16%) in June 2011 to June 2010. (FSNAU – Post GU Report 2011 - page 87)

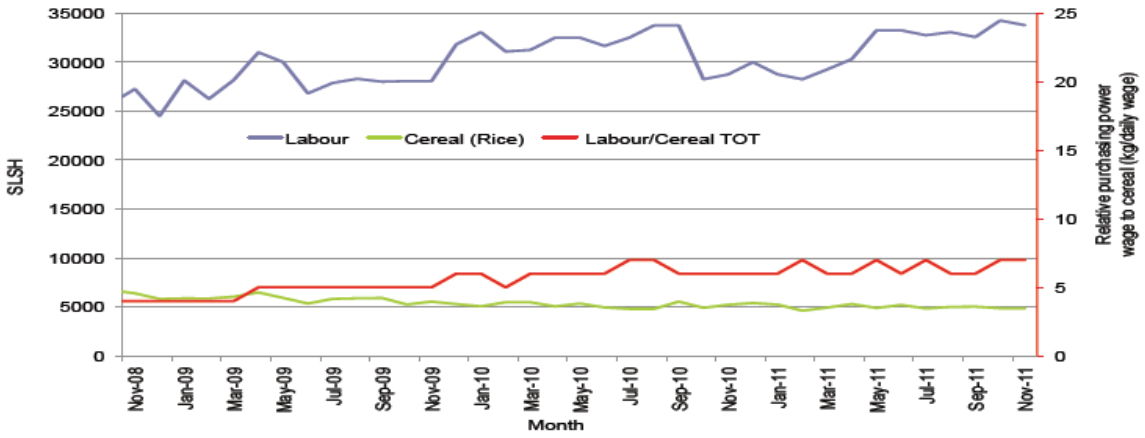
The remittance- both from abroad and urban to rural is also declining. This further reduces the purchasing power of the rural poor

**Table 11- Terms of Trade**

| Indicator | 5 year Average (2003-07) | Nov-10 | Oct-11 | Nov-11 Nominal Price | % Change Same Month Previous year | % Change Previous Month | % Change 5-years avrg (2003-07) |
|---|---|---|---|---|---|---|---|
| Labor Wage (Daily)/Cereal(Rice(KG)) | 9 | 6 | 7 | 7 | 26% | -1% | -22% |
| Local Goat(Head)/Cereal(Rice(kg)) | 52 | 48 | 53 | 48 | 1% | -9% | -7% |
| **Price Indices** | | | | | | | |
| Consumer Price Index | - | 108 | 123 | 122 | 13% | -1% | - |
| Purchasing Power Index | - | 0.93 | 0.81 | 0.82 | -11% | 1% | -- |

Source: FSNAU, October, 2011

**Figure 1. Trends in wage rates, staple cereal prices and relative purchasing power**




Source: FSNAU, October, 2011

## *5.5 Malnutrition and population in crisis*

The malnutrition situation in Somaliland stays between serious to very critical, and at best on alert category. During 2011, the total population in crisis is estimated at

210,000 people (9% in urban and 6% in rural areas. Out of this total 45,000 are in humanitarian emergencies (HE) while 160,000 are in acute food and livelihood crisis (AFLC.)

**Table 12 - Distribution of Somaliland Population in Crisis, Jul-Dec 2011**

| Zone | UNDP 2005 Total Population | UNDP 2005 Population | Acute Food and Crisis(AFLC) | Humanitarian Emergency (HE) | Humanitarian Catastrophe (Famine) | Total in AFLC & HE | Population in Crisis as % of Total |
|---|---|---|---|---|---|---|---|
| Rural | 1828739 | 1008750 | 120000 | 40000 | 0 | 160000 | 6 |
| Urban | 1828739 | 819989 | 45000 | 5000 | | 50000 | 9 |

Source: (Food Security and Nutrition Analysis Post GU 2011 -page 3)

