Somalia Drought Impact & Needs Assessment

VOLUME II

Sector Reports

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Table of Contents

Acknowledgments

The DINA was prepared under the overall leadership of the Ministry of Planning, Investment and Economic Development in partnership with the Ministry of Humanitarian Affairs & Disaster Management of the Federal Government of Somalia (FGS) and the Federal Member States (FMS). It was undertaken with strategic support from the World Bank Group, the United Nations and the European Union, within the framework of the 2008 Joint EU-UN-WB Declaration on Post-Crisis Assessments and Recovery Planning. Financial support has been provided by the European Union under the ACP-EU Natural Disaster Risk Reduction program implemented by the WB-led Global Facility for Disaster Reduction and Recovery. Ipsos provided remote sensing and survey support, and Courage Services, Inc. provided remote sensing services.

More than 180 national and international experts from the FGS, FMS, the Banadir Regional Administration, the World Bank Group, the United Nations and the European Union worked intensively across 18 sector/cross-cutting groups to collect, validate and analyze data, conduct field visits to consult with sub-national authorities, international and national non-governmental organizations and civil society stakeholders, to determine recovery needs and identify interventions for medium-term recovery and long-term resilience.

List of Figures

List of Tables

Methodology

The DINA follows the standard PDNA methodology developed by the UN System, World Bank and the European Union that incorporates a collection of analytical methods, tools and techniques developed for post-disaster assessments and recovery planning, ensuring sector to sector comparability and homogeneity in the definition of basic concepts of damages, losses and post-disaster recovery needs. The assessment builds on primary and secondary data related to damage and loss in the identified sectors, which are provided by FGS, FMS and development partners who supported the DINA.

Damage and Loss Quantification: The effects of the drought on each sector have been assessed in terms of damages and losses.

- Damage is defined as total or partial destruction of physical assets existing in the affected area. Damages occur during and immediately after the disaster and are measured in physical units (i.e., number of damaged boreholes, head of livestock, hectares of land, etc.). Their monetary values are expressed as the replacement costs according to prices prevailing just before the event.
- Losses are defined as changes in economic flows arising from the disaster. They occur until full economic recovery and reconstruction is achieved, in some cases lasting for several years, but for the purposes of this assessment, losses have been projected up through December 2017. Typical losses include: the disruption in the production and access to goods and services, disruption in governance, and losses associated with increased or changed risk (for example, in a drought/flood cycle, the increased poverty, malnutrition, livelihoods and welfare losses and less sustainability of life cycles of the affected population).

Classification and Quantification of Recovery Needs: Recovery needs are the costs of recommended interventions and resources that include: the reconstruction needs estimated as the requirements for financing reconstruction, replacement or repair of the physical assets that were damaged or destroyed by the disaster; and recovery needs estimated on the basis of the financial resources required for the rehabilitation of basic services, reactivation of productive activities and economic flows such as trade and commerce, or immediate reactivation of personal or household income. Recovery needs also include capacity building and operational costs for service delivery that are necessary for the implementation of interventions. Costing for recovery needs include differentials for building back better to consider quality improvements and DRR measures to be implemented to increase resilience against future disasters. For the purpose of this assessment, recovery needs are classified as short-term (Year 1); medium-term (Years 2-3); and long-term (Years 4+). Short-term recovery needs are distinct from emergency humanitarian needs. Rather than representing emergency lifesaving interventions, short-term recovery needs represent interventions of a developmental nature that need to be implemented in the short-term to have quicker results and impact on the overall recovery program. An example would be the immediate injection of capacity within the Government to lead and coordinate the recovery efforts.

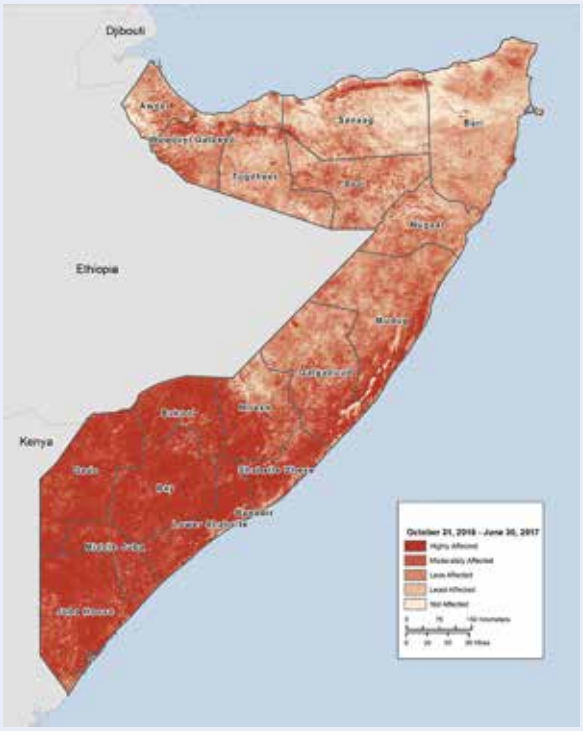
Recovery needs, especially in the case of a slow-onset disaster, are typically cumulative for the duration of the event (number of years of drought for example). Given the ongoing crisis due to the disaster, a large portion of the needs are represented by the humanitarian phase needs that can continue for an extended period of time. Recovery needs for the recovery and resilience building to overcome the humanitarian phase, such as the cost of relaunching economic activities, restoration of incomes, livelihoods and employment, are additional to the humanitarian response. These may include, for example, inputs required for recovery (such as livestock treatment or seeds) and will be less than the value of outputs lost due to drought (such as cattle mortality decreasing income from export, or crop failure decreasing the volume available for sale).

Data Collection and Validation: The key source of information for the estimation of damages and needs was primary data from the FGS and FMS, and secondary data available from existing or on-going humanitarian/sectoral assessments. Interviews were undertaken with a wide range of stakeholders, including government officials, staff from UN and other development agencies and academic and civil society experts. In addition, primary data and qualitative data were provided by Ipsos through remote sensing techniques using satellite imagery and from on-the-ground field surveys conducted by the Ipsos Somalia team. Data validation techniques included the use of remote sensing techniques to validate key impact data for crops, livestock and water resources. Further validation of data was performed using process verification techniques and empirical plausibility checks. The assessment included the collection of pre-drought baseline data to evaluate the drought impact and to determine the overall recovery strategy. Sector-specific valuation methods have been included in the relevant sectors.

The Ministry of Planning, Investment and Economic Development (MoPIED) and UN colleagues coordinated field visits to five Federal Member States (FMS): Galmudug, Hirshabelle, Jubaland, Puntland and South West, and consultation with Banadir Regional Administration authorities. The visits comprised consultations with state-level line ministries, UN agencies operational in the states, and representatives of civil society regarding data collection, needs assessment and recovery strategies.

Remote Sensing and Field Surveys in Support of the Somalia DINA

Remote sensing applications were used to delineate the spatial and temporal extent of the drought to provide an objective tool to quantify the impacts in key sectors. With the assistance of Ipsos Inc., one of the world's largest data services firms, and Courage Services Inc., high-resolution satellite imagery such as Landsat (the longest-running enterprise for the acquisition of satellite imagery of Earth) and indicators such as the Normalized Difference Vegetation Index (NDVI) (showing the state and health of vegetation) were analyzed to provide vital data on affected populations, drought-stressed areas and sector-specific impact information.



In addition, a survey was conducted of over 1,000 households in 13 districts in conjunction with a survey of Somali healthcare facilities (HCFs) to understand the impact of the drought on nutrition, health and livelihoods, particularly among internally displaced persons (IDPs).

Agriculture

Remote sensing was utilized to gauge total estimated area of production and total area loss within six major areas of Somalia, including Bay, Galguduud, Lower Juba, Lower Shabelle, Middle Shabelle and Middle Juba. MODIS NDVI 250M was utilized to determine baseline NDVI calculation, and imagery from 2016-2017 was first utilized for drought level NDVI calculation. Raster images were compared to estimate average NDVI loss. Areas with above-average NDVI loss were targeted for identification and/or verification of activity at previously known or classifier-identified medium/large-scale bananas, papayas, tomatoes and lemon large cultivation areas either through targeted review of 0.8-3M resolution Planet Labs imagery (for medium/large scale lemon tree/bananas holdings), WV3/4 30cm imagery for sampled confirmation of smaller crops (where available) and/or by cross-checking imagery results against previous ground-based agricultural baseline crop cultivation estimation studies in these areas. Limitations of this methodology include areas with relative cloud cover in either baseline/drought imagery, as well as potential joint planting

of crops within reviewed areas, areas of small-scale farming and/or lack of pre-existing ground sampling in examined areas. Information was cross-compared with FAO-estimated crop areas, as well as with expert-provided cultivation and loss estimates within designated regions. A major market and farm-based survey was conducted to identify farmgate (volume) and market prices for 14 major commodities. Data was used to assist sector specialists with damage and loss estimates.

Fisheries

Whereas the use of such techniques was discussed with IPSOS and thought to be useful in future for boat counts in marine fisheries (provided that we use very high resolutions satellite imagery), the use of boats as an estimate of fishing activity in the inland fisheries was not factored into the analysis done by the Fishery Sector Team.

Displacement

(i) Very High-resolution satellite imagery from 2014 and 2015, as well as from August 2017 was used to identify IDP settlements and estimate IDP populations prior to the drought and during the drought periods for Kismayo. IDP structures were determined based on existing imagery signatures, including roofing structure, irregularly-shaped constructions, and tent structures; (ii) Multiple NGO publications and local surveys, including IOM, Norwegian Refugee Services, UNICEF, among others, were examined to further refine areas for imagery analysis and examine IDP settlement patterns. Each IDP structure was counted, its area size accounted for, and roofing type determined. Calculations were cross-examined with UN procurement documents in the areas in which imagery analysis identified organized tent settlements. Data was used to determine average and absolute capacity for population incidence and density within Kismayo. Pre-drought and post-drought settlement maps and IDP estimates for the city were produced as a result.

WASH/Health Access

Remote sensing and NGO data were used to estimate IDP access to WASH/health facilities within three major urban areas, including Mogadishu, Baidoa and Kismayo: (i) Satellite imagery was used to estimate IDP populations and settlement patterns within these cities; (ii) UNICEF data for WASH/Health facilities was utilized to understand baseline distribution and functionality of facilities; (iii) Open street map (OSM) road data (September 2017) and high resolution imagery (August 2017) were utilized to identify which road networks, including primary, secondary and tertiary roads, connected WASH and health facilities to IDP settlements; (iv) IRC, IOM, World Bank High Frequency and Ipsos household surveys were used to understand primary and secondary sources of water and health provisions.

Conflict

(i) ACLED conflict incidence data for Somalia from pre-drought (2014-2016) and drought periods (2016-2017) was used to identify percentage change in conflict incidence at district/region levels for multiple types of conflict (battle-no change of territory, violence against civilians, remote violence, riots/protests); (ii) Conflict percentage change activity was layed over drought impact areas to identify any potential cross-correlation between drought and conflict; (iii) In urban areas with high influx of IDPs, pre-drought vs. drought IDP settlement patterns were reviewed to understand whether increase in IDPs was an additional vector potentially responsible for increase in violence.

Environment

(i) Remote sensing was used to estimate NDVI change (2014-2017) to estimate drought conditions in Somalia; (ii) FAO Landsat-derived land cover/land use areas were reviewed to identify grazing areas; (iii) Pixel-level overlap was identified between grazing areas and most affected/moderately affected by drought areas to estimate percentage of grazing areas likely decimated by the drought. Information was further mapped at district level.

Introduction

The latest in a cycle of devastating protracted dry spells over the last 25 years, the current drought and the resulting humanitarian emergency have worsened existing humanitarian and development challenges in Somalia. Decades of insecurity, political instability, drought and food insecurity have disrupted desperately needed services, devastated human capital and physical infrastructure, and contributed to systematic impoverishment and displacement of the population.

The ongoing 2016-17 drought has plunged the majority of the population into food insecurity. At the peak of the drought, an estimated 6.7 million people – more than half of the population – were acutely food insecure and in need of humanitarian assistance.[1] The below average rainfall has resulted in a significant depletion of water resources for agricultural consumption and livestock body conditions have deteriorated substantially. Food insecurity and scarcity of drinking water, coupled with displacement, has contributed to a stark rise in malnutrition and water-borne disease.

The impact of drought on the Somali people is informed by an interrelated set of factors that include the environment, governance, conflict, displacement and poverty. This confluence of factors has created an exceedingly complex crisis in the Horn of Africa, and it demands an equally complex analysis of the underlying drivers of drought, their impact on the Somali people and the strategies that can pave the way toward recovery and resilience.

The Somalia Drought Impact and Needs Assessment (DINA), a process led by the Federal Government of Somalia (FGS) in partnership with the Federal Member States (FMS), the World Bank (WB), United Nations (UN) and European Union (EU), aims to reduce the country's vulnerability to climate shocks, strengthen resilience and significantly reduce the future risk of famine in Somalia.

Volume II of the DINA presents in depth the data collected and analyzed for each of the 18 sectors and cross-cutting themes. The assessment reports cover:

- Overview of pre-drought conditions
- DINA findings and drought impact
- Cross-cutting considerations (when relevant)
- Recovery and resilience strategies, including costing of recovery needs

[1] UNOCHA. 2017. Somalia: Humanitarian Dashboard – July 2017.

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Productive Sectors

Agriculture – Irrigation and Rain-fed Crop Production

I. Overview and Pre-Drought Conditions

Already impacted by the civil war, the crop sector has been increasingly buffeted by the country's fragile natural environment, and its arid and semi-arid climate has experienced more extreme and frequent cycles of drought and floods. Crop production in the southcentral regions moreover has been severely affected by insecurity, weak governments, and the consequent deterioration of flood control, irrigation, and transport infrastructures, in addition to lack of research and extension services. From almost self-sufficiency in cereals on the eve of the civil war, domestic production in the early 2010s provided, on average, only 22 percent, and never more than 50 percent even in the best agricultural seasons, of the country's per capita cereal needs.

The major staple food crops cultivated under both rain-fed and irrigated conditions are sorghum (mainly rain-fed, for a USD 47.6 million annual gross value, averaged over the six growing seasons from *Deyr* 2013 to *Gu* 2016), maize (mainly irrigated, USD 35.4 million), sesame (mainly irrigated, USD 33.3 million), and cowpeas (mainly rain-fed, USD 15.4 million). Rice production is small (USD 1.5 million) but important in the Middle Shebelle region. Many fruit crops are also grown under irrigated conditions, but virtually all only for domestic consumption, unlike in the pre-war period, including banana (USD 82.3 baseline value), lemon (USD 39.3 million) and watermelon (USD 31.5 million), which are the only fruit crops currently exported (dry lemons from Mogadishu, and watermelons across the Somaliland border into Djibouti), papaya (USD 23.1. million), and grapefruit (USD 19.7 million), among others. In the arid northeastern and northcentral part of the country, dates (USD 121.7 million) and frankincense (USD 87.6 million) are also grown, including for export, especially the latter. Many vegetables are also grown for domestic consumption under both rain-fed and irrigated conditions, the major ones being tomatoes (USD 102 million) and onions (USD 77 million).

During severe dry spells, the Juba and Shabelle Rivers, along which most irrigated crop production takes place, are strained as livestock herders also move closer. Most Somali soils are rich in essential nutrients like potassium and sulfur. Rain-fed soils have become high in pH and low in nitrogen and phosphorus as a result of poor farming practices, restricting the potential of rain-fed crop production.

Agro-pastoralists, estimated at 22.8 percent of the total population[2], are mostly poor, dependent on either/both settled crop production and livestock rearing, and to a lesser extent on forestry products. Average holdings of banana, lemon, grapefruit and papaya plantations are 20 ha, 14 ha, 10 ha, and 0.5 ha, respectively. Most cereal and sesame production, however, is undertaken by small-scale farmers with land holdings between 2 ha and 5 ha, and most other crop production is undertaken by subsistence farmers with an average of only 0.2–3 ha of land. According to the FAO, the smallholder-farming sub-sector accounts overall for 80 percent of total crop output and 70 percent of marketed agricultural produce.

Commercial and small-scale irrigation farming is common along the two major rivers in southern Somalia. Rain-fed farming, mixed in with livestock rearing, is common in the inter-riverine areas and also in the northwestern regions of Somaliland. In the northern coastal regions and throughout the northeastern regions the annual rainfall is a very low 100mm, supporting only gums and resins production from wild trees and some oasis farming.

Some 3 million ha, about 5 percent of the total land, are cultivable, with 700,000 ha almost equally split between land under controlled irrigation (using pumps) and under flood recession irrigation and 2.3 million ha under rain-fed conditions. However, due to prolonged insecurity, most of the extensive irrigation and flood control infrastructure is in extremely poor condition. As a result, only a fraction (about 111,000 ha) of the irrigable land was recently irrigated and cultivated in southern Somalia, representing less than 20 percent of its potential, and about 50 percent of the land irrigated (222,950 ha) just before the civil war. However,

[2] UNFPA, 2015.


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in Somaliland's northwestern regions and in Puntland's oasis farming, areas irrigated with groundwater have expanded considerably. The total irrigated area in Somaliland is estimated at around 35,000 ha (or 10 percent of the total arable area), supporting about 4,000 farming households. For Puntland, small oasis farms cover about 2,848 ha.

In the past three decades, some major structural changes stand out in Somalia's crop agricultural production and trade. The precise extent of crop agriculture's contribution to the country's gross domestic product (GDP) is unfortunately not known because of lack of reliable estimates. Historically, this sector represented about 27.2 percent of the country's GDP, but its share is believed to have reduced much in recent years given the collapse in both cereals and banana production. About 49 percent of the population still lives in rural areas, and about 46 percent of the employed persons are working in agriculture, with 25 percent in crops cultivation and 7 percent in related activities like forestry. Recorded export of sesame seeds have fallen back to around USD 34 million in the last two years, after reaching an historical peak of USD 40 million in 2014 and are now the largest crop export, due to the total collapse of banana exports after the civil war. Dry lemon exports are the only sizable component nowadays within the vegetables and fruits export category, whose combined export value is only about 20 percent of pre-war levels.

There has also been a steady and large increase in agricultural imports since the late 1980s, reaching almost USD 1.5 billion by 2015 from an annual average of only about USD 82 million in the late 1980s. The combination of increased domestic food demand, mostly for cereals, sugar, and other preparations, driven by rapid population growth and urbanization and largely supported by remittances, and the collapse of domestic crop production have led to this massive increase in food imports.

The sector's performance, moreover, has been negatively affected in the last decades by severe environmental degradation of the country's rangelands and forested areas and by climate change experienced in the entire Horn of Africa region. By 2014, total forest cover was only about 10 percent of the country's land area, compared to 62 percent in 1980. The main factor responsible for the large-scale deforestation of the rangelands has been the massive and unsustainable cutting of Acacia trees to

make charcoal. This unsustainable exploitation of natural resources, especially forests and grasslands, has greatly amplified the vulnerability of the country's already fragile ecosystems to weather shocks and to climate change.

In the last four decades, agricultural production in Somalia has been severely affected by eight major droughts. The consequences of such massive deforestation, other environmental degradation of the rangelands from poorly regulated human activity and from overgrazing, erratic and diminishing water flows in its major rivers due to much expanded use of water in their upstream basins in the Ethiopian highlands, and intensifying global warming pose a very severe threat to the future recovery, resilience and growth prospects of the crop sector.

II. DINA Findings and Drought Impact

During the October-December 2016 *Deyr* growing season, across most of the country and especially in the southern agricultural areas, a persistent lack of rainfall led to extensive crop failures and record low vegetation cover and soil moisture conditions. The impact of the *Deyr* season drought was amplified by the effects of the poor rains during the previous March to May 2016 *Gu* rainfall season and a severe drought in the northern regions of the country in 2015. This had already led to significant losses in crop and pasture production (actually a virtual collapse in 2015 in the northwestern regions of Somaliland), weakening the capacity of households to deal with new major shocks.

In the southern agro pastoral areas, the *Deyr* 2016 crop production among poor households was a fraction of that during the baseline period of 2013-2015. In the northeastern and northcentral pastoral areas, limited oasis crop production was also badly affected. In the northwestern areas, however, near average to above-average late 2016 rainfall supported near-normal cereal production (as well as favorable livestock conditions).

Following the failed *Deyr* 2016 harvest, the drought persisted and actually intensified except for the northwestern regions of Somaliland for three-four months through March 2017, causing further major damage and losses to irrigated perennial tree crops like bananas. The drought only eased after March, but the arrival of the rains at the time of normal planting in April was delayed. Except for a few places in Puntland, Somaliland and the southern regions of Bay, Lower and Middle Juba that received good rains in May-June of 2017, many parts of the country also received below-average, sporadic and scattered rainfall, with an early cessation reported in other parts of the northeastern, central, and southern regions. Together with a still low level of the rivers in southcentral Somalia through April, the shortfall of rains in many regions left a high portion of areas under cereal cultivation either highly or moderately affected by the drought. The northwestern regions of Somaliland, however, experienced growth of both pasture and crop production, as they continued to benefit from rains through August.

According to remote sensing data, the least affected southern regions during the most recent *Gu* season were Bay and Lower Shebelle, with 30 percent and 44 percent respectively of their areas normally under cereal cultivation either highly or moderately affected by the drought. This share was 50 percent in the middle Juba, rising to a range for all other cereal growing regions in the south between 62 percent (in Hiraan) and 77 percent (in Gedo).

Due to the drought affecting southcentral Somalia, the Shabelle River experienced very low riverbed in 2016-2017. This resulted in lack of water reaching the Lower Shabelle region during the critical *Deyr* harvest and the *Gu* planting season and severe damage to irrigated staple food crops (e.g. maize, sesame, cowpeas) as well as fruits (especially bananas) and vegetables. The Juba River flow, however, was only moderately affected by the drought and thus its irrigated crops sustained only little damages and losses. In some cases, the regions in the Juba valley even recorded some production gains compared to the baseline period.

In the planting month of April, however, river levels showed wide geographical variations, they were 8-62 percent lower than in 2015. The almost normal levels of the two main rivers during the last three months of the *Gu* 2017 season allowed for some recovery of the main annual irrigated crops, maize, sesame, and vegetables, but fruit crops including bananas and agrumes will take a longer time to recover.

Damages and Losses

Damages

The main direct damages reported were (i.e. loss to physical infrastructure and banana trees): damages to the canals walls and from additional silting and sand being blown into the canal beds; and damages to the

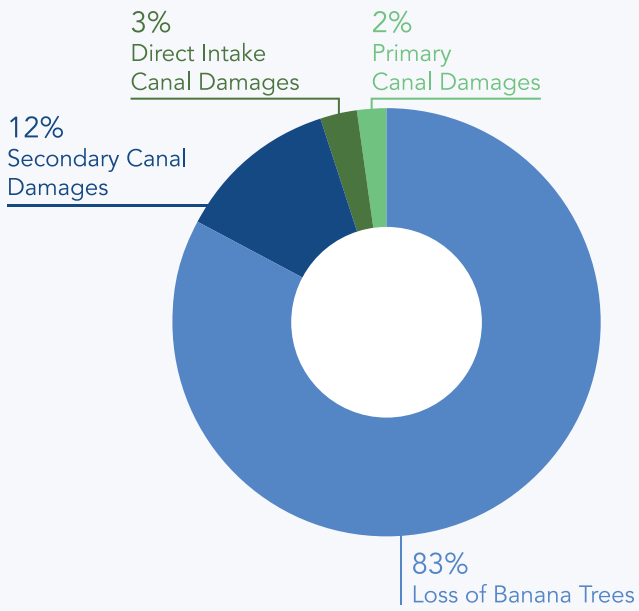
Table 1: Summary of Damages and Losses for All Crops *(in USD)							
Damages and Losses	Baseline Asset/ Production Values	Public DALO		Private DALO		Total DALO	
	US$	US$	%	US$	%	US$	%
Damages to Irrigation Infrastructure	$108,990,000	$10,899,000	10%			$10,899,000	10%
Damages to Banana Trees	$85,400,000			$52,890,000	62%	$52,890,000	61%
Losses for Sorghum	$47,552,704			$22,097,918	46%	$22,097,918	46%
Losses for Maize	$35,428,924			$12,397,503	35%	$12,397,503	35%
Losses for Sesame	$33,333,600			$27,530,400	83%	$27,530,400	83%
Losses for Cowpeas	$15,411,201			$9,150,693	59%	$9,150,693	59%
Losses for Rice	$3,034,253			$1,820,552	60%	$1,820,552	60%
Losses for Legumes	$578,921			$358,658	62%	$358,658	62%
Losses for Banana	$82,310,528			$55,421,649	67%	$55,421,649	67%
Losses for Lemon	$5,969,613			$2,936,858	49%	$2,936,858	49%
Losses for Grapefruit	$19,715,904			$10,843,747	55%	$10,843,747	55%
Losses for Papaya	$23,118,121			$14,484,948	63%	$14,484,948	63%
Losses for Watermelon	$31,502,293			$23,680,302	75%	$23,680,302	75%
Losses for Dates	$12,166,981			$11,447,751	94%	$11,447,751	94%
Losses for Tomatoes	$41,022,169			$36,663,520	89%	$36,663,520	89%
Losses for Onions	$4,560,057			$4,245,497	93%	$4,245,497	93%
Losses for Frankincense (Boswellia)	$87,609,921			$14,575,795	17%	$14,575,795	17%
Total DALO	**$637,705,190**	**$10,899,000**	**2%**	**$300,545,790**	**47%**	**$311,444,790**	**49%**
of which: Total Damages	$194,390,000	$10,899,000	6%	$52,890,000	27%	$63,789,000	33%
of which: Total Losses	$443,315,190	$		$247,655,790	56%	$247,655,790	56%
of which: Main Staple Food Losses	$131,726,429	$		$71,176,514	54%	$71,176,514	54%
of which: Other Crops Losses	$311,588,760	$		$176,479,276	57%	$176,479,276	57%
of which: Fruits, except Bananas	$92,472,911	$		$63,393,605	69%	$63,393,605	69%
of which: Vegetables	$45,582,226	$		$40,909,017	90%	$40,909,017	90%

banana trees, most of which could not survive the lack of rains and lack of irrigation (from the drying Shabelle rivers) until April 2017. In total, the drought-related damage has been estimated at USD 62.9 million (see Table 1).

Experts' best estimate of the overall current damage to the irrigation network suggests a cumulative 70 percent loss of functionality with 60 percent attributable to the civil war and at most a 10 percent loss of functionality attributable to the recent drought. About USD 10.9 million in damages has thus been attributed to the drought in the three Shabelle and Juba regions with the largest canal network (see Figure 1), while about USD 65.4 million has been classified as pre-drought damage. This deterioration of the irrigation system has meant that a large proportion of the previously irrigated land is now rain-fed, with much lower yields, and thus with substantial production losses.

With banana trees having shallow roots and being unable to survive more than a couple of months of lack of rains and lack of irrigation, the drought at its peak in February-March 2017 caused massive deaths of trees (over 2.6 million trees, see Table 2). Over 85 percent of the banana trees in the Afgoi area and about 50 percent in the Jennale area of the Lower Shabelle region were completely destroyed by the end of the dry season (January-March 2017). The only trees that survived the devastating drought were either those in their infant stage or those on old plantations with their own boreholes.

Figure 1: Damages to Physical Infrastructure and Banana Trees (in USD)



Damages to Irrigation Canals	
Region	Damage Attributed to Drought (USD)
Lower Juba	22,575.00
Middle Shabelle	1,965,425.00
Lower Shabelle	8,911,000.0
Totals	**10,899,000.00**

Table 2: Damages to Banana Trees (in USD), by Region									
Production Area		Banana							
		Baseline Area (ha)	Trees (per ha)	Baseline Trees (tot)	Avg. Tree Economic Value	Baseline Trees (US$)	Tree Loss (%)	Trees Lost (tot)	Monetary Damage from Tree Loss (US$)
Juba River Valley	Lower Juba	150	2,000	300,000	$20	$6,000,000	21%	63,000	$1,260,000
	Middle Juba	150	2,000	300,000	$20	$6,000,000	21%	63,000	$1,260,000
	Gedo	50	2,000	100,000	$20	$2,000,000	0%	0	-
Juba River Valley		350		700,000		$14,000,000	18%	126,000	$2,520,000
Shabelle River Valley	Lower Shabelle	1,535	2,000	3,070,000	$20	$61,400,000	75%	2,302,500	$46,050,000
	Middle Shabelle	200	2,000	400,000	$20	$8,000,000	54%	216,000	$4,320,000
	Hiraan	50	2,000	100,000	$20	$2,000,000	0%	0	-
Shabelle River Valley		1,785		3,570,000		$71,400,000	71%	2,518,500	$50,370,000
Grand Total		**2,135**		**4,270,000**		**$85,400,000**	**62%**	**2,644,500**	**$52,890,000**

Remote sensing was capable of estimating reliably the areas under cultivation, and thus the loss of tree coverage. This was the basis, together with an estimated economic value of USD 20 per (average) tree and a density of 2,000 trees per hectare (both figures based on Somali experts' advice) for the USD 52.9 million damage estimate to banana cultivation from the recent drought.

Estimated damages to critical assets for crop cultivation from the recent drought are estimated at USD 63.8 million. Other damages related to poor health and consequent expected loss of productivity over the medium-term to other fruit trees with stronger and deeper root systems (including those for such perennial crops as lemon, papaya and frankincense and myrrh) is believed to be relatively minor, but in any case, cannot be easily quantified.

Losses

The greatest impact of the drought in the agriculture sector has been on crop production losses arising from both reduced land area under cultivation and much reduced yields at harvest. For the DINA, both physical and monetary losses have been estimated, using a combination of available and timely FSNAU production and price estimates for some staple food crops, while for other crops expert estimates of average baseline yields, remote sensing for estimating baseline and drought-affected areas under cultivation, and ad-hoc baseline farmgate (large volume) price survey were used.

The drought had the largest impact on rain-fed staple food crops (mainly sorghum, cowpeas, and also some rain-fed sesame) in the interriverine regions of Bay and Bokool, which suffered from a multiple-season lack of rains starting in early 2016, and on the irrigated crops in the Shabelle valley regions (mainly maize, most sesame, and rice, bananas, and tomatoes, among other crops.

Including the less-affected northwestern regions, the total production volume loss for sorghum was 50 percent, for maize 34 percent, for sesame 83 percent and for cowpeas 59 percent (see Table 3). Many regions experienced physical losses for these crops of over 90 percent: for sorghum, 98 percent in Middle Shabelle, 96 percent in Gedo, and 91 percent in Mudug; for sesame, 98 percent in Middle Juba and 92 percent in Hiraan.

Table 3: Summary of Damage and Loss for All Crops (in physical units)						
Damages and Losses	Public		Private		Total	
	MT	%	MT	%	MT	%
Damages to Irrigation Infrastructure (kms)	311.4	10%			311.4	10%
Damages to Banana Trees (no. killed)			2,602,500	61%	2,602,500	61%
Losses for Sorghum			67,946	50%	67,946	50%
Losses for Maize			32,273	34%	32,273	34%
Losses for Sesame			22,942	83%	22,942	83%
Losses for Cowpeas			10,271	59%	10,271	59%
Losses for Rice			2,700	60%	2,700	60%
Losses for Legumes			248	61%	248	61%
Losses for Banana			100,523	68%	100,523	68%
Losses for Lemon			4,210	48%	4,210	48%
Losses for Grapefruit			12,062	55%	12,062	55%
Losses for Papaya			4,975	62%	4,975	62%
Losses for Watermelon			22,096	74%	22,096	74%
Losses for Dates			6,367	94%	6,367	94%
Losses for Tomatoes			51,880	88%	51,880	88%
Losses for Onions			7,417	93%	7,417	93%
Losses for Frankincense (Boswellia)			2,075	17%	2,075	17%

In the rain-fed interiverine regions, which includes the cereal basket of Bay, the losses for sorghum, maize and sesame were as high as 73 percent, 52 percent and 84 percent, respectively. The Shabelle valley regions under both rain-fed and irrigated conditions experienced losses as high as 60 percent, 36 percent and 80 percent, respectively, for these three crops.

For the country as a whole, the total monetary loss associated with all four main staple food crops' output is estimated at USD 71.2 million, with that for maize and sorghum combined at USD 34.5 million, for sesame at USD 27.5 million and for cowpeas at 9.2 million (see Table 3). Note, however, that much reduced crop production in 2015 in the northwestern regions and in mid-2016 in the southcentral regions of the country compared to the two-three preceding annual averages, due to earlier drought conditions, had already caused substantial additional monetary losses to farmers.

The highest absolute monetary losses (see Table 3) estimated at USD 23 million each, were recorded in the Bay region (representing a 74 percent loss compared to the baseline) and the Lower Shabelle region (54 percent loss). Various other regions, however, experienced monetary losses in percentage terms of over 90 percent compared to the value of their baseline production: peaks of 98 percent and 96 percent losses in Middle Shabelle and in Gedo, respectively, for sorghum and of 98 percent and 92 percent in Middle Juba and Hiraan, respectively, for sesame.

In both physical and monetary terms (as illustrated in Table 3) some regions also experienced small gains for some staple food crops: the Lower and Middle Juba regions for sorghum, maize and cowpeas; Togdeer in Somaliland for sorghum and maize; and W-Galbeed for sorghum. No region however experienced an overall monetary net gain for all four staple food crops combined.

Estimated physical and monetary losses have been also very large for crops, which include two minor staple food crops (rice and legumes), banana and other fruits, two main vegetables (tomatoes and onions), and frankincense and myrrh. As illustrated in Table 3, regarding fruits, physical output losses ranged from 48 percent for lemons to 94 percent for dates, with banana recording an overall 68 percent output loss. For the main vegetables, losses were in the 88-93 percent range. Reflecting the improved level of the river since April, rice which is only grown around Jowhar in the Middle Shabelle region, recorded a combined loss of 60 percent through mid-2017. For frankincense, the Puntland government estimates a 17 percent volume loss.

In monetary terms, these losses total USD 176.5 million, equivalent to 57 percent of the estimated baseline production value for these other crops (see Table 3). In percentage terms the regions most affected were in the northeast and central zones, with Nugaal and Galgadud recording 93 percent losses, followed by Mudug with 78 percent, and Bay with 75 percent. Losses in the Lower and Middle Shabelle regions, which suffered from the failed rainfall and the drying of the river, were 74 and 68 percent, respectively. In the Juba valley, losses were smaller but still substantial, ranging from 54 percent in the Middle Juba region to 30 percent in the Gedo region. In absolute terms, the region most affected has been the Lower Shabelle region, which recorded a USD 94.6 million loss, almost half of it due to banana and the rest due to other fruits and vegetables. The northeastern Bari region came a distant second, with a USD 23.8 million loss due to a combination of high losses of dates and vegetables and small losses of frankincense. The Middle Shabelle and the Middle Juba also suffered large absolute losses, of USD 14.1 million and 11.8 million, respectively. The northcentral region of Sanaag experienced an USD 8.8 million loss, all of it accounted for by the reduced frankincense production, while the interriverine southern region of Bay recorded a USD 7.6 million loss due to its much-reduced production of the main staple food crops.[3]

Table 4: Summary Losses for Crops (in USD)

	Cost (USD)							
Crops	Somaliland	Puntland	Galmudug	Hirabelle	South West State	Jubaland	Banadir	Total
Cowpeas	-	981,833	3,366,833	333,847	5,226,893	(758,714)	-	**9,150,693**
Maize	3,559,500	-	-	2,025,465	7,901,412	(1,088,873)	-	**12,397,503**
Sesame	-	-	-	1,590,400	21,658,400	4,281,600	-	**27,530,400**
Sorghum	132,750	21,267	99,267	6,157,422	13,644,706	2,042,506	-	**22,097,918**
Banana	-	-	-	6,634,901	45,954,778	2,831,970	-	**55,421,649**
Lemon	-	104,888	-	404,567	2,022,836	404,567	-	**2,936,858**
Grapefruit	-	-	-	-	10,843,747	-	-	**10,843,747**
Papaya	-	-	547,851	-	13,696,282	240,814	-	**14,484,948**
Watermelon	-	-	-	404,567	14,834,127	8,441,607	-	**23,680,302**
Dates	-	11,447,751	-	-	-	-	-	**11,447,751**
Tomatoes	17,232	9,733,960	3,176,226	4,551,380	13,283,287	5,918,667	-	**36,680,752**
Onions	50,667	2,100,000	33,333	900,405	1,211,759	-	-	**4,296,164**
Legumes	-	14,145	-	-	344,513	-	-	**358,658**
Rice	-	-	-	1,820,552	-	-	-	**1,820,552**
Frankencense	8,745,477	14,575,795	-	-	-	-	-	**23,321,271**
Total Losses	**12,505,625**	**38,979,638**	**7,223,511**	**24,823,505**	**150,622,742**	**22,314,144**	**-**	**256,469,165**

[3] Source: FAO and Centre for Consultancy Research and Development Enterprise (CCORD), 2017. "Somalia - Crop Yield Assessment Analysis Report *Gu* 2017", September 2017

Drought Impact

The Aggregate Economic and Human Development Impact

According to the 2016 *post-Deyr* drought impact assessment by FSNAU, FEWS NET, and partners, over 1.6 million people were already classified as in 'crisis' (IPC Phase 3) or 'emergency' (IPC Phase 4) in January 2017. This was as a consequence of both the high livestock-related mortality and output losses among pastoralists and agro-pastorlists, but also of the major reductions in crop production (mostly but not solely in the southern agricultural areas) during the failed *Deyr* 2016 season, coming on the heels of a poor *Gu* 2016 harvest in the southern regions and a collapse of staple food crop production in the northwestern regions of Somaliland in 2015 due to already severe drought conditions since late 2015. In the southern agro pastoral areas, the *Deyr* 2016 production among poor households was a fraction of that during the baseline period of 2013-2015. Already by early 2017, poor households had already exhausted their cereal stocks and had become heavily dependent on markets for food. However, price spikes and declining incomes had made household access to food very costly and sometimes impossible. Many were coping through selling atypically high numbers of livestock, purchasing food on credit, and seeking assistance through community support. Of highest concern were and still are the agropastoral areas in the Bay and Bakool regions, where *Deyr* production was a near complete failure and poor households owned only a few livestock to sell as a coping mechanism.

The drying of the Shabelle River during the *Deyr* season and lasting until March 2017 also caused a major displacement of riverine farming communities, many of whose members abandoned their properties of agricultural land and moved to refugee camps in and near Mogadishu and other major cities like Baidoa, in search of food and other essentials for their households. An intensification of conflict over agricultural land, pasture and water resources among agro-pastoralists who remained on their lands, those returning after months of displacement, and others was recorded.

While there is no specific information about the number of farmers displaced by the cumulative drought through mid-2017 (i.e. through the most recent *Gu* season), the water shortages, and the livestock and crops losses affected over 5 million people, mostly from rural areas, with over 1.4 million persons still facing crisis or emergency levels of food insecurity. The drought has forced many rural people to leave their homes in search of alternative sources of food and water, with around 444,000 people since November 2016 having been internally displaced. According to the foods security cluster, the international humanitarian actors have reached over 2,800,000 people with emergency in-kind or cash/voucher emergency assistance, including ensuring that rural people remain on their farms in preparation for the next planting season.

The severe aggregate economic impact of the widespread drought on Somalia's agricultural sector, its second most important source of economic activity, employment, and exports, has been unprecedented, with total aggregate production losses estimated at USD 176.5 and total damages to assets estimated at USD 63.8 million, representing almost 4 percent of the country's 2016 nominal GDP (estimated at USD 6.2 billion by the IMF and the World Bank).

Despite such high damages and losses and the many challenges that it faces, the country's crops agricultural sector remains both viable and critical to the country's economic recovery and long-term development. If rains and especially river levels return and stay at normal levels, Somalia has much room for expanded production of irrigated cereals, oilseeds, and fruits and vegetables. The country still possesses large and partly unexploited areas with fertile alluvial soils for staple cereals, oil seeds, legumes, and horticulture crops that can support both a more efficient production and an expanded cultivated area for both domestic and export markets. Its forests, furthermore, still provide gums and resins for both export and local markets (as well as charcoal for cooking).

For its farmers to place more land under cultivation and to achieve higher productivity, under both irrigated and rain-fed conditions, however, improvements to the country's flood control and irrigation infrastructure, seed quality, pest management, and related GAPs are needed. In turn, all such improvements require stronger security in the rural areas of southern Somalia and a supportive and efficient public sector in all regions. Despite the fact that many current constraints stifle the possibility of increasing yields and land under cultivation, improved farm management practices and introduction of climate-smart agriculture (CSA), such as drought-resilient crops, use of conservation agriculture, and drip irrigation technologies, would make a large difference to key rain-fed crop such as sorghum and legume and pulses, for which both yields and total area under cultivation can be doubled or even tripled.

III. Cross-cutting Considerations

Gender: Somali women are heavily involved in crop farming at par with men and they also dominate retail marketing. For example, in banana production women fertilize and transport bananas to packing centers, while men irrigate and harvest the bananas. Women are also

mainly responsible for marketing all fruits and vegetables for domestic consumption. It is estimated that women provide more than 60 percent of labor in subsistence farming. In crop production, women and men share activities. While no data and/or farming household profiles are readily available to assess differential impact of the drought by gender, due to their vulnerability female-headed small-scale farming households are believed to be the hardest hit by the drought.