## 5.6 Declining Coping strategies

The resilience of the people, particularly pastoralists and wage earners, to withstand external shocks has been declining over the years due to:

- Deteriorating terms of trade and purchasing power
- Deteriorating rangelands and pastoralist ecosystems
- Reduced incomes-limited employment opportunities both in rural and urban areas
- Reduced herd size and quality of livestock body conditions
- Increasing food prices
- Distress sales of breeding animals
- Migration to urban centers in search of labor/abandoning livestock rearing
- Weakening social cohesion networks
- Reduced remittance from relatives in Diaspora or in urban areas
- Declining incomes from gums and frankincense-collection due to droughts

## 5.7 Groups at Risk of Food Insecurity

The Somaliland population, in general, is extremely food insecure. Both people's ability to feed themselves in the short term (risk to live), and their ability to achieve self-sufficiency in the long term (risks to livelihoods) are precarious. The severity of risk to live continue to increase as recurrent drought/crisis has cumulative effect in depleting coping capacity year after year.

## 5.8 Types of food insecurity and food insecure groups

**Table 13-Types of food insecurity and food insecure groups**

| Types of food insecurity | Groups | Probable causes |
|---|---|---|
| **Chronic food insecurity**<br>Chronic food insecurity is a continuously inadequate diet caused by the inability to acquire food | **Rural**<br>✓ Resource poor households<br>✓ Female headed households<br>✓ Elderly<br>✓ Disabled and sick<br>✓ Poor non-agricultural households<br>✓ Poor pastoralists<br>**Urban**<br>✓ Low income households<br>✓ Employed in the informal sector<br>✓ Some Female headed households<br>✓ Elderly, widows<br>✓ Disabled and sick<br>✓ Street children<br>✓ Disabled ,elderly, widows, children etc<br>**Other**<br>✓ Refugees<br>✓ IDPs | ✓ Lack of employment opportunity for various reasons and barriers.<br>✓ Lack of national capacity to import because of balance of payment<br>✓ problems caused by inadequate resources<br>✓ Lack of assets such as land, good health and education, which directly and indirectly, reduces food supply.<br>✓ Insufficient transport services, which are necessary to improve access to food.<br>✓ non-income generation opportunities<br>✓ Constraints on boosting the supply of food because of inadequate technology, tradition and land tenure system, epidemics etc.<br>✓ Protracted war, droughts and high population growth rates.<br>✓ Rural-urban migrants<br>✓ Lack of infrastructure |
| **Transitory food insecurity**<br>Transitory food insecurity is temporary declining in household to access to enough food | **Rural**<br>✓ Less resource poor households vulnerable to shocks, especially but not only drought<br>✓ Farmers and others in drought pone areas<br>✓ Pastoralists<br>✓ Others vulnerable to economic shocks, e.g. in low potential<br>**Urban**<br>✓ Urban poor vulnerable to economic shocks, especially those causing food price rises<br>**Others**<br>✓ Groups affected by temporary civil unrest | ✓ Sharp changes in purchasing capacity of consumers due to depression in economic activity, social unrest or war.<br>✓ Unusal shocks such as droughts<br>✓ Sharp reduction in the domestic or imported supply of food because of crop failure, civil war and interruption in food trade<br>✓ Disease out breaks |

A number of converging trends, including water scarcity, land degradation, a lack of on-farm technological innovation, population growth and climate change can explain the trend towards the increasing food and water insecurity. These trends have combined with the repeated effects of drought over the years and substantially eroded the productive assets of communities and households.

The majority of small farmers and pastoralists are food insecure. They are unable to feed their families adequately due to their narrow production base and unfavorable trade terms for their livestock. Their livelihood base is not sufficiently diversified in

order to insulate them and their households from external shocks, particularly droughts. Food insecurity may be caused by recurrent droughts or disruptive conflict. It may be also the result of rapid population growth, rural urban migration flows, inflation as well as generalized economic decline.