Displacement and Migration: For those regions and crops where there was a major production loss, such as those mentioned above but also in many other cases, the crop-related impact of the drought caused many farmers to flee their fields, mostly rain-fed but also irrigated ones. While it can be expected that farmers fleeing lack of irrigation due to temporary low or nil river flows will spontaneously return to their fields once river flows have returned to normal, many farmers under rain-fed conditions may choose to seek new employment opportunities in the urban areas where they can also receive more easily both aid and remittances. No information is readily available, however, on the specific rain-fed crop-related impact of the drought on such internal displacement and on prospects for their return in the near future.

Environment & Natural Resources: Despite the many challenges affecting crop farmers from deforestation, environmental degradation and climate change, it is generally believed that for the southcentral regions the pre-drought level of crop production was so far below (more than 50 percent) the pre-war levels that neither recovery to pre-drought levels nor resilience strengthening for the pre-drought level of production are constrained by the environmental challenges and natural resources limits that these regions face. In the northern regions, moreover, where crop production is actually higher today than before the civil war, the potential for enhanced water catchment is such that here too neither recovery to pre-drought levels nor resilience strengthening for the pre-drought level of production are constrained by the environmental challenges and natural resources limits that these regions face. Nonetheless, adoption of climate-smart agriculture practices is required to ensure resilience to likely future climate shocks.

Private Sector Impacts and Role in Recovery: The private sector, at least its large-scale farmers, has already invested and is investing in profitable opportunities, witnessing the remarkable expansion of sesame production and of lemon production (including for exports) compared to the pre-war years. Its role remains central in investing in new ventures, both for increasing land under cultivation and yields for commodity production and for increasing agro-processing, and in seeking to adopt climate-smart practices. No commercial investment is expected by the public sector for either recovery, or resilience, or growth, but only supportive interventions to supply public goods like emergency services to the poorest farmers, irrigation and flood control infrastructure, extension and research services, etc.

Disaster Risk Reduction and Contingency Financing: A system of private insurance, seeded and regulated by the government, against catastrophic events affecting crop production would indeed benefit farmers. The government moreover needs to offer the country's farmers reliable short-, medium- and long-term weather forecasts, using all the international forecasting resources that are available. Such a system is needed to complement the existing real-time monitoring and analysis by FSNAU and FEWS of crop production and prices.

IV. Recovery Needs

Recovery and Resilience Strategy and Interventions for Crops Agriculture

The approach needed to drought recovery and resilience is to leverage the historical strengths of the Somali people, its communities and institutions to withstand and recover from recurring natural disaster, while understanding and addressing what makes them vulnerable. In the context of the expected higher frequency and severity of future droughts, resilience building requires a rapid and tangible start towards better irrigation, flood-control, on-farm and communal storage, farm-to-market access, agricultural inputs and widespread adoption of CSA practices and drought and pest-resistant seeds. All this would also foster diversification of farming households' incomes into better quality and alternative crops (e.g., nutritious dense vegetables).

The main components of a short-term and medium-term program contributing to the above dual objectives of recovery and resilience building should include (a) rehabilitation of prewar flood control and irrigation infrastructures along the two major rivers in southcentral Somalia and their expansion in both northwestern and northeastern regions; (b) more modern storage techniques and facilities; (c) rehabilitation of prewar trunk and rural roads to improve transportation of inputs to farms and of produce to markets; (d) institutions and human capacity building, and (e) improved access to and adoption of productivity-enhancing and resilient technologies (CSA practices). Many of these components should be pursued preferably in parallel, rather than in sequence, as institution-building without investments in infrastructure will not yield tangible

gains, while initial and partial gains in production and productivity from investments in infrastructure will likely prove unsustainable without complementary institution and capacity building. In total, the short-term recovery and resilience strengthening needs have been estimated at USD 36.7 million, and USD 348.6 million in the medium- and long-term, for a total of USD 385.3 million. The following section describes in more detail these recommended interventions in order of priority.

Recovery and Resilience Proposed Interventions

Immediate recovery should be prioritized as follows: (a) supporting access by farmers to the right quantities and quality of staple food crop, crucial to ensure that they and their families don't abandon their livelihood and become destitute; (b) provision of small quantities of high-quality seeds (e.g. 15-20 kg of seeds per hectare under cereal cultivation); (c) urgently improving infrastructures for irrigation, flood-control, and rain water catchment, as well as adopting climate-smart agricultural practices, which are indeed both main areas of intervention listed in the NDP 2017-2019; (d) revival/rehabilitation of pump fed irrigation systems will contribute to the efficiency of pump usage/operation, increase crop production/income and ultimately food security of farming communities; (e) the rehabilitation of deschek systems/infrastructure will help farming communities to use floodwater efficiently and reduce/mitigate the risks associated with this type of farming; (f) support rehabilitation/construction of water harvesting infrastructure with knowledge/skills transfer programs and a better regulatory/policy framework that would help both agropastoral and pastoral communities, ultimately contributing to food security and famine prevention; and (g) the rebuilding of a functioning, effective agriculture research and extension system is needed to promote sustainable CSA farming methods.

In addition to the above top priority interventions, other recovery interventions which are also important to both resilience strengthening and sustainable growth of the crops subsector have been identified and costed.

Table 5: Summary Needs for Crops (In USD)					
Summary of Drought Recovery Needs					
Intervention	Level of Activity	Timeframe (USD)			Cost (USD)
	(national/ regional)	Short-term (Year 1)	Medium-term (Years 2-3)	Long-term (Years 4+)	
Improving access to quality agricultural inputs for vulnerable rural population and returnees	National	X	X	X	95,500,029
Irrigation canal rehabilitation	National	X	X	X	150,040,098
Recovery/resilience of banana plantations (small and large)[4]	National	X	X	X	9,752,500
Improving farm management practices (incl. SMART, post-harvest handling, etc.)	National	X	X	X	50,000,013
Institutional capacity building for better governance	National	X	X	X	19,000,006
Rebuilding agriculture research and extension system	National	X	X	X	41,000,012
Strengthening informal and building formal seed system	National	X	X	X	20,000,006
Water and watershed management	National	X	X	X	115,000,000
Total Agriculture - Irrigation and Rain-Fed Crop Production Needs					500,292,664

Assessment Considerations

Seasonal crop production: The period 2013-2015, during which the southern regions of Somalia experienced normal rainfall conditions, was taken as the baseline. Production estimates available from FSNAU for the four main staple food crops before and during the recent 2016/2017 drought period were compared to derive directly their production losses (their areas under cultivation and baseline yields are reported only for information purposes). Conversely, for most other crops where direct production estimates by FSNAU are not available, areas under cultivation before and during the most recent drought period were estimated via satellite imagery. These areas were multiplied by average baseline yields (recent 'normal' seasonal yields) suggested by Somali experts. Production losses were then calculated as the difference in the associated total production estimates, and cross-checked with Somali experts' rough percentage crop losses estimates.

[4] Justified by the fact that banana is the only crop whose trees were actually killed by the drought. The banana crop was the only one to experience damage, while others experienced only losses.

Pre-disaster baseline prices: Includes staple food crop production and retail price figures from the regions from the 2013-2015 FSNAU data base. Due to non-availability of baseline farm gate prices, these have been estimated as 98 percent of the FSNAU-reported retail prices at the village level (closest to the producers). Pre-drought farm gate prices for other crops have been estimated especially for this DINA via a quick survey conducted by Ipsos.

Crop failure: For areas in 2016/2017 highly affected by the drought, a total crop failure was assumed. For areas moderately affected, a 50 percent crop failure was assumed. Farm gate crop prices during the baseline period derived from the village retail prices surveyed by the FSNAU or especially surveyed for the DINA, were subsequently used to calculate crop losses in monetary terms.

Damages to agricultural assets: Two types of damages have also been estimated. One relates to the drought-related damage to the irrigation and flood control infrastructure, stemming from two causes: the trampling by animals over river embankments and shallow canal walls in their stampede to reach scarce water sources, and their silting and associated rising floor levels from barren soil blown by the wind into river and canal beds. Care was taken for this damage to be estimated conservatively and only as relates to the recent drought, with specific damage and monetary repair cost parameters described in the relevant section above.

Recovery needs for the short-term: Estimated as the minimum cost of the interventions (including lost assets' replacements) required by the public and private sectors to return to pre-drought production levels. Resilience strengthening in the medium and long term were estimated as the minimum cost of the package of interventions required to mitigate (to no more than 30 percent) the damages and losses from a future large-scale and two- to three-season long drought similar to the one experienced in 2016/2017, as well as from (alternating) floods.

Agriculture – Livestock

I. Overview and Pre-Drought Conditions

Livestock is the major source of livelihood for Somalis. Over 60 percent of the populations in Somalia are dependent on livestock for their livelihoods. The sector provides food, employment and incomes and contributes 40 percent of the GDP and 80 percent of the foreign currency earnings, excluding cash remittances from Somalis in the Diaspora, with its exports being the Horn of Africa nation's leading foreign exchange earner. The growth has been boosted by continued export-focused interventions, "good prices", and growing markets in the Middle East. Recent statistic on livestock export from FAO shows Somalia exported 4.9 million goats and sheep, 295,000 cattle and 72,000 camels in 2016. The export of live animals, hides, skins and chilled carcasses with live animals account for over 70 percent of total livestock and livestock products trade and generate the foreign currencies for importation of food items and thus contributes significantly to ensuring food security in Somalia, and accounts for up to 80 percent of total exports in an average year.

Livestock is the source of livelihood for pastoralists, contributes to Government revenues, and provides employment to a wide range of professionals and other service providers. The pastoral based livestock sub-sector secures direct job opportunities for over 55 percent of the total labor force, plus indirect employment for another large segment of the labor force along the various livestock value chains. Somalia has two main livelihood systems related to land-based agriculture: pastoralism and agro-pastoralism. Pastoralists, about 26 percent of the total population, are mostly nomadic, poor, and found throughout all rural areas of Somalia. Agropastoralists, about 23 percent of the population, depend on both settled crop production and livestock rearing (or only the former), are also mostly poor, and live mostly along or in between the two major rivers in southcentral Somalia, but also in a few other parts of the southern and north-western regions with underground water and high annual precipitation.

In the last three decades, the annual precipitation has become lower than the long-term average, and more erratic, variable, and unreliable, shortening the historical cycles of recurrent droughts and resulting in impaired livestock and especially crop production. The annual rainfall ranges are a low of 100 mm in the northern coastal and central regions where agriculture is dominated by livestock grazing on their vast rangelands, gums and resins production from wild trees, and only limited oasis crops cultivation. But rain-fed farming, mixed in with livestock rearing, is common in the inter-riverine areas between the Shebelle and the Juba rivers and in the north-western regions, where the annual rainfall ranges from 400 to 600mm.

According to the FSNAU data, the livestock population in Somalia as of 2014 is estimated to be about 52 million animal heads, in which 36,561,961 of them are sheep and goats, 6,611,835 camels and 3,930,383 cattle.

Table 6: Total Estimated Livestock Population Before Drought

Region	Total # of Camels	Total # of Cattle	Total # of Goats	Total # of Sheep	Total Livestock Population Estimate
Awdal	396,890	65,696	2,332,466	1,088,945	**3,883,997**
Woqooyi Galbeed	564,659	96,567	2,745,465	1,139,224	**4,545,914**
Togdheer	496,815	5,018	1,952,918	582,689	**3,037,441**
Sool	236,260	0	1,541,657	1,267,790	**3,045,707**
Sanaag	233,942	0	2,842,832	2,044,901	**5,121,676**
Baru	86,649	0	1,496,383	745,638	**2,328,669**
Nugaal	377,872	0	1,959,593	1,217,801	**3,555,266**
Mudug	437,672	13,070	2,057,841	881,057	**3,389,640**
Galgaduud	461,495	33,978	2,031,000	850,953	**3,377,426**
Hiraan	638,935	347,044	1,995,619	680,917	**3,662,516**
Shabelle Dhexe (Middle)	156,138	185,540	1,099,778	521,759	**1,963,214**
Shabelle Hoose (Lower)	286,770	535,447	981,022	464,193	**2,267,433**
Bay	361,562	800,964	1,171,477	117,007	**2,451,010**
Bakool	617,905	369,601	1,459,008	408,830	**2,855,344**
Gedo	770,894	336,629	1,825,849	750,202	**3,683,575**
Juba Dhexe (Middle	165,335	520,175	478,247	393,329	**1,557,086**
Juba Hoose (Lower)	322,042	620,654	732,224	492,673	**2,167,593**
Total	**6,611,835**	**3,930,383**	**28,703,379**	**13,647,910**	**52,893,507**

Table 7: Livestock Export (2012-2017)				
Somalia Livestock Export 2012-2017				
Year	Species			Total
	Camel	Cattle	Sheep and Goats	
2012	124,952	266,397	4,411,787	**4,803,136**
2013	94,760	279,229	4,238,078	**4,612,067**
2014	76,829	340,156	4,528,703	**4,999,688**
2015	72,420	294,992	4,946,602	**5,314,014**
2016	67,985	220,838	4,387,967	**4,676,790**
2017	1,752	30,443	1,014,732	**1,046,927**

Livestock marketing and trade also generate revenues for local administrations, through taxation of livestock destined for trade. The livestock exportation rate has increased in the last five years, as Somalia exported 4.7 million animal heads in 2011, 4.8 million in 2013, 5 million in 2014 and 5.3 million in 2015, injecting more than USD 360M and USD 384M in 2014 and 2015 respectively.[5]

Table 7 shows the estimated total number of animals exported from Somalia.

Livestock export trade is constrained mainly due to the December 2016 Saudi ban on imports of livestock from Somalia due to a (misplaced) concern related to a communicable disease outbreak, the impact of the recent drought on animal health and physical status and disease out breaks including Trans-Boundary Animal Diseases (TAD). However, recently, Saudi Arabia is reported to have just allowed the resumption of import of a certain number of livestock from Somalia. However, as indicated in Figure 2, Somalia's total exports of livestock in 2017, as of August, stands only at 1 million heads. The large proportion of the annual livestock export takes place before the Haji event which was held in August. Therefore, even if there will be large scale exports in the remaining months, which are most unlikely, the total export amount and the corresponding value will remain significantly lower than that of 2016. Livestock exports to KSA and Gulf countries through the bordering countries such as Djibouti cannot be ruled out. However, this is not documented.

The value of livestock exports was USD 533 million for the whole of 2015, according to the U.N. Comtrade statistics (partner countries reporting). The volume shortfall recorded so far for the year 2017, implies approximately USD 400 million of export revenue losses in 2017, bringing the total cumulative monetary loss

Figure 2: Somalia Livestock Exports 2012-17

from the drought to over USD 2.6 billion. The informal cross- border livestock trade has grown significantly in the pastoral areas of the Horn of Africa. It continues to provide local and regional food security, meat supplies to large urban centers, and contributes to poverty alleviation amongst pastoral communities.[6] The cross-border trade has been reported to be the largest income earner for herders, traders, brokers, transporters and butchers. Even though the cross-border trade is unorganized, it is linked to the formal trade which is export-oriented. It is noted that the cross-border trade on the Kenya/Somalia border, though largely informal, is highly successful.[7] Due to its informal nature, there is no official screening and documentation, and therefore the volumes have not been determined. A study commissioned by FAO in 2012 found that provision of adequate water for trekked animals, and feed access along the livestock trade routes

[5] Federal Government of Somalia. 2016. National Development Plan (2017-2019).
[6] Little, P.D. 2009. Hidden Value on the Hoof: Cross-border trade in East Africa. Policy Brief No. 2.
[7] Ibid.

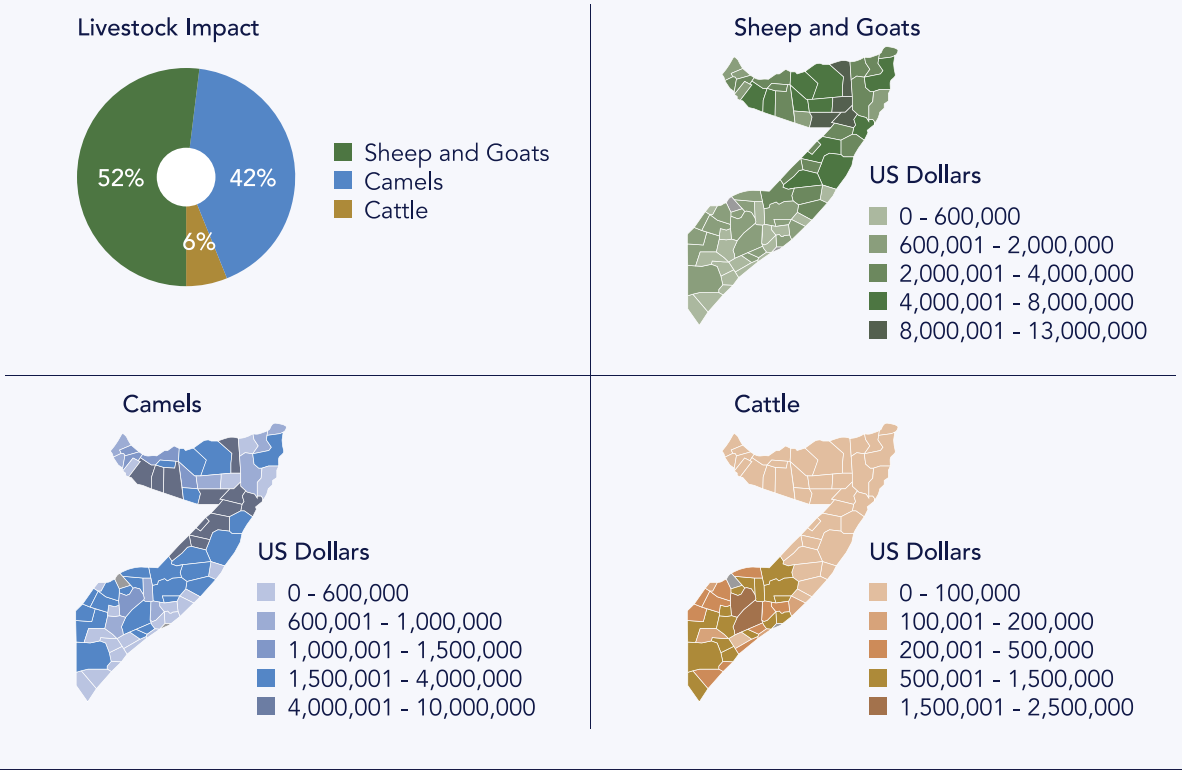
are some of the measures that could promote cross border livestock trade. It was noted that the cost of water escalates during the dry seasons and animals have to be trekked over long distances in search of water points which are distributed haphazardly making it difficult for trekked animals to access water in the dry season. The same case applies for pastures which are overused and further degraded during the dry season. The study recommends the Ministries of Livestock, Agriculture, environment and natural resources and other players to work closely together to provide the necessary physical infrastructure, improve water resource management, natural resource and environment management, and develop agro pastoral practices that are necessary in promoting such trade.

II. DINA Findings and Drought Impact

Drought Effects

Despite the vital role of livestock trade to the economy in generating incomes and contributing to food security; periodic droughts affect the economies of the Somali regions badly. Insufficient rain and water availability towards the end of 2016 severely reduced water and pasture availability for livestock. This in turn caused fodder and water prices to rise beyond the means of farmers and pastoralists who, in parallel, lost their income and suddenly became dependent on market purchases of food for their survival. With each passing season, the losses intensified and compounded.

Figure 3: Estimated Economic Losses from Livestock due to Drought – Somalia, 2016-17[8]



[8] World Bank and Ipsos. 2017. Somalia Drought Impact and Needs Assessment (DINA).

Hydrological drought results from the failure of one or more consecutive rain seasons and its effects on the livestock sector are mainly manifested in the form of lack of or insufficient water and pasture to maintain the production and productivity of animals. Due to the recent droughts, water and pasture availability have significantly deteriorated and led to severe morbidity, lower resistance of livestock to common diseases and death of huge number of animals, to the extent that 60 percent livestock were lost in severely affected areas, implying a significant effect on the livestock dependent economy and livelihoods of the people. Livestock export trade is constrained mainly due to the December 2016 Saudi ban on imports of livestock from Somalia. Other factors affecting the livestock production and trade include: political instability, conflict, civilian displacement, and floods.

Damages and Losses

The consecutive failure of the *Gu* and *Deyr* rain fall seasons have resulted in huge damages and losses on the livestock sector. For this year, though limited, the *Gu* rains somewhat replenished animal water sources and regenerated pasture, which does not require much time or water to grow but is very limited in nature and provides little relief to pastoralists.

Damage in the sector refers to the death of animals due to lack of water, pasture and disease prevalence, while loss refers to the effect of drought on the production and productivity of livestock. It is estimated that during the drought, Somalia lost over 6.4 million of its total livestock population valued at over USD 350 million in addition to losses in productivity in terms of milk yield and body weight valued at about USD 1.2 billion.

51 percent of the Somali population lives below the poverty line of USD 1.9 per day.[9] Livestock losses have been very high among poor families, averaging 40-60 percent in the north and 20-40 percent in the center and south. The livestock damage and loss for Somalia was estimated based on the FSNAU matrix indicated below in Table 8.