Loss of prime pasture lands has strained a livelihood system that pivots on access to grazing and scarce seasonal water sources. An increasing proportion of the pastoral population is dependent on unsustainable coping strategies that are damaging their livelihoods in the longer term, such as charcoal production from life trees. These trends all add up to the increasing uncertainty, which the rural poor, who depend largely on a fragile natural environment, has to live with.

Another emergent food insecure group is building up in urban centers. This is composed of tens of thousands of migrants and refugees from Somalia and Ethiopia, known as "mixed migration flows", who come to Somaliland with the desire to access better economic opportunities in peace. These are joined by large numbers of pastoralists and agro-pastoralists migrating towards urban centers, creating a new social class of internally displaced people (IDPs).

The most vulnerable groups among the food insecure are women and children. Many of the households most at risk are headed by women. They often support their children from subsistence farming or from petty trade. They look after the animals, fetch water and firewood, and are most likely to suffer from malnutrition by carrying out such arduous and energy consuming tasks.

Poor households in Somaliland are typically characterized by few income-earners, meager assets, and many dependants. They are frequently constrained by lack of economic activities and employment opportunities in close proximity to their communities. Some of them are dependent on remittances from the Diaspora and urban centers, and are, therefore, vulnerable to changes in the level of remittances.

## 5.9 Water availability

Somaliland suffers from water scarcity. The current water supply is inadequate. A relatively small number of households use water from sources considered safe. The available water is inadequate for human, livestock, agriculture, wild- life and industrial needs. Even in Hargeisa, the capital, with a population of 800-900,000, the daily water supply is only 14,000 Cubic meters (10,000 supplied by Hargeisa water agency and 4,000 by private trucks). The per capita daily consumption is only 17 litres, whereas the minimum recommended by the UN is 30 liters per day per person. The challenges in this sector include:

- Keeping up supply with population growth
- Regional imbalances in water availability and utilization
- Lack of availability of water throughout the year

- Lack of access to quality water
- Inadequate water harvesting and Water catchment management
- Limited Infrastructure development

There are 10,000 cubic meters piped water and 4,0000 cubic meters of tanker delivered water available to residence of Hargeisa the national capital with an estimated population of approximately 900,000-800,000. The per capita consumption is approximately 6-7 liters/per day/per person. The UN standards are 30 liters/per person/per day

## 5.10 Binding constraints

Many factors interact to create a food and water insecure situation in Somaliland. The major binding constraints to achieving the goal of sustainable food and water security strategy are:

- Low food production and productivity
- Lack of access to rural finance, poor infrastructure, technology, markets, and non farm income opportunities
- Insufficient upstream integration into agricultural markets and value chains
- Limited arable land
- Water scarcity and environmental degradation
- Inappropriate economic policies
- Threat of climate change
- Volatile food prices
- Weak Support Networks and Disaster Management Systems
- Absence of robust early warning system for disaster risk management.
- Rapid urbanization and growth of cities/towns that is creating wide spread and increasing urban poverty
- Uncertain future flow of Somaliland Diaspora remittance
- Lack of awareness of urgency and magnitude of food insecurity and water problem the country faces

# 6 FOOD AND WATER SECURITY STRATEGY

The process of dealing with current food and water security challenges in Somaliland consists of three dimensions:

The first dimension seeks to maintain and increase the ability of Somaliland to meet its national food and water requirements. This involves meeting those needs from domestic agricultural sources, imports food items that cannot be produced efficiently, and exporting commodities with comparative advantage (livestock/meat, fish, hides and skins and special gums and frankincense).

The second dimension seeks to eradicate the widespread inequalities and grinding poverty among the majority of households that is manifested by inadequate and unstable food supplies, lack of purchasing power, poor nutrition, inadequate safety nets, weak food emergency management systems and unemployment

The third dimension seeks to withstand cyclical and other variations in access to food and water and the impacts of climate cha**n**ge and associated climate variability and food price volatility.