© UNDP Somalia

[9] World Bank. 2017. Somali Poverty Profile 2016: Findings from Wave 1 of the Somali High Frequency Survey.

Table 8: Summary Table of Damage and Losses for Sector (in local currency and USD)						
Region	Total Livestock Damage (Death) Value (USD)	Total Livestock Loss Value (USD)			Total Livestock Damage and Loss Value (USD)	Percent from Total Damage and Loss
		Milk Loss	Live Weight	Total		
Awdal	10,046,200	20,703,083	28,252,725	48,955,808	59,002,008	4
Woqooyi Galbeed	15,047,638	22,668,412	46,012,239	68,680,651	83,728,289	5
Togdheer	30,299,037	61,044,301	60,664,688	121,708,989	152,008,026	9
Sool	41,962,040	31,895,036	43,597,824	75,492,859	117,454,899	7
Sanaag	36,505,812	35,332,428	71,515,974	106,848,401	143,354,213	9
Bari	22,065,447	13,873,480	42,920,638	56,794,118	78,859,565	5
Nugaal	40,413,776	47,288,549	79,912,256	127,097,911	167,614,581	10
Mudug	34,054,457	53,376,114	67,721,797	121,097,911	155,152,369	10
Galgaduud	31,404,304	58,759,910	62,752,610	121,512,519	152,916,823	9
Hiraan	17,032,203	33,064,790	47,925,879	80,990,669	98,022,872	6
Shabelle Dhexe (Middle)	4,383,049	4,917,367	20,668,690	25,286,056	29,969,105	2
Shabelle Hoose (Lower)	8,743,316	10,370,331	33,237,647	43,607,978	52,351,293	3
Bay	13,362,385	17,902,330	29,355,211	47,257,541	60,619,926	4
Bakool	13,987,630	22,278,858	35,903,408	58,182,266	72,169,896	4
Gedo	20,908,982	38,173,336	56,076,025	94,249,360	115,158,342	7
Juba Dhexe (Middle)	4,076,406	5,799,757	15,829,656	21,629,413	25,705,819	2
Juba Hoose (Lower)	6,395,010	17,481,507	25,040,185	42,521,693	48,916,703	3
Total	**350,687,691**	**494,929,586**	**767,387,452**	**1,262,317,038**	**1,613,004,729**	**100**

As indicated in the map above, the effect of the drought on sheep and goats has been worse in the northern part of the country due to the severity of the drought in these parts but less so in the south due to riverine regions which provided sufficient water and fodder for livestock. The low level of impact on cattle in the north is due to low cattle population in the region so in terms of numbers affected, it is less. Camel density in the south-eastern part of the country is less, hence the low value in terms of total impact.

Drought Impact

The economic impact of the drought is estimated to be over USD 1.6 billion in total damages and losses to the sector, impacting on livelihoods, food and nutrition security and livestock-related businesses.

Medium to Long-Term Projections on the Sector and Impact on Development Goals

Somalia has launched its first National Development Plan after the central government collapse in 1991 which prioritized the country's recovery and developmental goals for a period of three years (2017-19). Due to the drought, most of the projections and targets of 2017 weren't achieved, including the funds allocated for different activities. The absence of the urgently-needed interventions may lead to the delay in planned and expected achievements for the rest of the year as well as for that in 2018. The continuation of the drought without a clear response will also negatively affects the sector contribution to the country's economy, employment and livelihood support.

Potential Scenarios if Policy and Programming Measures are not taken

As drought had massive economic, livelihood and human impact, rapid interventions, and policy and programming measures are necessary to be taken. Failure of this rapid response to the drought will cause the death and damage of more livestock numbers, reduction of the product value, deterioration of more households' livelihoods, and high susceptibility to the expected coming droughts and climate shocks. During the drought, high number of livestock owners sell their animals to the market for slaughtering, this along with high losses of livestock due to the drought will lead to the decline of national herd size, sharp decline to animal prices due to the demand/supply principle and thus poor livelihood for livestock holders. In addition to this, sharp decline of livestock production (milk, body weight etc.), increase of animal disease occurrences, low conception rate and high abortion rate, and inadequate feed and water availability are among the expected scenarios if clear measures are not taken.

Major Challenges for the Sector

According to the National Development Plan, the major challenges for the sector include the continuous natural and climactic shocks that livestock holders face (droughts, floods, range degradation and low rainfall) and livestock diseases including trans-boundary threats which makes the drought impact more severe and broad.

Absence of fodder reserves and alternatives for fodder/feed during dry and lean seasons and dependency on only rain-fed farming leads to a large number of animal losses annually which reaches its peak during the drought and famine periods. Along with the normal low productivity of Somali livestock breeds and loss of large quantities of animal products due to lack of proper storage, processing and cold facilities, the drought caused huge losses to the milk and reduction of livestock body weight.

The absence of allocated budget by the government to the sector, low investment from the private sector and limited budget support from donors to the livestock development programs, hinders the establishment of drought mitigating initiatives and developmental programs. Weak government institutional capacity and lack of central coordination between all the sector working organizations led to overlapping activities, lack of rapid response to shocks as well as poor inter-agency cooperation.

III. Cross-cutting Considerations

Gender: Both male and female dependent households owning relatively small herd size mainly of small ruminants are also considered vulnerable to natural disasters. Women in Somalia are heavily involved in subsistence farming which entails milking the animals, processing the milk, feeding the family, and taking care of livestock. There are women involved in smallscale enterprises, selling milk, meat, hides and skin in the urban areas. According to a study on the Somaliland meat value chain, women are reported to play a very significant role in the livestock and meat marketing chains in Somaliland.[10] About 70 percent of slaughter activities and the marketing of livestock products and by- products, milk, ghee and dry meat, were undertaken by women. In cases where women lack ownership and access to various productive assets, they are involved in micro and small enterprises to supplement their family food and income sources.

[10] FAO. 2011. Towards A Competitive Somaliland Livestock and Meat Industry: Analysis of Somaliland Livestock and Meat Value Chains.

Women lack ownership and have limited access to productive assets. They are therefore affected most by the drought conditions. The other effect of drought is temporary loss of business opportunities for women who depend on marketing of livestock and livestock products. Drought affects production and income from backyard enterprises such as poultry production. In times of drought, the cash flow is affected as business funds are diverted to buy critical food supplies which leave such businesses to crumble.

Targeting men, women and youth with appropriate interventions can close the gender disparity gap. This can be achieved through promoting women in management of community assets, promoting joint ownership or sharing of replaced productive assets and livestock between spouses, training women, and designing gender responsive credit schemes and financial services to increase their work and employment opportunities in agriculture sector. This is in addition to supporting them with productive assets such as home-based business equipment and production tools as well as backyard economy assets to get them on recovery path.

Conflicts development nexus: During drought communities or households located in inaccessible areas are likely miss out on emergency supplies of water and fodder for livestock. These in most cases foment displacement to urban areas or cross border areas in search for services. This could result in further conflicts with the host communities. In the past, FAO experienced challenges in accessing livestock in some regions of Somalia for vaccination, due to insecurity concerns. The livestock had to be moved to bordering safe regions to access the vaccine.

Social Protection & Safety Nets: Men, women and children are affected by drought differently. Migration of men and livestock during the drought period may lead to family splits which could have a long-term effect the family unit. Loss of remaining livestock due to drought could force women and children left behind to migrate to urban areas to access food and basic needs. There are limited livelihood diversification opportunities among livestock dependent households who are mainly pastoralist.

Promoting safety nets for a minimum of social protection through different programs, tailored to women and men's household needs, can secure their basic needs on a daily basis and ensure their survival in the event of a shock. For example, supporting women smallholder groups through the organization and establishment of cooperatives and promoting dissemination of gender sensitive information on available services. The safety nets should provide a foundation to embrace sustainable productive activities, access basic social services, and facilitate longer-term livelihood recovery and development. The focus areas include: good health, adequate nutrition and education, safety and adequate skills.

Displacement and Migration: During drought, there is abnormal massive movement of people with their livestock in search of grazing land and water. These movements are internal and cross-border. Whereas generally some of the movements are temporary, the frequency and intensity of drought has led to actual migrations. For instance, during the last drought period in 2011, huge numbers of people moved across borders in the region and beyond in search of safety, food, pasture, water and livelihood opportunities. Migration through perilous routes exposes the already vulnerable population to numerous risks. There is need to consider policy and investment options in addressing these issues, taking into account the delicate balance of maintaining pastoralists' mobility and lifestyle vis-à-vis environmental conservation, population growth and state security. Other ways of addressing the migration challenge is establishing/improving a monitoring system of seasonal forecasts of potential drought conditions, spatial monitoring of pasture availability, and promotion of commercial livestock off take to allow early reduction of herd sizes.

There is also an increasing number of internally Displaced persons (IDPs) within Somalia including a high proportion of women (SNDP) who have settled in the urban and peri-urban areas. Women and children are reported to comprise 70-80 percent of all refugees and IDPs. These are mainly pastoralist dropouts who relocate in these areas expecting to receive humanitarian aid after losing all their livestock to drought. It has been observed that IDPS supported with productive animals are able to rebuild back their assets and resume livestock production post drought. Other triggers of urban migration are insecurity in some parts of Somalia and migration in search of employment.

Environment & Natural Resources: The increasing frequency and intensity of drought has put more pressure on already degraded pastures leading to reduction in grazing resources. Pre-war traditional forms of natural resource management and control systems using paddocking and rotational grazing was abandoned due to the collapse of the government's ability to enforce

appropriate rangeland management practices. Over the years feed for livestock has reduced due to a shift in land use attributed to expansion of land for cultivation and increased charcoal production. During drought, there is increased use of private enclosures for grass, which interferes with grazing routes. Most of the harvested surface rainwater is also depleting rapidly. Although some improved dams exist whose bottoms and sides are cemented and covered to ensure that water is not lost to evaporation and seepage this is not sufficient. These permanent sources provide water for the majority of town supplies and act as buffers to drought. The increased demand for water for livestock during drought increases unplanned private water development (especially for berkeds, wells). These water sources have exerted pressure on surrounding rangelands as they collect in large numbers for watering causing further environmental degradation.

Private Sector Impacts and Role in Recovery: The revival of Somalia economic sectors largely depends on the strengths of the Somalia's entrepreneurial private sector. The private sector is pivotal in the growth of livestock trade, which remains the backbone of the economy. The private sector supports with the provision of essential services and infrastructure development. The veterinary clinical services are exclusively in the hands of the private sector, the Livestock Professional Associations. In Somaliland and Puntland, the Government and business community negotiated an agreement with Saudi Arabian Company (SEIVQMC) to establish quarantine stations to facilitate the livestock export to major export markets in Saudi Arabia. The export slaughterhouses are owned by the private sector.

During drought, the livestock emergency response activities were mainly implemented by FAO through the private voluntary organization such as the regional Livestock Professional Associations, NGOs, and government parastatals, with supervision of the government. With the Government working closely with the livestock professional associations, about 12 million livestock were treated for drought related diseases/ infections in entire Somalia. Strengthening the enabling environment for livestock private sector development is critical. It entails reducing the cost of trade, improving access to finance and inputs, and catalyzing private sector investment into high priority sectors.[11]

For sustainability, the private sector can be supported to provide animal health services (targeted disease surveillance vaccination and treatment) for priority diseases and commercialized fodder production among others.

Disaster Risk Reduction, Drought Resilience and Contingency Financing: Where the impacts of drought can be reduced with the construction of water or market infrastructure, and DMA plans with other sections of government, donors need to prioritize those investments on the basis of their dual value – economic growth and risk reduction. The construction of priority infrastructure is shared with the private sector, infrastructure & agriculture, and livestock (productive sector).

In communities chronically affected by drought and where key early warning indicators are known, DMA should establish centers to serve FMS, private sector and individuals to monitor and provide alerts for changing conditions as well as to support early action to be taken to minimize loss and hardship. Also, local disaster response mechanisms should be established to work together with government, private and local interests to ensure the safety of the local population from disaster.

Drought preparedness plans should guide communities on: specific actions to take before, during and after a drought; communication channels on drought conditions across communities and with monitoring agencies; and modalities to implement systems for monitoring drought impacts. Preparedness planning will have specific benefits for communities, including improved water management and food storage, increased drought awareness and reduced future livelihood losses due to protection of feed and animals from drought impacts. There is the need to explore Sharia-compliant Islamic insurance schemes for the livestock sector in the near future to de-risk investment in the sector.

IV. Recovery Needs

Recovery Strategy for the Sector

To ensure durable and applicable recovery strategy for the livestock sector, it should ensure proper post-drought interventions, enhancing livestock production, feed and water availability for the livestock and livestock holders and better financing and investing opportunities for the sector interventions and initiatives. Most vulnerable groups such as women, the aged, female dependent households, and populations in remote and dry areas should be given priority.

The loss and damage of animals during drought season was mainly due to lack of sufficient feed and water available for them which led to deaths of large number of animals and reduction of productivity (milk production, body weight, fertility etc.) of the surviving ones. Thus, the country to recover from the impact of

[11] Federal Government of Somalia. 2016. National Development Plan (2017-2019).

the drought and high losses and damage in the sector needs a resilient strategy on feed and water availability to livestock, supporting the livestock households especially the vulnerable groups, improving the veterinary health services, ensuring enough financing and investing on drought mitigation initiatives, and encouraging all the stakeholders, particularly the private sector, to participate.

Interventions for resilience in the medium term (1-3 years): (a) Rehabilitation of livestock watering infrastructure on the rangelands and provision of dedicated watering facilities along the banks of the country's two main wet rivers and its many dry rivers; (b) Planting autochthonous trees and introducing more nutritious and drought resistant grass-bushes; (c) Ensuring better animal health service by training community-based animal health service providers, and establishment of, and technical support for, community based agrovet operators; (d) Improving laboratory facilities for disease diagnosis, antimicrobial testing, confirmatory disease diagnosis and animal food residue testing to ensure food safety; (e) Stronger governance related to access to, and use of, available rangeland and water; (f) Support improved breeding management practices to avoid inbreeding and promote use of local superior genetic pools; (g) Enhance governance of livestock value chain actors; (h) Identify Public Private Partnership (PPP) opportunities with existing and newly established infrastructure facilities (fodder sheds, honey houses and poultry input storage facilities); (i) Support the creation of pastoralists and agropastoralists producer organizations as well as market linkages between producer organizations and input and output markets for livestock and livestock products; (j) Facilitate the creation of linkages between producer organizations (POs) and business development service provider.

Interventions for resilience in the long term (3+ years): (a) Strengthen capacity for clinical Veterinary services – risk based surveillance for Transboundary Animal Diseases (TADs); community based early warning systems; community based animal health delivery network; quality assurance of veterinary drugs; and vaccination against prioritized diseases; (b) Feed and water development and supporting large scale fodder productions and establishment of strategic "fodder banks"; (c) Poultry production and supporting village based poultry feed production utilizing local resource feed base; training and supporting women and youth groups with poultry production inputs; technical support in production and marketing; (d) Bee keeping; (e) Genetic research and breeding with the focus on selective breeding within the existing stock to take advantage of its time-tested capacity for adaptation, resistance, and rebound to harsh climate, severe droughts, poor feed quality, and endemic diseases; and (f) Strengthened regulatory capacity of the Veterinary Services to supervise and regulate quarantine operations and certification for trade.

Needs and Interventions for Recovery in the Short Term (next 12 months): The main livelihood objective during the recovery phase is to rebuild livestock assets. This will be achieved mainly through: (a) Veterinary services provision; (b) Feed and water provision; and (c) Livestock redistribution. Annex 2 indicates in more detail the above outlined recovery interventions required for the livestock sector.

Recommendations for DRR and Building Resilience in Sector

To ensure enough feed available for the livestock private investment in commercial fodder production should be supported and expanded as well as strengthening capacities to deliver extension services to farmers and supporting fodder seed bulking. Improving the processing, storage, and transport of fodder to minimize wastage and quality losses and to ensure year-round availability should be also emphasized.

The key elements in the drought resilience strategy should be to develop capacity for public and private veterinary service providers, disease surveillance, diagnosis facilities and laboratories, establishing early warning systems, emergency preparedness and immediate response.

Rebuilding herds of poor agropastoralists' to pre-drought baseline levels and providing them with the right livestock composition, which ought to include not only more drought-tolerant animals like goats but also larger animals such as camels, that are usually never included because of their high cost. This will be done through the long-term interventions on genetic research and breeding. Gradual shift in herd composition towards more drought-tolerant animals and less thirsty and drought-sensitive animals will also be promoted.

To mitigate water stress, harvesting rainwater in underground ditches and berkads should be adopted.

Table 9: Summary Needs for Livestock					
Summary of Drought Recovery Needs[12]					
Intervention	Level of Activity	Timeframe			Cost (USD)
	(national/ regional)	Short-term (Year 1)	Medium-term (Years 2-3)	Long-term (Years 4+)	
Vaccination against prioritized diseases (PPR/CCPP/SGP);	National	X	X	X	66,500,000
Supportive Treatment (on need basis)	National	X	X	X	13,860,000
Strengthening community based animal health service delivery (CAHWs training and kits supply) and linking them with the private sector	National	X	X	X	1,134,000
Establishing mobile clinics	National	X	X	X	500,000
Rehabilitate laboratory facilities	National	X	X	X	250,000
Strengthening the public veterinary service and SPS	National	X	X	X	2,500,000
Feed Supply (Range Cube and Mineral Blocks) and feed stores Construction/ Rehabilitation	National	X	X	X	1,000,000
Fodder production and Management	National	X	X	X	3,000,000
Redistribution (1 percent of the total damage for Sheep and Goats (167,317) among very poor and poor households) with focus in South Central regions)	National	X	X	X	6,000,000
Rehabilitation of livestock water infrastructures	National	X	X	X	4,000,000
Rangeland Management	National	X	X	X	5,000,000
Capacity Development	National	X	X	X	2,000,000
Poultry Production	National	X	X	X	1,250,000
Bee keeping	National	X	X	X	1,000,000
Genetic research and breeding	National	X	X	X	2,500,000
Total Agriculture – Livestock Needs					110,494,000

[12] Given the ongoing nature of the drought, the cost and extent of recovery needs interventions will be updated as part of the subsequent Recovery and Resilience Framework (RRF) process.

Assessment Considerations

In the absence of government livestock population census data, the study relied on FSNAU household data for the analysis and validated by the Ministry of Livestock, Forestry and Range personnel on the livestock sector team. Below are the approaches used in arriving at the estimated damages and losses;

Damages: Refers to livestock deaths and is calculated as per the percent estimate for each of the losses in the regions, based on the severity of the drought. The value is calculated based on the number of animals that died, multiplied by the average price during the baseline period of 2013-15. Average prices are based on farm gate prices, which were estimated to be 35 percent less than the prices from major markets where FSNAU market surveys are conducted on regular bases.

Losses: Refers to the loss of milk and live weight of animals (mainly camels, cattle, sheep and goat) calculated based on the FSNAU damage and loss estimates for each region.

Milk loss: Given that milk prices during the peak of the drought season was not known to compare the prices of milk during the baseline period (2013-15) to estimate the losses, the analysis used the estimated percentage losses of milk due to drought to calculate milk volumes lost, and further computed the monetary value of the losses. In each region, the milk yield under normal condition is multiplied by the percent loss. Key assumptions for calculating milk yield by species:

- *Camel:* Lactation period= 12 months (365 days); Production = conservatively used average of 6 liters per day
- *Cattle:* Lactation period= 8 months (240 days); Average production of 1.8 liters per day
- *Sheep and Goats:* Lactation period – 60 days; Average production of 0.7 liter per day

All the above estimates are for normal years, and are multiplied by the respective percent loss estimate for each region to estimate the total loss for the drought period.

Live weight: Similarly, the region-specific percentage losses were used to calculate the value of live weight of emaciated animals and compared with the normal year situation in terms of weight.

Agriculture – Fisheries

I. Overview and Pre-Drought Conditions

Somalia's marine fishery dominates the fishery sector. Coastal communities are heavily dependent on fishing, carried out mostly by men. Women dominate fish processing, trading, and support activities and some women are multiple boat owners, although there are no specific numbers available to quantify the division of labor in the sector between men and women. Fishing is however a seasonal activity for many rural dwellers, including pastoralists, and often an important source of supplementary food and cash income. On much of Somali's Indian Ocean coastline, fishing ceases entirely during the months of the strongest southwest monsoon season (June-September) and many communities return to a pastoral existence.

Fish consumption in Somalia is one of the lowest in Africa, at about 3.1 kg per capita (2009 data – no more recent data exists).[13] Most Somalis are still rooted in their pastoralist tradition and have a strong preference for meat. Coastal populations have always eaten fresh fish, but traditional resistance to its consumption remains due to poor handling, lack of ice and basic storage and processing facilities.