## 6.1 Goals

Goals of Somaliland Food Security and water Strategy rests on sector visions articulated in Somaliland vision 2030 as shown below:

***Vision 2030: A Stable and Democratic country Where People Enjoy High Quality of Life by 2030.***

***Agriculture sector vision****: A nation that utilizes agricultural (including livestock and fisheries) resources sustainably for income generation and food security;*

***Water sector vision****: A society whose citizens enjoy access to safe and sufficient water;*

On the basis of current situational analysis, best practices and proven effective interventions feasible in the challenging context of **Somaliland**, the following goals have been established for achieving national food and water security:

1. **I**ncrease **A**gricultural **P**roduction and **P**roductivity(crops, livestock and Fisheries)
2. **D**evelop **E**xport **M**arkets for **l**ivestock and **F**isheries with **A**dded **V**alue
3. **I**ncrease **I**ncome and **J**ob creation **O**pportunities
4. **I**mprove **N**utrition and **F**ood **S**afety
5. **E**stablish **S**afety **N**ets and **F**ood **E**mergency **M**anagement **S**ystems
6. **D**evelop **S**ustainable **W**ater **R**esources **M**anagement **S**ystem
7. **B**uild **I**nstitutional **C**apacity

The primary objectives of the FWSS are to promote domestic food production capacity, improve the availability of food and water, increase national capacity to import adequate quantity of food supply, increase the participation of food insecure households in agricultural sector activities and create both forward and backward linkages. Access to export markets is dependent on Somaliland ability to meet international standards. The food security strategy aims to improve the quality of local produce to be competitive and meet international requirements.

The goal is to exploit the potential in livestock production by improving rangeland management in the traditional pastoral system, promoting animal breeding systems, improving animal health and nutrition and developing higher quality animal feed and pasture systems. Measures that create intensive and diversified agricultural sector with strong links to the other economic sectors will be encouraged and supported.

One overarching aim of the FWSS is to create an economic environment that enables food-insecure households to insert themselves into the economic mainstream. Smart partnerships between the private and public sector will be encouraged; and policies that provide safety nets, information, and emergency management systems will be introduced and applied. One of the fundamental problems standing in the way of carrying out effective food and water security strategy programs, which must be addressed, is the lack of institutional capacity in the country.

FWSS aims to respond to the current food and water insecurity challenge with targeted interventions founded on the National vision 2030 and guided by the following principles;

## 6.2 Guiding Principles

The development of the strategy has been based on a number of guiding principles:

- **Alignment** with *vision 2030 and National Development Plan (NDP) 2012-2016*
- **Commitment** from political leadership
- **Multi-sectoral** approach.
- **Ownership** by the government and all segments of the society
- **Enabling** policy environment
- **Participation** from bottom up
- **Research** and extension
- **Investment** in agriculture and water
- **Capacity** Building

# 7 PROGRAMMES

Programmes will address the binding constraints to achieving the goal of food security and water strategy and focus interventions to achieve 7 priority outcomes that will lead to accomplishment of the overall goal. These priorities/ outcomes will be achieved by preparing an actionable operational plan which will define the programmes that will produce the desired results. To work towards the realization of above priorities/outcomes, programme in the following areas of intervention will be developed.

The operational plan will contribute to addressing binding constraints. These are not discrete, independent factors, but related elements of the food and water security strategy. The interventions in these areas of influence will enable Somaliland strengthen inclusive food and agriculture value chains that enable integration of production, processing, markets and distribution networks; and promote improved farm and non-farm employment opportunities, increased incomes, and better living standards of the poor, women and other vulnerable groups. **Annex 1** shows indicative flagship programmes /projects.

## 7. 1 Programmes - Areas for intervention

### 7.1.1 Agriculture Development

*Increase access to agricultural inputs.*

- Ensure supply of fertilizers/seeds/pesticides/agricultural implements
- Provide tax concessions for agricultural input imports and manufacturing
- Promote domestic production of high quality improved varieties
- Establish seed production and seed certification programs
- Establish community seed banks for easy access and sustainability

*Promote crop protection*

- Encourage farmers to follow appropriate cultural and management practices
- Encourage Integrated Pest Management (IPM) for crop protection as a way of safeguarding farming systems and maintaining a productive economy
- Provide training to farmers on the use and storage of pesticides and fertilizers

*Promote animal power and farm mechanization*

- Increase access to drought animals and animal drawn implements
- Expand training and utilization of animal power
- Facilitate farmers and farmer organizations access to tractors and tractor-mounted implements

*Increase farmer's access to financial services*

- Support and empower farmers to access financial services
- Encourage the formation of farmer credit, associations and cooperatives

*Promote environmental and land management for sustainable agriculture development*

- Promote conservation of land and proper utilization based on applicable instruments such as Environmental Impact Assessment (EIA), audits and land use plans
- Develop appropriate technology and extension methods aimed at improving and maintaining soil fertility
- Prevent water, soil and air pollution from agro-chemicals

*Promote sustainable harvesting of natural food resources*

- Ensure sustainable harvesting of foods such as honey, wild fruits and gums, etc

*Develop and promote adoption of appropriate technologies.*

- Introduce sustainable agricultural production techniques and technologies
- Strengthen demand-driven research and research based extension system using participatory approaches
- Promote farmer organizations to share best practice among themselves
- Encourage research, manufacturing and marketing of appropriate technologies
- Establish research centers for dry land farming, horticulture, seed and fodder production
- Promote the preservation and domestication of indigenous plants that produce edible fruits, berries, leaves and gums.

### 7.1.2 Livestock Development

*Promote Livestock Production*

- Improve rural access to infrastructure, communication and market opportunities
- Develop sustainable livestock production techniques and technologies through research and development, training and extension.
- Develop and promote technologies for adding value to animal products such as meat, milk, ghee, hides, skins and bones for local consumption and export.
- Create range reserves and fodder banks for dry seasons
- Develop rangeland and pasture rehabilitation programs

- Promote programs for fodder and feed production

*Promote Animal Health*

- Expand animal health service programs
- Train livestock herders and extension workers in animal pest and disease control
- Promote research on livestock health and diseases
- Build laboratories for vaccine production
- Establish quarantine and holding grounds to ensure exported animals meet international health standards
- Carry out quality control screening on veterinary drug imports

### 7.1.3 Fisheries Development

- Create a conducive investment climate for commercial fishing and processing
- Empower local communities to manage fisheries resources
- Assess national marine resources
- Promote sustainable management, storage, processing, value addition and utilization of marine resources
- Build cold chain and fish marketing facilities
- Promote export of marine products
- Establish marine research and training centers
- Improve access to financing and fishing gear
- Enhance capacity to patrol territorial waters to stop or minimize illegal fishing
- Improve quality control and sanitation of the fishing industry
- Develop coastal infrastructure – small fishing ports with access roads
- Establish coastal fishing communities
- Support establishment of fishing cooperatives
- Build and strengthen the institutional capacity of the ministry.

### 7.1.4 Market Infrastructure

- Invest in transport infrastructure particularly in feeder roads linking farmers and rural communities to markets,
- Build modern storage facilities for agricultural products to facilitate marketing and minimize post-harvest losses
- Improve physical markets for livestock and farm products
- Establish an integrated market information system
- Develop and strengthen health and quality control certification systems for exports
- Promote trade agreements with neighboring countries
- Diversify export markets

- Organize national and international trade fairs
- Promote a coordinated approach to planning and management of food aid and commercial import

### 7.1.5 Export Development

- Strengthen private sector participation to ensure timely provision of inputs and purchase of sufficient produce
- Regulate and facilitate agricultural markets of inputs and outputs at national, regional and international levels to ensure fairness, transparency and competitiveness
- Expand and strengthen the development and rehabilitation of rural infrastructure
- Formalize trade in foods in line with bilateral, regional and international trade agreements without compromising sanitary and phytosanitary issues
- Exploit nations comparative advantage by focusing on food processing value-addition of livestock and marine resources for export and local consumption;