The Somali fisheries sector is general poorly documented in terms of reliable data. This is a recurrent issue across the sector that hampers the work of development planners and analysts. This lack of data is compounded in the inland fishery by security problems in much of the relevant regions (in the Juba and Shabelle River basins), which prevent or severely restrict access. As a result, there is no accurate assessment of the number of fishers. A report by FAO/Smartfish confirms that there is little scientific evidence available on the status of marine fishery resources due to the lack of data and research capacities.[14] No information is available on the status of the inland fish stocks.

There is no history of aquaculture but there is a small inland fishery sector mostly based on two riverine systems - the Shabelle River (flowing through Hiraan, Middle Shabelle and Lower Shabelle) and the Juba River (flowing through Lower Juba, Middle Juba and Gedo). According to FAO FishStat data, total inland production has stagnated at 200 MT per year over the last decade.

[13] World Bank and FAO. 2017. Somalia: Rebuilding Resilient and Sustainable Agriculture (draft).
[14] Breuil, Christophe and Damien Grima. 2014. Baseline Report Somalia. SmartFish Programme of the Indian Ocean Commission, Fisheries Management FAO component.

The lower reaches of southern Somalia's two permanent rivers have been fished by share cropping communities for generations and locally fish is highly valued as a good source of food, particularly so in watersheds where tsetse fly (Glossina sp.) mean little or no livestock is available for consumption.[15] This attitude does not extend beyond these communities, however, and fishing activity and fish consumption further upstream is less established. FAO site visits around Jowhar in 2016 confirmed that existing fishing skill and equipment are rudimentary, with considerable room for technical improvement and, if well managed, also for expansion dependent on the state of the fish stocks. Current fishing methods, predominantly using traps and hand-lines in the southern reaches of the river, are being supplemented by the provision of rowing boats.

Because these fisheries are highly seasonal, they tend to form part of a risk-spreading strategy, as one of several activities that households engage in.[16] Fishing can provide a fall-back source of food and income in years when local rainfall events lead to crop failure. Fisheries represent one of the most important benefits to society that aquatic systems provide, often sustaining the livelihoods of poor rural communities. Furthermore, the riverine fisheries activity is exclusively traditional, highly seasonal and restricted to drier months of the year, with the supply of fish largely available during drier periods from December to May. The FGS has assumed a similar pattern of activity for the riverine fisheries in Somalia.

Table 10: Baseline Data for Income From Fishing

Income From Fishing								
River	Region	Number of HH	50% of number of HH heavily involved in fishing	Catch of fish per day per HH (kgs)	Fish catch SOLD per day per HH (kgs) for income purposes	Price of fish (USD/kg) - based on FAQ data October 2017	(Daily) Value of the income from fish component of HH livelihood	Pre-drought baseline value of fisheries to all riverine HH, in that region (per day)
Shablle River	Hiraan	86,780.8	4,467.9	1.5	1.0	1.5	1.5	6,816.0
	M Shabelle	86,006.0	6,927.2	1.5	1.0	1.5	1.5	10,567.7
	L Shabelle	200,369.8	17,373.4	1.5	1.0	1.5	1.5	26,503.8
Juba River	Lower Juba	266,993.2	19,509.9	1.4	0.9	1.5	1.4	27,040.7
	Middle Juba	155,851.7	14,611.3	1.4	0.9	1.5	1.4	20,251.3
	Gedo	194,821.2	15,676.9	1.4	0.9	1.5	1.4	21,728.2
Totals		**990,822.7**	**78,566.6**	**1.5**	**1.0**	**1.5**	**1.5**	**112,907.6**

[15] World Bank and FAO. 2017. Somalia: Rebuilding Resilient and Sustainable Agriculture (draft).
[16] Alemu Lema Abelti, Assefa Mitike Janko and Tilahun Geneti Abdi, 2014. Fishery production system assessment in different water bodies of Guji and Borana zones of Oromia, Ethiopia. International Journal of Fisheries and Aquatic Studies 2014.

II. DINA Findings and Drought Impact

Drought Effects

This is considered to be negligible for the marine fishery (in terms of direct effect), other than the indirect consequences of the. For the inland fishery, the effect of the drought in the six regions of relevance can be summarized in the following broad categories:

- Ecological: disruption to the spawning migrations and spawning grounds of key fish species – in extreme cases the drying up of river beds will result in spawning stock mortalities.
- Fishing: when water levels are low then fishing may no longer be possible (access to the water, water too shallow, destruction of fish habitat etc.).
- Physical assets: boats may be stranded and in extreme cases boats and/or fishing gear may be sold if the owner has no other income.
- Economic: loss of income (to the individual/HH and upstream in terms of expenditure in the local economy)
- Physical environment: collapse of riverbanks and/or change in river courses as rivers dry up and/or siltation with renewed flooding (post drought).

The inland fishery is artisanal in nature and as such is considered to have very limited, if any, sector specific public or private physical assets (in terms of fish landing sites, markets, ice making facilities and cold storage). The major impact, although still considered minimal, is on the physical assets of private individuals if fishing gear (specifically boats) is abandoned. The fishing gear is simple technology so there is no impact from non-use if stored properly. The effect of the drought is that fish production (catches) will diminish or cease altogether. The inland fishery has limited access to, and need for, goods and services (such as for example the supply of fuel and ice) as the fishery is artisanal in nature.

Damages and Losses

Table 11: Damage and Losses for Sector (in local currency and USD)

Damages and Losses	Public		Private		Total Damages and Losses	
	USD	Shilling	USD	Shilling	USD	Shilling
Itemized List of Damages						
Fishing gear damage - assumed negligible	0	0	0	0	0	0
Itemized List of Losses						
Loss of income	0	0	4,953,405		4,953,405	
Loss of assets			1,238,351		1,238,351	
Loss of access to fishing ground			1,238,351		1,238,351	
Loss of food security			2,535,455		2,535,455	
Total	0	0	9,965,562		9,965,562	

Damages

The damages as a result of the drought will be limited as the inland fishery is a low technology artisanal fishery with few assets (public or private) in use – and those that are in use are generally not valuable, except perhaps the rowing boats.[17] The direct damages to fishing gear are assumed to equate to zero in the inland fishery (noting that – given the lack of aquaculture - it is assumed there are no fishing ponds in use within the affected regions).

Losses

The losses from the drought will result from:

1. The loss of income as a direct result of the drought (reduced landings) – this has been quantified as a maximum of USD 4.95 million;
2. Loss of assets if they are forced to sell their fishing gear (lines, nets and/or boat) – this has been quantified as approximately USD 1.24 million if it is assumed that 25 percent of those fishers who earn an income (part-time/ seasonal/full-time) from fishing have lost their assets;
3. Loss of and/or restricted access to fishing grounds if river beds silt up and water/river-flow does not return as per pre-drought - this is difficult to quantify but a proxy of 25 percent of direct loss of income has been used, equivalent to USD 1.24 million;
4. Loss of food security – although a cross-cutting sector, this has been quantified for the inland fisheries sector as USD 2.54 million using a proxy amount equivalent to the current market price of fish (USD 1.50 / Kg)

The estimates received from government provided a total of only 1,728 fishers, whereas data from the surveys completed in the districts of Jowhar and Balcad[18] suggest that there are many part time seasonal fishers, with an average of 70 percent of HHs interviewed suggesting that they fish five or more days per week. In order to assess the real impact of the drought on HH in the riverine regions, a comprehensive baseline needs to be established and agreed with the FGS and FMS.

Table 12: Freshwater Fish Market Prices – Mogadishu Market 15/10/17

Freshwater Fish Name	Price/Kg in USD	SO/SH.
Malay Madwoe (Black Fish	0.50	10
Malay Adde (Milk Fish)	0.50	10
Hangoongo	0.70	16
Balil Addey (Local Name)	0.80	18
Shariifato/Afdhuub (Long Mouth Fish)	0.50	10
Haraaye (Local Name)	0.80	18
Beeli Dabagaduud (Red Tailed Fish)	0.70	16
Musiiyo (Local Name)	0.60	14
Shariibo (Local Name)	0.70	16

[17] The FAO built and distributed 11 fishing and transportation rowing boats to communities on the Shabelle River in October 2016 at a cost of USD 3,800 per boat (including basic safety equipment).
[18] CEFA. 2016. FAO Fish Project Final Report October 2016.

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Drought Impact

The potential effects of the drought on marine fisheries were as follows; (a) Influx of people into the coastal communities, as they lost livestock; (b) Competition with the local community for space and other resources, and potential use of environmentally damaging fishing gear; (c) Influx of people into coastal areas provides a new (expanding) market for fish; (d) Diversification of livelihoods by some coastal HHs through combining fishing and livestock or crops.

The potential effects of the drought on inland fisheries was as follows: (a) Siltation of the rivers reducing river bed levels; (b) Dependents on seasonal fishing become increasingly food insecure as a result of drought; (c) Regular riverine shallows that provide a sanctuary as nursery grounds are lost; (d) Disposal of fishing assets; (e) Changes in ecology and physical nature of the river flow may affect fish populations.

Medium to Long Term Projections on the Sector and Impact on Development Goals

While the drought might have affected the achievement of development goals outlined in the NDP. The NDP, 2016 refers to the following development goals for the fisheries sector:

1. Living aquatic resources should be harvested within their sustainable limits.
2. The supply of fishery products will keep pace with demands to safeguard the nutritional standards, and the social and economic well-being of communities depending on fisheries for their livelihood,
3. Effective and adequate support is provided to help private sector development and expansion in fisheries, and
4. Critical habitats used for fisheries and aquaculture are safeguarded.

Two scenarios are possible regarding the medium-long term impact of the drought on inland fisheries, mainly; (a) If the drought continues then rivers and tributaries will dry up, the physical environment will change, fishers will sell or abandon their fishing gear and will ultimately migrate away - policy and programming measures will need to address the economic and social consequences of more IDPs and long-term displacement of communities; (b) Conversely, if the rains return and if the drought has not been so severe as to cause broodstock mortality and/or change the nature of the water-basin, then fishers will eventually return. The consequences are therefore of a temporary/seasonal nature, although these consequences may extend for some time beyond the immediate cessation of the drought dependent on the resilience of fish stocks to recover, spawning cycles/ season and changes in the physical environment. Policy and programming measures in this case may therefore need to include physical works remedial measures such as dredging of rivers and streams and repairs to river banks.

Major Challenges for the Sector

As a result of the drought, the challenges for the sector are very consistent with those highlighted in the NDP which are as outlined: (a) Inadequate landing facilities; (b) Post-harvest losses are unacceptably high, with a negative consumer perception of fish quality due to the poor handling and short shelf life; (c) Lack of enforcement capacity; and (d) Lack of technical experience among youth to actively participate and increase employment in the private sector.

III. Cross-cutting Considerations

Gender: The FAO fisheries survey completed in the districts of Jowhar and Balcad[19] gives some indication of gender roles. The two surveys (completed in different months) confirmed that women play a significant role in the inland fishery (either fishing and/or trading fish) and as such have been severely impacted upon in terms of their livelihoods and food security. However, in the absence of accurate data on gender and age disaggregated roles in the sector, the main consideration is to put in place mechanisms to collect relevant information, alongside general fish catch data in the near future.

Social Protection & Safety Nets: The inland fishery is a seasonal and part-time livelihood. As fishing is one of several activities that households engage in there is likely to be moderate to significant impact dependent on the importance of fishing to HH income generation and food security. There is no known data available on building inland fisheries HH and community resilience to drought.

Environment & Natural Resources: One of the potential consequences of periodic (particularly flash) flooding after a drought is that it can cause any remaining fish populations (contained within small ponds) to scatter and therefore lowers their vulnerability to fishing gear. Catch

[19] World Bank and FAO. 2017. Somalia: Rebuilding Resilient and Sustainable Agriculture (draft).

Per Unit Effort (CPUE) therefore declines, impacting on fisheries related livelihoods.

The WB/FAO report makes reference to experiences from interventions in Dollow, Gedo region, where the FAO supported with some success the formation of fishing cooperatives, resulting in by-catches of freshwater turtle and crocodile in gill-nets used there.[20] The impact of droughts on the loss of such valuable flora and fauna is unknown but in terms of the longer-term impact on the ecosystem this could be significant. Droughts may negatively affect fish breeding and fishing grounds, but may also impact on coastal communities through the drying up of low-lying coastal areas and salt-water ingress into brackish water estuaries.

Private Sector Impacts and Role in Recovery: The inland fishery is exploited exclusively by the private sector at an artisanal level – the impact on the private sector (and role of in recovery) outside of HH participation is considered minimal.

Disaster Risk Reduction, Drought Resilience and Contingency Financing: risk reduction and resilience programs and contingency planning in anticipation of the drought are not relevant to an open access, common property capture fishery (particularly to the extent this is an artisanal fishery). Such crosscutting issues are only applicable if there were managed small-scale aquaculture (pond culture fisheries), which is currently not the case in Somalia.

IV. Recovery Needs

Recovery Strategy for the Sector

The four clear strategies as outlined in the NDP and milestones to support development of and resilience within the fisheries sector focus primarily on the marine capture sub-sector:

1. Maximize full potential of small-scale fisheries
2. Strengthen institutional partnership
3. Minimize post-harvest losses in small-scale fisheries
4. Commercial fisheries development

In line with the relevant strategies of the NDP, the recommended needs and interventions for sectoral resilience are: (a) Distribution of fishing kits; (b) Development of local market for dried fish; (c) Establishment of inland fish landing sites; (d) Development of Spate Fed Desert Aquaculture. Annex 3 provides a more detailed recovery action plan.

Table 13: Distribution of Needs by Region

	Cost (USD)							
	Somaliland	Puntland	Galmudug	Hirabelle	South West State	Jubaland	Banadir	Total
Distribution of Fishing Kits	-	-	-	50,000	25,000	75,000	-	**150,000**
Development of Fishing Land Sites	-	-	-	666,667	333,333	1,000,000	-	**2,000,000**
Development of Spate Fed Desert Aquaculture	-	-	-	500,000	250,000	750,000	-	**1,500,000**
Development of Dried Fish	-	-	-	666,667	333,333	1,000,000	-	**2,000,000**
Total Needs	-	-	-	1,883,333	941,667	2,825,000	-	5,650,000

[20] Ibid.

Recommendations for DDR and Building Resilience in the Sector

The inland capture fisheries sub-sector is based around a largely seasonal fishery (and water-flow) and so there are no direct adaptive strategies that can be recommended to build resilience within this context; particularly given the significant uncertainties about the level of resources, catch rates, number of fishers etc. Indirect adaptive strategies related to fisheries related livelihoods and food security that is recommended may include:

- Investigating the potential for integrating fisheries into irrigation canal development.
- Dredging of key riverbed areas that have been silted up due to the drought.
- Inclusions of capture and culture fisheries issues in integrative water resource management strategies.
- Long term investment in basic infrastructure to improve fish handling and storage, and thereby reduce post-harvest losses within the local market.
- Research on fish distribution and consumption patterns within inland communities to assess options for distribution of fish (for example as an alternative or supplement to existing food aid distributed by WFP)
- Livelihoods and income generation diversification strategies (linked to other sectors).

Further research is recommended on the inter-dependencies between traditional pastoralism and other economic activities such as fishing and the ability of HH to mix and/or switch between these activities. There are some groups calling to encourage a wholesale shift from nomadic pastoralism to coastal fishing.

Table 14: Summary Needs for Fisheries

Summary of Drought Recovery Needs					
Intervention	Level of Activity	Timeframe			Cost (USD)
	(national/ regional)	Short-term (Year 1)	Medium-term (Years 2-3)	Long-term (Years 4+)	
Distribution of Fishing Kits	Regional	X			150,000
Development of Fish Landing Sites	Regional		X		2,000,000
Development of Spate Fed Desert Aquaculture	Regional			X	1,500,000
Development of Dried Fish	Regional		X		2,000,000
Total Agriculture - Fisheries Needs					5,650,000

Assessment Considerations

An assessment of impact using the estimated (MFMR) number of fishers (a total of 1,728 for four of the six target regions) suggests an income loss of USD 1.15 million – this compares with an alternative methodology used in the inland fisheries income loss spreadsheet that refers instead to where provided FSG data, and in the absence of such data, to the average per caput consumption of fish (3.1 kg/annum) and number of HH across the two riverine regions. The following assumptions have been made and comments noted in the preparation of the inland fisheries loss of income/food security spreadsheet:

HH size: FAO FSNAU assumes a standard multiplier of six-person per HH. However, data collected from recent fisheries surveys completed in Jowhar and Balad districts in August and September 2016 (CEFA. 2016. FAO Fish Project Final Report) puts the average family size at 9.8.

Catch Per Unit Effort (CPUE): This is a complex issue as there are widely varying figures (and ways of calculating) the likely CPUE. In the absence of accurate data for fisheries, a number of options were evaluated by the DINA team prior to arriving at the proposed figure of an average per caput fish consumption of 3.1 kg (quoted in several reports including WB/FAO. 2017. Somalia - Rebuilding Resilient and Sustainable Agriculture (draft), and Breuil and Grima, 2014). This would equate for a total non-pastoral population (i.e. they obtain the majority of direct protein from fish) of 2.86 million (figure provided from the NDP), with fishing activity confined to 91,200 HH fishing five days a week over 130 days per year, to 0.7 Kg/HH/day. This is equivalent to an inland fishery of 8,300 MT per year (0.7 x 130 x 91,200) – still possibly on the high side but a relatively realistic figure.

Income vs consumption of fish: Apart from specific data received for HH in the SW region, the FST has assumed, based on the results of the surveys completed in the districts of Jowhar and Balcad (CEFA, 2016), that 66 percent (2/3) of a HH average catch is sold and 33 percent (1/3) is consumed. This breakdown is used throughout the fisheries income loss spreadsheet.

Price of Fish: The FAO FSNAU use a standard fish-selling price of USD 2/Kg. The FST considers this too high and based on recent market data has used a fish-selling price of USD 1.50/Kg (even though in reality fish is sometimes sold by the piece rather than by weight, larger fish still fetch higher prices).

River levels: The severity of the impact of the drought is estimated through the number of days in which fishing would be impossible or unproductive on the two main rivers: Shabelle and Juba. River level information obtained, suggest that during the drought period the Shabelle would have experienced 60 days as an unfishable river and the Juba would have been similarly impossible to fish for 30 days. During these days the catch would be zero.

Physical Sectors

Water Supply and Sanitation

I. Overview and Pre-Drought Conditions

In 2017 Somalia's population still had one of the lowest reported rates of access to improved drinking water and sanitation facilities in the world. There are no nationally representative surveys in the past decade but based on two recent surveys that covered secure parts of the country an estimated 59 percent of Somalis have access to an improved source of drinking water within 30 minutes and 27 percent have access to an improved sanitation facility.[21] Access to improved sanitation facilities in urban areas has fallen by half over the past 15 years. Access to improved sanitation in rural areas has stagnated at a very low level currently estimated to be fewer than 10 percent with over 56 percent of households resorting to open defecation.[22]

SWALIM during the base line period of 2013 – 2015, estimated that there are around 3,733 water points, 61% (2,261 sources) of which were reported to be perennial, under normal conditions. Higher proportions of berkads[23] and dams supply water for only part of the year compared to other sources.[24] An assessment done by SWALIM on strategic boreholes between February and April 2017 on selected regions in the south and central parts of the country identified that only 79% of the perennial /strategic boreholes were functional.

Water resources in Somalia are dominated by groundwater, with the surface water mainly found along the Juba and Shabelle Rivers in the southern part of the country. The two rivers flow from Ethiopia into southern Somalia. During extreme dry periods the flow in both rivers is not able to adequately support domestic and agricultural water needs for the riverine communities. In March 2016 and February to mid-March 2017 River Shabelle dried out completely which is unprecedented in over 30 years. In other parts of the country rainwater harvesting through the provision of dug outs (Wars)[25], Berkads[26] and Mugciids[27] to impound surface runoff during the two rainy seasons - *GU* (April to June) and *Deyr* (October to December) - is a common feature of the water supply infrastructure in rural communities.

Water resource and water supply development over the past 20 years has been dominated by non-state humanitarian actors. Over the past decade humanitarian aid flows to Water, Sanitation and Hygiene (WaSH) in Somalia have averaged over US$ 20 million a year.[28] Communities and households have also invested in water supply particularly berkads for harvesting and storing rainwater for people and livestock and hand-dug wells for small scale irrigation. This combination of investment by humanitarian actors, communities and individual households has resulted in very low levels of access to safe water for people, inadequate permanent sources for livestock and very limited capacity of the government to manage these sources.

The Ministry of Energy and Water Resources in addition to water supply has responsibility for delivery of sanitation services in both urban and rural areas. The responsibility for sanitation services is jointly shared with Local Government Authorities and the Ministry of Health. Generally, Somalia is yet to put in place a vibrant institutional framework for the delivery and oversight of sector related activities. Fragmentation of institutional responsibilities and lack of adequate legislation have resulted in an uncoordinated development of the sector. The few established institutions are not yet fully staffed (see Annex 2) and are weak and require capacity enhancement, at the national, regional and district level. The stakeholder analysis (see Annex 3) shows that a range of actors play different role in the water supply and sanitation sector in Somalia, with very little or no government oversight.