### 7.1.6 Nutrition and food safety

- *Improve the coordination and management of food aid and imports.*
- Ensure that food aid and food imports conform to bio-safety and international quality standards
- Promote consumption of traditional nutritious whole grain sorghum and maize based diets
- Ensure that food aid conforms to the bio-safety and other related legislations
- Provide training on appropriate skills and technologies for food preparation, preservation and storage to avoid high food losses in terms of both quantity and quality.loss of nutritional value.
- Promote sustainable access to adequate nutritious food and other resources at household and national level/
- Support targeted interventions (e.g. micronutrients, vitamin supplements) for the chronically vulnerable groups especially children and mothers.
- Strengthen household food security (HFS) and nutrition training at both pre- and in-service training level and equip the trainees with skills to integrate HFS and nutrition concerns in development programmes.
- Enhance knowledge and public education about food values, food choices, , childcare and feeding
- Provide Essential Healthcare Package to address the causes of morbidity and mortality, focusing on nutrition, health service gaps, etc.

### 7.1.7 Food safety nets and emergencies

- Promoting consumption of traditional grains such as sorghum and non-traditional food stuff
- Improving the quality and judicious use of food aid and imports
- Raise and store adequate strategic food reserves(SFR), determine appropriate stock and cash levels for establishment of the SFR
- Target public sector assistance programms to the vulnerable, weak and excluded and other food deficit households
- Introduce income support schemes
- Special /targeted schemes to reach the poor and vulnerable groups that remain excluded from greater participation in economic activities
- Establish strategic food reserves(SFR)
- Expansion of culinary skills within Somaliland
- Establish targeted public sector safety net programmes including cash based transfers, feeding centers, and food distribution to the poor and socio - economically vulnerable individuals and households
- Ensure transparent and cost effective delivery of socio-economic support programmes
- Put in place mechanisms to remove all transient obstacles in order to ensure access for people excluded

### 7.1.8 Income and employment generation opportunities

- Increase the purchasing power or the level of real income, for all those who depend on the market as their source of food supplies
- Improve market efficiencies to give the poor better prices for their products
- Promote off-farm employment opportunities through economic empowerment programmes and other income-generating activities
- Facilitate the diversify of the livelihood of youth and women through promotion of alternative income generation activities, value-addition, cottage type industries and agro-processing development.
- Increase employment opportunities for the poor
- Transform subsistence producers into commercial oriented producers
- Maximize the potential for earnings from assets of subsistence producers by helping access to better markets

### 7.1.9 Emergencies and Disasters management

- Promote a coordinated approach to disaster preparedness and management
- Ensure allocation of adequate resources to disaster management
- Improve system of assessing possibilities of a shock
- Strengthen early warning systems and drought response mechanisms

### 7.1.10 Water resources and Soil management

- Review and enact policies for sustainable use of scarce rain water and underground aquifers.
- Assess available water resources, including precipitation, surface water, and groundwater.
- Develop a network of strategic boreholes, reservoirs and check dams across the country
- Introduce sustainable, equitable, efficient and economic use of scarce water resources in agricultural production and within rural communities, with due concern for watershed management and wider environmental and social downstream implication
- Promote sustainable management, conservation and efficient and equitable utilization of surface and underground water resources for human consumption, agriculture and livestock

### 7.1.11 Capacity building

Institutional reform for food security should enhance co-ordination on food security programs by, among others:

- Enhancing intergovernmental relations and improving co-ordination among Regional, National, District and Local governments in support of food security goals.
- Enabling co-ordination among political and administrative structures.
- Fostering co-operation among government, development partners/donors, private sector and NGO's.
- Establish food information management systems, and early warning emergency management systems.
- Strengthen the co-ordination and management of emergency relief operations at national and regional level.
- Compile baseline information database to assess the food insecurity and vulnerability situation of Somaliland

# 8. INSTITUTIONAL FRAMEWORK

## 8.1. Food and water Security Strategy Office

To effectively plan and implement the Food and Water Security Strategy as well as monitor and evaluate its progress, a strong infrastructure within Government is required. This will be necessary to guarantee the coordination, not only of government institutions, but also of all actors involved in the food economy.