[21] 2017, WHO-UNICEF JMP data
[22] UNICEF/WHO Joint Monitoring Program 2017 www.wssinfo.org
[23] 3 CIA, 2013, World Factbook on Somalia
[24] Most berkads, dams and dug wells which supply water for a limited period within the year have not been mapped
[25] Wars are dams or impoundments up to 3 m depth built in clayey soils that retain surface run off from rain with capacity of 1,500 to 50,000m3. Lining with plastic reduces seepage.
[26] Berkads have capacities of 10 to 100 m3. Covering with shrubs or iron sheets reduces evaporation thereby extending the period of use.
[27] Mugciids are underground storage wells with average depth of 15 m that are used to supplement supply when all other sources are depleted.
[28] OECD, 2016.

II. DINA Findings and Drought Impact

As Somalia goes through a series of devastating and frequent droughts, the impact on the country's hydrologic cycle is substantial, manifested with immediate drying up of surface and ground water sources. The effect of such a troubled cycle, beyond the immediate impact on human lives and livestock, includes decline in ground water recharge, depletion of fresh water aquifers, reduction of surface water flow and other long-term damages. In March 2016 and February to mid-March 2017, the Shabelle River dried out completely, unseen in over 30 years.

Furthermore, drought has affected not only the quantity but also the quality of drinking water. There are noticeable weaknesses in the water sector related to water quality testing and monitoring. Weaknesses in regulating water quality are compounded by the relatively poor understanding of how the water supplies become contaminated and the risks associated with the use of contaminated water.

Because of drought, the prevalence of illness amongst children has increased as the quality of water has diminished with no available alternative. The rise in the number of cases of acute watery diarrhea/cholera was significant – from 3113 cases and 47 deaths in January 2017 to 4621 cases and 138 deaths in February 2017.[29] Due to the drought, over 926,000 (47.8% male and 52.3% female)[30] people have been displaced in the past six months of 2017, many of which are sheltered in IDP settlements and host communities giving additional stress on scarce and dysfunctional water and sanitation services.

The cost of vended water increased by 50 percent during the critical drought period. Price data for water vended by tanker trucks, carts and kiosks shows that following the failed *Deyr* rains in November 2016 the average cost of water went up from US$4 to US$6 per cubic meter (m^3).[31] In addition to higher average costs, there was greater variability in water prices during the period December 2016 to April 2017. This variability was location specific with the cost in water scarce places such as Laas Caanood and Xudun reaching over US$50 per m^3. Other factors that may have contributed to higher water prices in the north are the higher livestock numbers and more dispersed nature of pastoralist livelihoods.

[29] WHO, Cholera in Somalia, monthly situation update, August 2017
[30] Somalia Displacement dashboard, Protection and Return Monitoring Network (PRMN), cumulative 1 Jan. – 31 Aug. 2017. Disaggregated data by sex for displaced persons has been collected at Household level.
[31] Collated by FSNAU from various sources (FEWSNET, SWALIM, FSNAU)

The regions hardest hit by higher water prices were Sool, Sanaag, Bakool, Bay, Nugaal, Bari, Galgaduud where localized price increases were extremely volatile reaching ten times average prices in the case of Sool region. These regions also lost around 80 percent of their water available for productive uses. Other regions less effected by vended water price increases – Awdal, Mudug, Togdheer and Woqooyi Galbeed – also lost 80 percent of their water available for productive uses. Data on the regions through which the Juba and Shebelle rivers run was not as good as in other regions and though they are also experiencing lower flows they may have been less impacted by the drought. Though there is no regularly collected data on water levels in berkhads (cisterns), dams, hand-dug wells and springs these were widely reported as having been impacted by the drought. By contrast boreholes, particularly those supplying town utilities, were more resilient to the drought but with some notable exceptions. Boreholes played an important role in ensuring water security – particularly for people.

Drought Effects

The 2016-2017 drought resulted in outbreak of water-borne diseases and people in critical need of humanitarian assistance. It is estimated that 4.4 million people need water, sanitation and hygiene (WASH) assistance. Despite the commitment of the major sectoral actors to improve access to water and sanitation services, Somalia still has some of the worst indicators for access to water and sanitation in the world with Joint Monitoring Program estimates showing that national coverage for safe drinking water and sanitation stands respectively at 59% and 27%[32] with large number of population (56%) still practicing open defecation. The quality of water used for domestic purposes is also reduced by preferences for surface water compared to groundwater.

Only one in five Somalis use both improved water and improved sanitation, although almost half of urban dwellers do so compared with just four per cent of those in rural areas. In Somalia, an average of 90% of schools does not have access to safe drinking water and 61% do not have functional latrines.[33] The lack of safe WASH facilities continues to put displaced women and girls at risk of sexual violence.

Effects on Infrastructure and Physical assets

WASH assessment in Lower Juba (South-Central Somalia) indicates that a total of 30 out of the 35 shallow wells in the town have dried up due to the drought. A similar assessment in Puntland suggests that many shallow wells have reportedly dried up and the water levels of most boreholes have decreased to abnormally low levels, forcing many boreholes to operate more hours to serve the demand.

Effects on Production of Goods and Services and Access to Goods and Services

Humanitarian aid may have led to an increase in the cost of vended water. Water trucking was a key component of the humanitarian response. Around a third of the US$ 25 million humanitarian response was channeled into water trucking and water vouchers for over million people. Other factors that may have contributed to higher water prices in the north are the higher livestock numbers and the more dispersed nature of pastoralist livelihoods. The higher livestock numbers in the north would have driven demand for water up during the drought period.

Increased Risks and Vulnerabilities

In displacement, women face heightened risk of sexual and gender based violence, exacerbated by overcrowded makeshift facilities without adequate safety and security measures – from lighting to safe and dignified WASH facilities. Women and girls, who have the primary responsibility for collecting water for domestic use, are now traveling increased distances in search of water. In the Sanaag region of Somalia, for example, the journey to reach water is reportedly up to 125km roundtrip.

Based on the regional water source composition a drought vulnerability index can be used to estimate reductions in water availability. The index is a crude means of estimating the potential reduction in water availability in regions during a severe drought – useful for loss analysis. Three examples are worth describing here (see Figure 4). Bakool region has a very high number of people per borehole making it water insecure. Mudug region has a low number of people per functional borehole making it relatively water secure. However, more counter intuitive is that Woqooyi Galbeed, though having a relatively low number of people per borehole has a high number of vulnerable sources which means drought would reduce water availability severely in the region making it relatively water insecure. In this last example of drought impact on Woqooyi Galbeed region there would likely be enough water for people but drought would have a larger economic impact by reducing the water available alternative sources for economic uses.

[32] WHO-UNICEF Joint Monitoring Program, 2015
[33] UNICEF. 2016. Somalia Education Cluster Final Report 2016.

Figure 4: People Per Functional Borehole and Number of Boreholes by Region (Non-Riverine Regions)[34]

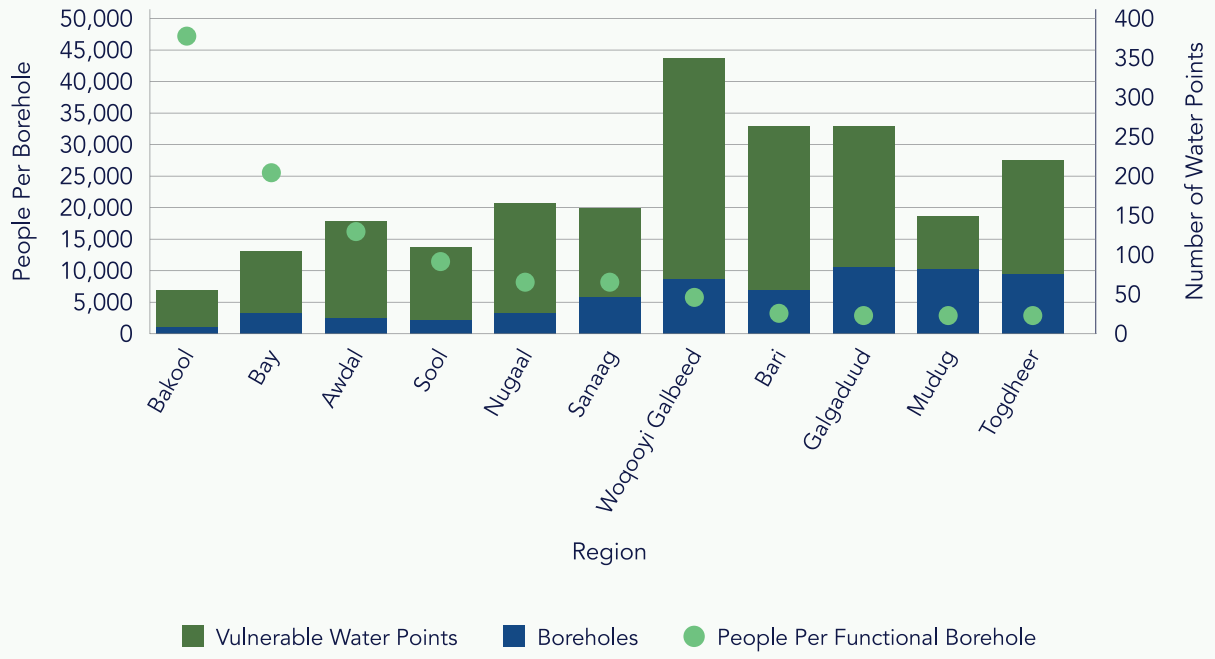
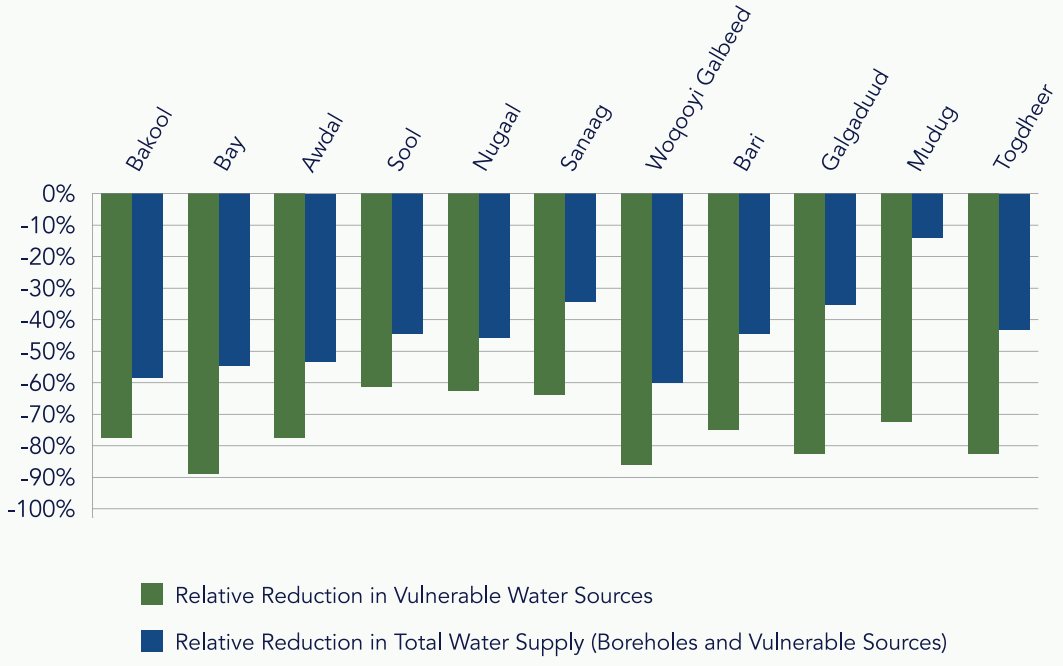


Figure 5: Potential Drought Vulnerability Based on Water Point Composition (Non-Riverine Regions)[35]



[34] FAO SWALIM
[35] Ibid.

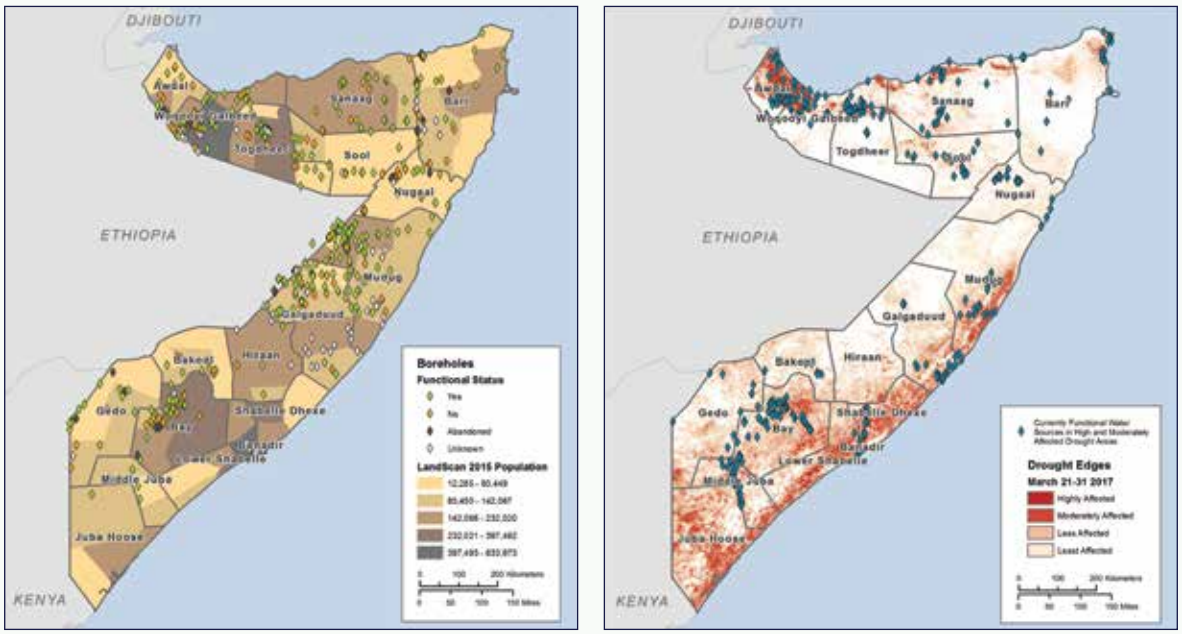
Damages and Losses

The water supply and sanitation related damages are largely associated with the impact on water sources such as complete drying up of boreholes, shallow wells, hand dug wells, berkads, dams, water pans and springs. Though the proportion of none functional water schemes in Somalia is estimated to be very high, drawing a clear attribution of damage only for the drought is a challenge. However, effort was made to collect actual damage data from states using a data collection format, making extensive use of data collected by FAO SWALIM and triangulation of all this with various studies and assessments and satellite imagery comparison collected by the consulting firm Ispos. The damage was calculated considering the prevailing market price for the construction of new schemes as well as the cost for rehabilitating schemes refereeing an ongoing draft working documents from the Somalia WASH cluster technical working group.

SWALIM has estimated a total of 3,733 water sources, of which under normal conditions only 2,261 (61%) were reported to be perennial. An assessment done by SWALIM on strategic boreholes between February and April 2017 on selected regions in the south and central parts of the country identified that only 79% of the perennial /strategic boreholes were functional. From the various data sources, it has been estimated that a total of 202 boreholes, 387 shallow wells, 29 berkads[36] require complete replacement while 380 of boreholes, 728 shallow wells, 54 berkads need to be rehabilitated. The total damage on water supply schemes is estimated to be US$ 41,958,000.

In the context of Somalia, and particularly Central South where the impacts of drought and flooding have historically been more severe, access to clean water improved sanitation and hygiene is important for ensuring children's safety and resilience. Lack of water during periods of drought have proven a major factor forcing children out of schools. A 2016 rapid survey by UNICEF on 1225 schools in South West clearly shows that, only 35.3% of secondary schools reported having access to some type of water supply, while 64.7% reported not having access to a water supply at all.

Figure 6: Boreholes and Drought Edges



[36] Most assessments done focus on boreholes, and to some extent shallow wells and springs, as they are considered more strategic for drought response. Generally, it is estimated that the number of Berkads across the country is big but are not mapped properly.

The spike in water prices is estimated to have added around US$20 million to the cost of water in no-riverine regions over the critical 4-month drought period. While only crude estimates of the volume of vended water can be made, the need to heavily rely on borehole water for the critical 4-month drought period could have generated costs in the region of US$60 million. This estimate is based on the production capacity of all available boreholes in non-riverine regions being pumped for 12 hours a day.[37] The average premium of US$2 per m3 would have added US$20million to pre-drought costs. While some of these additional costs were funded by humanitarian aid (assuming US$10m was spent on water trucking) up to US$50m may have to be paid for directly by households in remote water scarce areas. These higher water costs will have indebted many poor households requiring them to pay back from their future livestock production gains and driving inequality within communities.

The effect of drought on water supply and sanitation and the associated impacts are too many to list down. It is manifested on reduced productivity both in agriculture and livestock, impacts human productivity to the extent of loss of human life, increased medical expenses, direct impact on school attendance and many others. However, quantifying these losses is not easy exercise both from the data and information gap. For this exercise, impact on house-hold income because of the need to spend more on water *(recognizing the fact that private water service providers in Somalia during draught time have a tradition of reducing tariffs substantially*) was factored in calculating losses to arrive at a monetary equivalent.

Drought Impact (Economic and Social Impact)

With decreased access to safe water, compounded by the drying up of rivers, lack of technical expertise to rehabilitate the few existing over congested water sources resulted in the escalation of acute watery diarrhea (AWD)/Cholera and prevalence of childhood illnesses have increased. The lack of standardized hygiene and sanitation facilities has also contributed to a rapid increase in cases of AWD/cholera. The unavailability and shortage of water may lead to violent interclan conflicts due to scarce food and water services which will degenerate and worsen the Somalia security situation with a potential to lead to more displacement.

The existing urban and rural infrastructures in Somalia are aged and in some cases, go beyond design age. In addition to the recurrent drought, overuse of existing water sources has also contributed in stretching the long and short term plans and development goals. The medium-term projection requires massive investments for replacement and expansion of the existing infrastructure to meet increasing demand of water both in rural and urban and minimize the shock during drought and build resilience.

III. Cross-cutting Considerations

Gender based violence (GBV) is a significant protection challenge that is prevalent throughout Somalia and is likely to be exacerbated by the drought related crisis, as women and girls travel longer distances without protection to fetch water, and particularly for IDPs traveling outside formal or informal settlement areas. Women and girls travelling to and from IDP settlements, are exposed to serious risk of violence while travelling to WASH facilities, including water points, cooking and sanitation facilities that are limited, located far from homes. In most circumstances, women and girls must travel through unsafe areas and usually after nightfall to relieve themselves. Open defecation affects women's health and poses an increased risk to GBV.

The scarcity of water and absence of men due to drought and conflict has resulted in an increase in women's work burden in the household. Women and girls, who have the primary responsibility for collecting water for domestic use, are now traveling increased distances in search of water. As reflected in the Gender DINA, in the Sanaag region of Somalia, the journey to reach water is reportedly up to 125km roundtrip. In the face of increased drought-related diseases, women's unpaid care work has also exponentially grown.

Climate change is undoubtedly an important issue when addressing environmental challenges for WASH. Water resource sustainability is directly and progressively affected by climate change and environmental unsustainability. Most parts of Somalia are expected to receive average to below average *Deyr* seasonal rainfall between October-December 2017, however, predicted warmer temperatures for the same *Deyr* period indicates the combined impact will lead to faster depletion of water sources. Contingency measures should be put in place to quickly respond to any flooding which could lead to contamination of water sources in flood prone areas.

[37] Collated by FSNAU from various sources (FEWSNET, SWALIM, FSNAU)

IV. Recovery Needs

Boreholes play an important role in ensuring water security – particularly for people. In non-riverine regions, a lower number of people per functional borehole would make them less vulnerable to drought. This is because boreholes are less vulnerable than other sources to drought – especially as berkads and dams but also dug-wells and springs. However, the composition of other sources also matters particularly for economic productivity as humanitarian assistance will prioritize water for people over water for other economic activities.

Both prior to and during the humanitarian response to the drought, not enough was done to increase the availability of strategic water sources in water insecure areas. More emphasis should be put on rehabilitating existing boreholes and drilling of strategic boreholes able to supply people in times of drought. Livestock also need equal treatment regarding water need. Post drought estimates indicates that, there are about 3,732,016 cattle, 6,195,330 camels and 36,561,961 sheep and goats requiring 30, 35 and 8 liters of water per day respectively.

Urban areas provide economic resilience from dry shocks and for internally displaced people, but are highly constrained by the lack of investment in water services. The lack of investment in water services holds back opportunities for productive livelihoods and leads to tensions between host and migrant populations. Though the immediate recovery effort to rehabilitate existing schemes and construct new ones will support the needs of IDPs, almost all urban areas in Somalia need immediate support to improve water supply and sanitation services and that needs to be appropriately considered.

For the immediate drought recovery needs of water supply, water schemes, such as Boreholes, Shallow Wells and Berkads were considered both for rehabilitation and new construction. It was assumed that 21%[38] of these schemes (202 Boreholes, 387 Shallow wells and 29 Berkads) have completely dried up and need to be replaced by a new one. In the absence of site specific inventory, it will be difficult to arrive accurately on the rehabilitation need. For practical purposes, it was assumed that rehabilitating half of the remaining schemes (380 Boreholes, 728 Shallow wells and 54 Berkads) be a rational approach to arrive at a reasonable needs estimate. More over the daily water need for current livestock and IDPs around the three major urban areas (Mogadishu, Baidoa and Kismayu) is estimated to be 631,462 M3 per day. Assuming a Borehole to yield 10 liters/second and with 12 hours of pumping per day, the water demand translates into 1461 Boreholes. But conservatively close to one third of this i.e about 500 new boreholes were considered in calculating the needs.

A recent draft working document from the Somalia WASH cluster, on minimum WASH guidelines was referred to calculate the monetary equivalent of the recovery needs for Water Supply and sanitation. According to the guideline, on average new construction costs US$110,000 for Boreholes, US$5,000 for Shallow wells and US $7,000 for Berkads, while rehabilitation costs are US $40,000, 3,000 and 4,000 respectively, and this was considered in estimating the needs.

Any future recovery needs assessment will not be complete without due consideration to strengthen the sector institution. The newly established Ministry of Energy and Water Resources so far was only able to fill only few of the top management positions with almost all technical positions remaining vacant. Discussion with state authorities also indicated that sector institutions at state and district level are even more at infant stage than the federal. There is a need to quickly bring on board critical core staff at the national, regional and district levels and it requires strengthening to achieve results and sustain the gains both from the current as well as future interventions. A 2015 general assessment by the African Development Bank identified a total US$ 34.3 million to meet identified sector institutional strengthening and capacity building needs over a period and this was also considered in estimating the needs.

The recovery work is proposed to be in phases Short term (less than one year); Medium term (1 – 3 Years) and long term which is more than 3 years. This allows a cascaded approach that considers immediate needs, implementation and absorption capacity. Therefore, the first year shall focus on immediate rehabilitation of most of the water supply schemes, while construction of new schemes shall be planned for intermediate phase to have time for site selection, designs and mobilization of equipment. Institutional strengthening and capacity building should spread across the planning horizon with some immediate needs such as staffing, office facilities, communication, and putting in place a mobile operation and maintenance crew at state level.

The total recovery needs for the WASH sector were estimated at US$ 180.7 million. The recovery needs proposed for the sector are detailed in the recovery needs table below (Table 15). In addition, the breakdown of recovery needs by Federal Member States as indicated in Figure 7 were as follows; Somaliland, US$ 36.3 million; Putland US$32.7 million; Galmudug US$10.9 million ; Hirshabelle US$14.5 million; South West State US$ 21.8 million; Jubaland US$21.8 million; and Banadir US$7.3 million.

[38] Collated by SWALIM from various sources

Figure 7: Distribution of Needs By Region

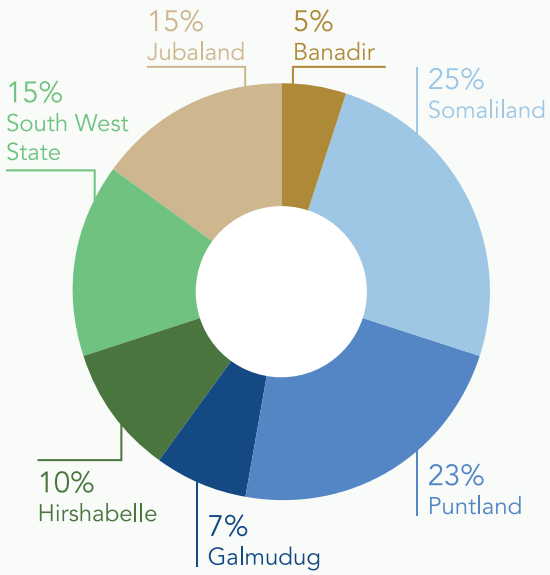


Table 15: Summary Needs for Water Supply and Sanitation					
Summary of Drought Recovery Needs					
Intervention	Level of Activity	Timeframe			Cost (USD)
	(national/ regional)	Short-term (Year 1)	Medium-term (Years 2-3)	Long-term (Years 4+)	
Construction of new boreholes	National	X	X	X	77,000,000
Rehabilitation of non-functional boreholes	National	X			15,200,000
Construction of new protected shallow wells	National	X			1,935,000
Rehabilitation and protection of non-functional shallow wells	National	X	X		2,184,000
Construction of new berkads	National	X			203,000
Rehabilitation of berkads	National	X			216,000
Institutional strengthening and Capacity building	National	X			34,000,000
Urban rural sanitation (drainage, sewage and solid waste management)	District/ municipal level	X	X	X	50,000,000
Total Water Supply and Sanitation Needs					**180,738,000**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Transport

I. Overview and Pre-Drought Conditions

The transport sector is considered an enabling sector for other sectors, providing linkages to regional trade and socio-economic activities. In Somalia, roads are the only mode of land transportation in the country; therefore, the assessment and interventions of the sector have been concentrated on them as they provide access to areas affected by the drought. The analysis below considers different data sources that were used for the assessment of the road network in Somalia and the existing road condition. It was noted that different sources of data provided different information that needed to be reconciled for this assessment.

For example, a study by UNOPS, EU and AfDB in 2015 identified 21,830 km of roads in Somalia, with 2,750 km or 12 percent paved (Table 15). For such a large country of over 600,000 km2, this figure represents a very low road density of 3.5 km per 100 km2 of land. Presumably, many other roads and paths have not been mapped or classified.

Data from Ipsos indicated 17,000km (Table 16). This data was disaggregated according to the length of roads in each region and gives more detail in terms of road class distribution of the network per region.

Table 16: Classified Road Network in Somalia (km)[39]

Surface Type	FGS	Puntland*	ISWA*	Somaliland	Total
Paved	986	806	115	850	**2,757**
Unpaved	6,882	3,261	1,010	7,920	**19,073**
Total	**7,868**	**4,067**	**1,125**	**8,770**	**21,830**

** Part of FGS, Federal Government of Somalia*

[39] UNOPS, EU and AfDB (2015).

Data from Ipsos indicated 17,000km (Table 17). This data was disaggregated according to the length of roads in each region and gives more detail in terms of road class distribution of the network per region.

Table 17: Length of Regional Roads According to Class (km)[40]				
Region	Primary	Secondary	Tertiary	Total
Awdal	90.72	302.72	86.32	479.76
Bakool	254.70	260.41	412.87	927.98
Banadir	26.24	0.00	25.21	51.45
Bari	339.57	11.62	1231.97	1583.16
Bay	197.79	437.89	716.70	1352.38
Galgaduud	234.78	299.88	403.16	937.82
Gedo	437.95	455.09	668.47	1561.51
Hiraan	379.40	378.90	100.88	859.18
Juba Dhexe (Middle)	331.02	48.82	180.02	559.86
Juba Hoose (Lower)	124.09	301.80	731.36	1157.25
Mudug	208.29	482.47	1012.09	1702.85
Nugaal	387.37	184.19	91.82	663.38
Sanaag	358.03	500.37	512.33	1370.73
Shabelle Dhexe (Middle)	152.33	375.06	29.16	556.55
Shabelle Hoose (Lower)	370.39	87.98	200.23	658.60
Sool	465.75	0.09	227.07	692.91
Togdheer	350.85	0.00	348.46	699.31
Woqooyi Galbeed	264.25	521.62	419.75	1205.62
Total	**4973.52**	**4648.91**	**7397.87**	
Total Network Length			**17020.30**	

The World Bank estimated about 104,000 km of potential roads in its contribution to Somalia's Country Economic Memorandum. This figure includes cutlines, in addition to the approximated 22,000 km by UNOPS. The cutlines have been used as foot paths and minor motorable tracks where people can walk or drive on, regardless of the limited official road network. If these cutlines are included, the total length of all potential roads would reach 126,000 km (Table 17). Figure 7 of a map of Somalia shows the road network, with further details of accessibility due to security constraints. Using available satellite imagery, this potential road network was mapped as shown in Figure 8.

[40] Ipsos 2017 data.

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Figure 8: Map of Somalia Showing Road Network and Access Constraints

The following categories of roads are used:

- Main roads: Roads connecting major towns and economic centers
- Tertiary roads: Roads linking main roads and other roads
- Track roads: Minor path and feeder or access roads
- Streets: Roads within major towns, such as national capitals
- Residential roads: Roads within residential areas - outside major towns

Most roads in Somalia are in poor condition due to lack of proper maintenance caused by the long periods of civil war. Detailed road condition is difficult to assess even if high-resolution satellite imagery is available. Based on visual assessment of satellite imagery by the World Bank, approximately 7,960 km of roads or 7.6 percent of the total network (including unclassified feeder roads) are considered to be in good or fair condition. Good roads are paved roads that look dark and are not eroded. Fair roads are either paved roads in fair condition or good gravel roads that are motorable. All other earth roads and paths, as well as potholed or worn out paved roads are considered as poor condition. See Figure 9 for examples of satellite imagery.

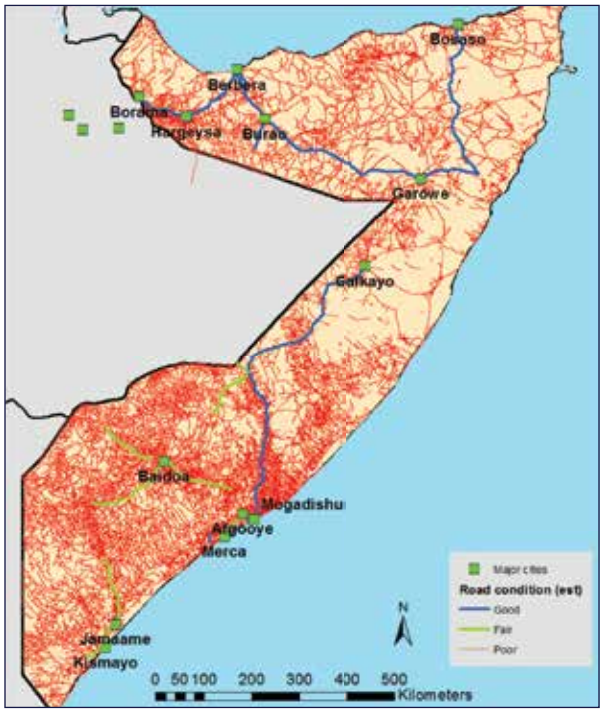
Table 18: Length of Roads Mapped Using Satellite Imagery[41]		
Type	Number of Roads	Total Length (km)
Main Road	2,149	3,589
Tertiary Road	1,029	338
Track Road	51,502	96,597
Street	23,130	2,460
Residential Road	12,100	1,070
Service Road	62	20
Cutlines	7,725	22,197
Total	**97,697**	**126,271**

Figure 9: Examples of Satellite Imagery[42]

Somalia is relatively highly urbanized with most of the population living in or near cities. However, many farmers and pastoralists still live in rural areas and are not well connected to domestic or international markets. According to the 2014 Population Estimations Survey for Somalia (PESS), there are about 12.3 million people in Somalia, of which 5.2 million or about 40 percent of the total live in urban areas.[43] This means that about 7.1 million people still live far from a road that is in good or fair condition. Out of the 21,830km of roads[44] (including unclassified feeder roads), only about 6 percent of the total network is estimated to be in good or fair condition (Figure 9). This means that market accessibility is a challenge for most farmers in Somalia, more so in the drought-affected areas.

[41] World Bank Estimations based on Ipsos data.
[42] Ibid.
[43] Federal Republic of Somalia. 2014. Population Estimation Survey 2014: For the 18 Pre-war Regions of Somalia.
[44] Federal Government of Somalia. 2016. National Development Plan (2017-2019).

Figure 10: Provisional Road Condition[45]



II. DINA Findings and Drought Impact

There are no direct damages for the transport infrastructure related to the drought, except transport services. These would incur losses relating to the overall impacts of the drought on key sectors of the economy, which depend on transportation services.

Drought Effects

Limited availability of goods to be transported, due to the drought, especially agricultural commodities, would bring secondary effects on transport services. However, these effects are difficult to quantify across the country. Some of the losses experienced by transporters might be compensated when government imports food and relief items that need to be distributed to the affected areas, requiring the services of the transport sector enterprises. Meanwhile the difference between the losses and gains would be minimal to such an extent that they may balance out.

For road infrastructure, earthworks during road construction require water for compaction to acquire the proper strength of the road formation. Scarcity of water will force contractors/workers to source water over longer distances increasing their operating costs. This will in turn translate into either poor quality of works or higher costs of construction, rehabilitation and maintenance of works transferred to the client and thereby the end-user. These effects are abstract and have not been quantified in this report.

The drought brings in the prospect of increased transportation costs due to scarcity of commodities that need to be transported over longer distances, which would in turn translate into higher fuel costs for the transportation enterprises. Consequently, these costs would end up being paid by the end-user and will be evidenced from huge differences between farm gate and retail prices for most commodities. Seasonal jobs offered by transporters e.g. truck drivers, assistants, transport laborers and mechanics, would also be affected negatively.

Security is a challenge, and implementation of any set of interventions will be affected by it. There are two types of conflict that will affect the implementation of works: al-Shabaab inflicted areas and inter-tribal or inter-community conflicts. Security improvement is a necessary condition to accelerate recovery efforts on the ground. Meanwhile improving accessibility can result in economic opportunities and contribute to peace and stability as long as the masses believe that there is fair distribution. According to the WFP, some of the primary roads are currently closed or difficult to pass due to conflict while other roads are impassable due to broken bridges. Interventions in conflict areas will require intense consultation with communities to avoid inducing conflict when carrying out works and to avoid activities that would facilitate al-Shabaab activities, that would end up bringing overall negative impacts.

The prevalence of conflict presents major obstacles to the implementation of any activities in the sector. It has caused several institutional set ups to be underdeveloped. The transport sector is one of the sectors affected by this and does not have proper structures to effectively perform its activities e.g. contractor registration, car registration, monitoring services and other enforcement issues. There is also lack of clear definition of terms of references for staff in the sector and the different stakeholders, against which performance can be measured. This poses a challenge in enforcement, procurements, implementation of activities and service delivery. While there are some qualified professionals in the sector, registration of engineers and consultants is not properly structured and it is difficult to appreciate the extent of the existing capacities available on the market. Capacity building for the sector is very vital for sustainability of interventions. Strategies for implementation of programs will require to take into consideration the security aspect and ensure proper mitigation measures are employed.

[45] DINA team estimates based on Ipsos data.

With regard to displacement, there is evidence of transport infrastructure's influence on IDP settlement patterns. Figure 10 shows IDP settlements in Kismayo in relation to primary road infrastructure. Access to transport is a key service for IDPs, as it connects IDPs to livelihood opportunities and access to additional municipal services, and should be considered when planning future transport infrastructure works.

Figure 11: IDP Settlements and Roads in Kismayo

Damages and Losses

There are no damages and losses computed for the transport sector since the infrastructure was not directly impacted. The secondary losses experienced for the transport services are difficult to compute and have not been included in the analysis.

III. Cross-cutting Considerations

- Gender: In transport, gender issues will need to be incorporated in interventions by letting more women participate in road construction works. In addition, interventions should take into consideration concerns of women, e.g. safety of transport services.
- Social Protection & Safety Nets: Since the livelihood of communities is hugely affected, employment will need to be considered to allow the local people to earn a living. Labor intensive methods of road rehabilitation will be considered for rehabilitation works especially for feeder roads. Schemes will be designed in such a way that local people are engaged whilst ensuring good quality works through proper supervision and monitoring. The experience of some NGOs engaged in the sector e.g. International Labor Organization (ILO) will be employed, where communities are contracted directly to carry out labor intensive works but an individual supervisor (local) is employed to ensure quality of works.
- Displacement and Migration: The movement of people will cause some areas to have inadequate local workers for labor-intensive works while more demand for work would be available in areas to which more people have migrated. Works programs will need to take this into consideration when designing projects.
- Environment & Natural Resources: Environmental issues should be considered in all road works. For instance, the natural habitat of pests and animals would need to be conserved as much as possible and trees should not be cut unnecessarily during implementation. Measures should be taken to replace vegetative cover where it has been removed due to the works.
- Private Sector Impacts and Role in Recovery: The recovery of the private sector is vital for the economy of the country. Wherever possible, Government could consider cutting on taxes for transporters to minimize costs that are transmitted to the consumer for transported goods. Consideration should also be made when procuring works, goods and services, to give priority to the local private sector wherever possible in order to improve capacity.
- Disaster Risk Reduction, Drought Resilience and Contingency Financing: For resilience, all infrastructure needs to be constructed using the building-back-better concept for sustainability.

IV. Recovery Needs

The main objective of recovery in the transport sector is to provide accessibility to drought-affected areas by maintaining and rehabilitating roads that are in bad condition to allow for relief initiatives to reach the intended victims. This maintenance and rehabilitation will need to follow a building-back-better concept in order to build resilience to future climate shocks.

For sectors directly impacted by the drought e.g. agriculture, food security, water supply, sanitation and hygiene, and health, the transport sector is incorporated to support their recovery and resilience efforts by

providing improved linkages between the population, social services and markets. Recovery interventions include rehabilitation and maintenance of roads and bridges at a cost of USD 147.9 million aimed at providing improved linkages, targeting areas that are hard hit by the drought, and those that require various relief initiatives. The initiatives are expected to contribute to the people's socio-economic activities and improve their livelihood through improved accessibility and short-term employment from the labor-intensive road rehabilitation works. The building-back-better concept will be applied for sustainability of the rehabilitation works. The interventions recommended for the transport sector are: short-term rehabilitation, reconstruction and maintenance of 1099km of roads; and medium-term rehabilitation, reconstruction and maintenance of 1008km of roads.

Recovery Strategy for the Sector

For recovery, the respective sectors have come up with interventions that are aimed at reducing and mitigating the impact of the drought on the livelihood of people, especially the rural poor. The transport sector aims at bringing accessibility to those areas that have been prioritized for interventions by the respective sectors. Somalia is highly urbanized with most people living in or near cities. However, a good number of the population still lives in rural areas and lack accessibility in general, especially outside of Mogadishu. While it is important for the country to focus its recovery needs on the whole road network since the whole country is affected, there is need to prioritize the interventions in order to maximize on the available resources.

Recovery is divided into short, medium and long term interventions. Several roads are selected to receive either rehabilitation or reconstruction. Reconstruction works will aim at linkages that are completely destroyed but are critical for the recovery, especially primary roads. These would require bitumen surfacing and/or low volume paving. Meanwhile some of the primary roads that would bring positive impact but are not completely destroyed may receive basic maintenance to make them passable. The other roads, mainly feeder roads, will require rehabilitation, mostly gravel. Depending on several factors like security, availability of labor and extent of road damage, some may be rehabilitated using equipment while others would use labor intensive methods. Labor intensive methods would be vital in order to provide short-term employment to communities and improve their livelihoods, and at the same time to impart basic skills on road rehabilitation techniques, with the hope that they can be used to sustain the roads.

Recommendations for DRR and Building Resilience in Sector

All projects formulated for rehabilitation and reconstruction of roads and bridges will require to follow standard procedures and technical requirements with regards to road construction standards applicable to the region. This will ensure that the building-back-better concept is properly captured for resilience in the sector. To achieve this, a consulting firm would need to be engaged as technical assistance to conduct a detailed analysis of the roads and bridges and come up with detailed designs that can be used by contractors and communities for construction and rehabilitation.

Table 19: Summary Needs for Transport

Summary of Drought Recovery Needs					
Intervention	Level of Activity	Timeframe			Cost (USD)
	(national/ regional)	Short-term (Year 1)	Medium-term (Years 2-3)	Long-term (Years 4+)	
Short-term rehabilitation, reconstruction and maintenance of 1099km of roads	Regional	X			83,600,000
Medium-term rehabilitation, reconstruction and maintenance of 1008km of roads	Regional		X		64,300,000
Total Transport Needs					**147,900,000**

Environment, Clean Energy and Natural Resource Management

I. Overview and Pre-Drought Conditions

Somalia's environmental complement, especially the vegetation resources, offers contrasting experiences, and this is due to the spatial and temporal precipitation distributions.[46] The Somali climate is typically hot and semiarid to arid, with two annual rainy seasons (*Gu* and *Deyr*). There are variations in spatial distributions of rainfall, with about 500 mm recorded annually in the northern highlands and between 300 and 500 mm in the southern regions.[47] The coastal plains register only between 50 and 150 mm. Annual potential evapotranspiration (PET) is high, exceeding 2,000 mm in the northern basins and can be as high as 3,000 mm in the Gulf of Aden.[48] Over the dry period the vegetation is sustained mainly through the shallow aquifers found along the dry river beds (togga) across the country. Fertile flood plains and continuous recharge from the Juba and Shabelle Rivers, both originating from Ethiopian highlands, also provide sustained development growth along the riverine areas.