Therefore, it will be appropriate to establish within the Ministry of Planning, an independent office to be known as the Food and Water Security Strategy Office (FWSSO). The Office will be lead by a National Food and water Security Committee (NFWSC) consisting of concerned ministers and heads of agencies including the ministers of Agriculture, Livestock, Fisheries, Environment and Rural Development, Water,labour and social affairs Planning and NERAD. The Minister of Planning and National Development will chair the joint steering committee meetings and will be co-chaired on a rotation basis by one of the other relevant line ministries. This will in turn report on a standing basis to the council of ministers. The officer in charge of FWSSO will serve as the secretary and coordinate the work of steering committee. The primary responsibility for the formulation and preparation of programmes will rest with respective line ministries.
The responsibilities of FWSSO will include but not limited to:

- ✓ Advising the Government on Food and water security policies and programmes
- ✓ Initiating and Co-ordinating the preparation and implementation of food security and water policies and legislation
- ✓ Developing priority programmes and action plans
- ✓ Coordinating implementation of food and water security programmes
- ✓ Initiate, undertake and participate in the collection, preparation and production of data on the food and water security for the use by the Government and its different bodies or organizations;
- ✓ Promoting co-operation among government, development partners/donors, private sector and NGO organizations
- ✓ Coordinating all activities concerning food aid;
- ✓ Establishing and maintaining national food and water information system
- ✓ Strengthening the co-ordination and management of emergency relief operations at national and local levels
- ✓ Supporting establishment of early warning system
- ✓ Coordinating exchange of information about food and water security with different organizations at national ,regional and international levels;
- ✓ Establish an M&E system

## 8.2. Implementation arrangements

The basic concern is to bring various sectors to work together to the achieve food and water security objective by harnessing resources necessary to make the efforts a success. While the strategy takes a long view and is designed to have an enduring impact on food and water security, it is viewed as a living approach that will be updated as changes occur in the rural economy, national priorities, and external factors.

Furthermore, the Government will adopt a broad-based (holistic and integrated) approach to address food and water security problems at both household and national levels in recognition of the multidisciplinary nature of food and water security problems.

A set of actions will be undertaken to put the strategy into effect. These include:

- ✓ Design priority programmes and projects
- ✓ Set key performance indicators
- ✓ Prepare and enact food security , water, land and environment legislations
- ✓ Design management and administrative structures
- ✓ Design food security and water information and communication systems
- ✓ Design monitoring and evaluation systems
- ✓ Review and update the disaster risk management plan
- ✓ Formulate public-private partnership framework
- ✓ Secure human and financial resource requirements
- ✓ Obtain approval for priority programmes
- ✓ Obtain approval for the plan of action
- ✓ Appoint the National Food and water Security Committee

## 8.3. Monitoring and Evaluation (M&E)

Monitoring and evaluation are essential components of the national Food and Water Security Strategy since up to date information is critical to decision making, policy and program intervention.

This monitoring and evaluation system will coordinate the management of all the food and water security data and information. It will also serve to provide all the relevant stakeholders with up to date information on the implementation status of the food and water security strategy based on the implementation of actionable plan to be developed as part of FWSS.

Additionally, external monitoring and evaluation systems through the civil society, donor community and other stakeholders will be promoted and supported to complement the national system.

The monitoring and evaluation system of the FWSS will address the following:

- Forming a focal point for all data and information on food and water security situation

- Reviewing and updating the existing institutional structures and systems for food, nutrition and water security data collection, analysis and management
- Establishing Food and Water Security Information Systems (FWSSIS) for evidence based interventions
- Harmonising and improving Food and Water Security Information Systems (FWSSIS) for evidence based interventions
- Producing and disseminate information that is appropriate, timely and demand driven to all stakeholders
- Strengthening institutional set-up and capacities to produce analyze and disseminate information
- Facilitating in-depth analysis on the quality and optimal quantity of information for decision-making
- Supporting creation of information products that are appropriate, timely and demand-driven
- Strengthening tracking and monitoring of food and nutrition surveillance systems
- Evaluating the impact of ongoing food, nutrition and water security programmes
- Carry out vulnerability assessments
- Establishing a communication strategy to ensure a shared vision and understanding of the FWSS

# Annex 1: Proposed Flagship Programmes/Projects for Somaliland Food and Water Security Strategy-2030

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| **Agricultural Development** |
| Improved seed production and seed certification programme |
| Establish Agricultural Research centers for dry land farming, seed and fodder production |
| Small holder rehabilitation and development programme |
| Agriculture market infrastructure programme |
| Horticulture production support programme |
| Agricultural resource development project. |
| Agricultural development program/agricultural service |
| Small holder dry areas resource management project |
| Small holder credit, input supply and marketing programme |
| National date growing programme |
| **Livestock Development** |
| Livestock development and rangeland management programme |
| Livestock and pasture development programme |
| Integrated rural recovery and development programme |
| Programme for planting of forage crops including trees and shrub (indigenous+ introduced) for livestock. |
| Development of per-urban dairy with focus on camels and cattle. |
| National program for rangeland rehabilitation and development |
| Establishment of Range reserves and fodder banks for dry season |
| Livestock water points and stock routes |
| Rural Financial Service Projects |
| Rural sustainable livelihoods regeneration programme |
| **Fisheries development** |
| Enhance institutional capacity of ministry of fisheries in the fields of management, monitoring , legislation and protection |
| Assessment of Somaliland marine resources |
| Develop coastal infrastructure - small fishing ports with access roads |
| Programme for marine resources & marine environment development and protection |
| Programme for establishing coastal fishing communities with training centers |
| Establish Marine research institute and promote sustainable utilization of marine resources |
| **Promoting export /food trade** |
| Programme for developing marketing information system to facilitate regional trade |
| Harmonise the Sanitary and Phyto-Sanitary (SPS) policies |
| Share experience in value addition for exports-training programme |
| Enact Enabling trade policies |
| Promote the leather industry as a source of foreign exchange |
| Strengthen and capacitate chamber of commerce |

| **Food safety and emergencies** |
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| Establish Early warning and food information system |
| Establish food safety nets for vulnerable groups incl. eldery, disable, IDPs |
| Establish food security emergency reserve facility |
| Increase national storage capacity/food strategic reserve |
| Promote village-level food storage (including warehouse receipt system) |
| **Income and job creation opportunities** |
| Establish Community-based infrastructure |
| Promote food for work programmes |
| Establish programmes for youth employment in agriculture |
| Rural Women Empowerment Programs |
| Rural Entrepreneurs project/program |
| Community-based Resource Management programmes/projects |
| **Nutrition and food safety** |
| Establish national Child and mother Health and Nutrition Information System |
| Food and nutrition social welfare program and projects |
| Enhance public education |
| **Water resource management** |
| Promote agro-forestry in the drylands |
| Integrated water and land management programmes |
| Participatory integrated-water shed management programme |
| Water resource development investment programme |
| Participatory small scale water resource sector. |
| Forest resource management programme |
| Establishment of check dams at bottom of wadi's to reduce run off and to recharge shallow wells. |
| Adaptive Water harvesting technology |
| Pilot programmes for alternative energy and fuel efficient technology |
| **Capacity building** |
| Food security capacity building program |