Approximately 98 percent of the country is dry landmass, with less than 2 percent of the landmass under water. Dictated by shifts in the wind patterns, the country's environmental resources and agricultural livelihoods revolve around four main seasons:

- *Gu':* April to June, which is the main rainy season for the country.
- *Xagaa:* July to September, which is cool, dry, and windy in the interior and with some showers in the northwest highlands and south coastal areas along the Indian Ocean.
- *Deyr:* October to December, which is the second rainy season but with less rainfall amounts than the *Gu*' season.
- *Jiilaal:* January to March, which is the longest dry and hot period in the country.

The south-central and southwestern regions of the country are characterized by large swathes of grasslands, scattered farmlands, and are home to the two main river systems in the country (Jubba and Shebelle). The high plateaus of northern Somalia is comprised mainly of low formations of arid scrublands and scattered grass clumps crossed by broad, shallow and generally dry watercourses.[49] These watercourses have water for short periods during rainy seasons, and are thus able to provide short-term fodder (usually no more than 5 to 6 months in a year) for transhumant livestock populations. With increase in elevation and rainfall in the mountain ranges of the north, the vegetation becomes denser and includes aloes, woodlands, and remnants of juniper forests and candelabra euphorbia. In the more arid highlands of the northeast, *Boswellia* and *commiphora* trees are sources, respectively, of frankincense and myrrh, production of which Somalia has been renowned for since ancient times.[50] However, vegetation in large parts of the northern coastal plains is denuded: thus, large areas are almost bereft of vegetation even in the best of times, due to inappropriate land uses, including extensive production of unregulated charcoal.

Between 1990 and 2000, Somalia lost an average of 76,700 hectares of forestland per year.[51] This amounts to an average annual deforestation rate of 0.93 percent. Between 2000 and 2005, the rate of forest loss increased to 1.02 percent per annum. In total, between 1990 and 2005, Somalia lost 14 percent of its forest cover, or around 1,151,000 hectares.[52] Along the Juba/Shebelle catchments, agro-pastoralism is the norm, but land degradation often occurs due to inappropriate land use. Large volumes of sediments are transported along the two rivers - up to 18 million cubic meters in Juba[53] and 15 million cubic meters in Shebelle[54] annually, as a result of poor land use in the upper catchments, both in Somalia and Ethiopia. These sediments end up being deposited further downstream as the river's carrying capacity goes down.

[46] WWF. 2017. Somalia Montane Xeric Woodlands.
[47] FAO-SWALIM. 2007.Water Resources of Somalia.
[48] Zeila, A., and Guyo, M. 2013. Natural Resources Management Project Baseline Survey Report. CARE International and Adeso
[49] Metz, Helen C., ed. 1992. Somalia: A Country Study. Washington: GPO for the Library of Congress.
[50] Zeila and Guyo. 2013.
[51] Forest cover loss and gain interactive map (http://www.globalforestwatch.org/map/).
[52] UNEP-World Conservation Monitoring Center.
[53] Masterplan for Juba Valley Development, April 1990.
[54] Surface and underground water resources of the Shebelle Valley.

II. DINA Findings and Drought Impact

Effects and Impacts on Vegetation Resources

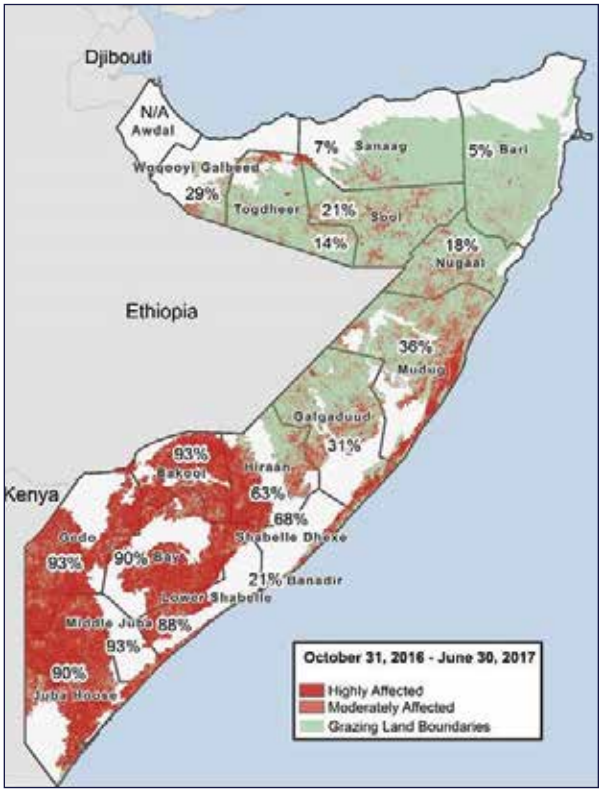
The 2017 Somalia drought has significantly reduced annual and seasonal NDVI (see Figure 11), with much more degradation of vegetation occurring in the southern regions of the country. The magnitude and direction of the de-trended NDVI under drought stress varied with season and vegetation type. However, the overall impact on vegetation has seen drastic reductions in aggregate natural vegetation standing biomass in grazing lands, with a national average loss of 68 percent of natural standing vegetation in the drought period (or 113,282 km^2, accounting for 18 percent of the total national landmass). The damages range from a low of 5 percent in Bari region (or 105,000 ha denuded) to a high of 93 percent each in Gedo (desiccation of 892,000 ha of grazing land as well as dense stands of *commiphora* and acacia species) and Middle Juba (desiccation of 641,000 ha of grazing lands). Total damages and losses on the vegetation resources as a result of the 2017 drought are estimated at USD 227m and USD 315m, requiring USD 59m as restitution costs.

Table 20: Impact of the 2017 Somalia Drought on Vegetation Resources

Region	Sub-region	Proportion of total vegetation biomass lost (%)[55]	Total biomass lost (ha)[56]	Total economic losses of vegetation biomass (USD)[57]
North-west	Awdal	29%	182,700	5,075,000
	Sanaag	7%	113,400	3,150,000
	Sool	21%	298,200	8,283,333
	Togdheer	29%	356,700	9,908,333
	Woqooyi Galbeed	29%	391,500	10,875,000
North-east	Bari	5%	105,000	24,800,000
	Mudug	36%	756,000	45,750,000
	Galgaduud	31%	399,900	17,825,000
	Nugaal	18%	54,583	1,516,200
Juba River Area	Gedo	93%	892,800	24,800,000
	Lower Juba	90%	1,647,000	45,750,000
	Middle Juba	93%	641,700	17,825,000
Shebelle River Area	Hiraan	63%	642,600	17,850,000
	Lower Shabelle	88%	660,000	18,333,333
	Middle Shabelle	68%	448,800	12,466,667
Inter-riverine/Other	Bakool	93%	753,300	20,925,000
	Banadir	21%	10,439	289,975
	Bay	90%	1,053,000	29,250,000
Total National			**11,328,222**	**314,672,841**

[55] Ipsos data 2017.
[56] ENR taskforce projections.
[57] See Assessment Considerations for the permutations used to arrive at these estimates.

Figure 12: Land Degradation Affecting Vegetation Biomass in Different Regions of Somalia, 2017



Source: World Bank/IPSOS, 2017

Effects and Impacts on Biodiversity:

Somalia's biodiversity (including 5,000 plant species, with remarkable plant endemism, and 1,332 animal species) is categorized into six eco-regions: five terrestrial regions and one aquatic coastal region. The *Acacia – Commiphora* bushland is the dominant eco-region among the terrestrial zones, whereas the aquatic eco-region is confined to the coastal belt and associated wetlands. Although the level of degradation is evident in all the five zones,[58] the available data is limited, with access to most of the biodiversity hotspots restricted by the unstable security situation in the country. Nevertheless, evidence suggests that degradation is ongoing, with almost no investment in replenishment. Many of the potential flagship species are either locally extinct or otherwise threatened.

[58] Federal Republic of Somalia. 2015. National Biodiversity Strategy and Action Plan.

The continued effect of droughts and inappropriate land use practices have paired to result in widespread destruction of plant life, which has in turn also fragmented and decreased animal habitats and reduced forage, negative impacting not only Somalia's most important economic resource (livestock complement of goats, sheep, camels, and cattle), but also its wildlife. While there are far fewer wildlife numbers in the north (due to the much more extensive land degradation) and despite the absence of protected areas, there are still some significant presence of wildlife species in the south: hyenas, foxes, leopards, lions, warthogs, ostriches, small antelopes, and a large variety of birds. Total damages and losses in the country's biodiversity resources as a result of the 2017 drought are estimated at USD 0.4m and USD 72m, requiring USD 6m as restitution costs.

Table 21: Impact of the 2017 Somalia Drought on Biodiversity

Region	Sub-region	Expansion of land colonized by invasive species[59] (ha)	Wildlife mortality (% of all ungulates)
North-west	Awdal		29%
	Sanaag		7%
	Sool		21%
	Togdheer		29%
	Woqooyi Galbeed	400	29%
North-east	Bari		5%
	Mudug	120	36%
	Galgaduud		31%
	Nugaal	700	18%
Juba River Area	Gedo		93%
	Lower Juba		90%
	Middle Juba		93%
Shebelle River Area	Hiraan		63%
	Lower Shabelle		88%
	Middle Shabelle		68%
Inter-riverine/Other	Bakool		93%
	Banadir		21%
	Bay		90%
Total National		**1220**	

Studies by SWALIM show that Prosopis has colonized vast swathes of formerly important grazing lands in Puntland and Somaliland, with a particularly high concentration in the Woqooyi Galbeed region. In addition, biodiversity related livelihoods such as frankincense, myrrh, etc., have been adversely affected due to drought's impact on the habitat. The drought also triggered excessive use of these resources, due to diminishing conventional livelihoods elsewhere. Therefore, the livelihood as well as its resource base (habitat) is degenerated.

Effects and Impacts on Soil Resources and Soil Quality:

There has been severe impact on the soil resources of Somalia because of the 2017 drought in the country. This assessment projects that 93,000 tons of topsoil has been eroded as a direct result of the drought in 2017, in the process resulting in aggregate damages and losses in soil fertility functions and ecosystem services estimated at USD 36 million and USD 3 million, respectively.

[59] *Prosopis juliflora*

Table 22: Impact of the 2017 Somalia Drought on Soil Resources and Soil Quality				
Region	Sub-region	Total volumes of soils eroded (wind erosion, in MT)	Loss of soil fertility function (USD equivalent)	Reduction in yields of cereals and legumes (average, in MT)[60]
North-west	Awdal	3,150	548,100	1,575
	Sanaag	8,100	340,200	4,050
	Sool	2,130	894,600	1,065
	Togdheer	6,150	1,070,100	3,075
	Woqooyi Galbeed	6,750	1,174,500	3,375
North-east	Bari	10,500	2,678,400	5,250
	Mudug	10,500	4,941,000	5,250
	Galgaduud	6,450	1,925,100	3,225
	Nugaal	455	163,750	227
Juba River Area	Gedo	4,800	2,678,400	2,400
	Lower Juba	9,150	4,941,000	4,575
	Middle Juba	3,450	1,925,100	1,725
Shebelle River Area	Hiraan	5,100	1,927,800	2,550
	Lower Shabelle	3,750	1,980,000	1,875
	Middle Shabelle	3,300	1,346,400	1,650
Inter-riverine/Other	Bakool	4,050	2,259,900	2,025
	Banadir	249	31,317	124
	Bay	5,850	3,159,000	2,925
Total National		**93,883**	**33,984,666**	**46,941**

In the past two decades, Somali rural communities have faced unprecedented food and livelihood crises. Small-scaled subsistence farmers, who depend on rain-fed agricultural production systems for their livelihoods, have recently suffered from the worst drought in 60 years. Due to prolonged droughts and extreme climate conditions, crop and livestock are increasingly being lost. Further, land degradation led loss of vegetation, gully erosion, loss of topsoil, the invasive species *(Prosopis juliflora)*, the demise of frankincense and juniper forests and wide-ranging ecosystem degradation. Off-season *Deyr* (2016/2017) cereal production was only 357 MT, 93 percent below average, attributed to limited water availability for cultivation and farmers who sold their crops at the vegetative stage for fodder, when the price and demand were high.

On the other hand, April to June *Gu* rainfall started two weeks later than normal and were below average in all areas, except in the northeast where rainfall totals were near average. April rainfall deficits led to crop wilting in rain-fed areas and many farmers replanted. Late April/early May rainfall led to seed germination, but reduced yields were experienced due to early season losses and erratic rainfall. Combined with the frequent droughts, the negative human influences on the environment, such as cutting trees for charcoal production, has led to soil erosion and degradation, loss of agro-biodiversity, deforestation and desertification and therefore a decline in both agriculture and livestock outputs.

[60] Reductions in grain and stover yields of important (4) cereal and grain legumes grown in the country due to loss of topsoil, declining soil fertility and reduction in soil water storage

Effects and Impacts on Household Energy and Fuelwood Resources

Annually, 250,000 tonnes of charcoal is exported from Somalia to Gulf Cooperation Council (GCC) countries.[61] In order to produce this amount, 4.4 million trees are felled annually and processed using inefficient killing techniques, in the process not only deforesting 72,900 ha of land[62] but also significantly contributing to aboveground biodiversity degradation, loss of soil flora and fauna and acceleration of the process of desertification, estimated at USD 216 million. With Somalia's already highly energy-deficient, the 2017 drought is a negative multiplier to the energy access challenge, with 850,000 households unable to meet daily household energy needs. The pressure on the natural vegetation stands increases as the drought severity level moves up from "moderate" to "severe." The continued pressure on biomass result in alarming levels of destruction of Somalia's biomass resources and forest cover, which undermines the resilience of natural eco-systems to future droughts.

Charcoal production has gone up by 50 percent because of the drought in 2017, as subsistence livelihoods option to replace employment in farming and livestock rearing activities. With the issues around access to follow the exact movement pattern of drought affected communities it is difficult to quantify the damages to natural vegetation to meet basic energy needs in drought conditions. However, recent analysis by FAO-SWALIM using GIS datasets indicate

Table 23: Impact of the 2017 Somalia Drought on Household Energy and Charcoal Production

Region	Sub-region	Individual trees lost as a result of charcoal production (no.)	Total land deforested for charcoal production (ha)	Environmental costs of charcoal production (USD)
North-west	Awdal	121,541		6,077,071
	Sanaag	273,586		13,679,275
	Sool	214,569		10,728,433
	Togdheer	265,318		13,265,915
	Woqooyi Galbeed	185,702		9,285,109
North-east	Bari	372,459		18,622,948
	Mudug	372,459		18,622,948
	Galgaduud	364,981		18,249,061
	Nugaal	213,343		10,667,155
Juba River Area	Gedo	372,205		18,610,258
	Lower Juba	395,676		19,783,823
	Middle Juba	147,473		7,373,670
Shebelle River Area	Hiraan	263,492		13,174,579
	Lower Shabelle	160,046		8,002,281
	Middle Shabelle	75,606		3,780,285
Inter-riverine/Other	Bakool	209,943		10,497,125
	Banadir	1,164		58,177
	Bay	321,779		16,088,926
Total National		**4,331,341**	**79,200**[63]	**216,567,039**

[61] UNDP, 2013.
[62] UNDP. 2013. Breaking the Cycle Of Charcoal Production: Press Briefing. https://reliefweb.int/sites/reliefweb.int/files/resources/Breaking%20the%20cycle%20of%20charcoal%20production%20in%20Somalia.pdf
[63] Estimates based on data supplied by UNDP and validated by FAO SWALIM.

charcoal production during 2016-17 has been extensive across Somalia. The southern regions of Jubaland, Lower and Middle Shabelle are over-extracted, with data showing that one tree is felled every minute for charcoal production in highly energy-inefficient kilns. At this rate, Somalia is likely to be any natural tree canopy cover within next 50 years. The estimated damages and losses in this category of impact is estimated at USD 260 million and USD 217 million, requiring USD 30 million in restitution investments.

III. Recovery Needs

This report makes a number of recommendations (short-, medium-, and long-term) to remedy the situation that is estimated to cost a total of USD 99.85m over a period of 5 years. They include capacity building of government institutions, support in legislation and policy, and direct interventions. Suggested direct interventions include scaling up evergreen agriculture (EGA) by integrating with trees-on-farm agroforestry systems for better resilience, as well as rehabilitation of important vegetative resources badly affected by drought by promoting the adoption of sustainable, low-cost land restoration techniques such as farmer-managed natural regeneration (FMNR) and integrated soil fertility management systems (ISFM) for drylands).

Recovery needs include rehabilitation of rangelands and reforestation, which can also provide a large number of short-, medium- and long-term employment opportunities, especially for the bulging youthful population. Experience elsewhere in Somalia indicates that this work could be effectively undertake through a community contracting type of approach that ensures ownership and the long-term stewardship of the environment. There are excellent examples of rangeland regeneration and reforestation implemented in Somaliland and Puntland, which can be expanded and replicated throughout the country. In addition, efforts must be made to develop the renewable energy sector, which has the potential to involve women and youth and can to provide power sources to sectors that are currently underdeveloped because of energy deficits or high costs of energy.

In as far as rangelands rehabilitation and reforestation is concerned, this report recommends that the Ministry of Natural Resources seek the support of international agencies and NGOs at the level of member-states, who can thereafter support local authorities with procurement of materials and implementation of interventions. The focus should be on the use of locally available resources, as well as optimizing labor content by adopting approaches such as community contracting systems of engagement and procurement.

Table 24: Summary Needs for Environment, Clean Energy, and Resource Management					
Summary of Drought Recovery Needs[64]					
Intervention	Level of Activity	Timeframe			Cost (USD)
	(national/ regional)	Short-term (Year 1)	Medium-term (Years 2-3)	Long-term (Years 4+)	
Emergency capacity building of government forest rangers	National	X			2,000,000
Emergency re-seeding of selected rangelands with fast-growing grass species and setting up of germplasm mother blocks (seed production zones for indigenous fruit tree species)	National	X			10,000,000
Improvement of energy efficiency of existing charcoal carbonization and kilning systems	National	X			8,000,000
Scaling up evergreen agriculture (integrating with trees-on-farm agroforestry) and ISFM and training forest end users on sustainable extractive techniques for NWFPs	Southern Somalia		X		17,000,000
Development of legislation to support zoning of wildlife parks, migratory corridors	National		X		1,000,000
Cleaner and renewable energy sources – promotion of energy-efficiency	National		X		15,000,000
Technical capacity improvement of Somali government - remote sensing, GIS, national lab	National			X	4,000,000
Cleaner and renewable energy sources –promotion of solar energy technologies and promoting the use of LPG in Somalia	National		X	X	27,000,000
Rehabilitation of selected gullies and other severely degraded ecosystems in the North and promoting wide-scale adoption of low-cost integrated soil fertility management (ISFM) for improving soil resources	National			X	11,000,000
Assisting the Somali government with the development of a biomass energy policy	National		X	X	3,000,000
Develop a power plan	National	X			853,510
Cross-border electrification and interconnector study	National	X			1,000,000
Total Environment, Clean Energy and Natural Resource Management Needs					99,853,510

[64] In assessing the environmental sector, there is a noticeably large difference between the cost of damages and losses (USD 564m and USD 610m, respectively), and the cost of recovery (USD 99.85m, which has a suggested implementation period of up to 5 years). This is largely due to the method of valuation of environmental resources, which takes into account the generation of these assets over years, losses that persist for a long time, and several intangible features, as well as the existing absorptive capacity of governmental systems in Somalia.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Assessment Considerations

Soil resources and quality: *Soil erosion damages* were calculated on the basis of average wind speeds of 30 m/s, between June to August 2017; occurring on Somalia's light-textured soils that have already been heavily grazed during 2017 drought.

Soil losses estimates are based on the degradation of sedimentation crusts on the surface of stripped soils, or the weathering of rocks at their base where they are in contact with the soil (abrasion) and associated losses. An estimation based on loss of USD 3 for every ha of land desiccated was used (USD 3 representing the total amount of soil organic carbon that would have been stored and retained per ha of land, and which would have given rise to better water holding capacity and higher yields for crops and grasses).

Yield losses due to loss of soil fertility is based on the loss of 0.5 MT of grain cereals and legumes that would have been produced for every ton of topsoil lost per year.

Forests and household fuel-wood resources: Based on the estimate that 12 trees are felled for charcoal production per 1 ha (CARE International in Somalia estimates, 2017), the net damage has been calculated via stumpage value of USD 60 per tree in lost income for NWFPs and environmental services.

Social Sectors


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Health

I. Overview and Pre-Drought Conditions

In terms of health indicators, Somalia ranks among the weakest countries in the world. In 2015, the maternal mortality ratio (MMR) was the sixth highest,[65] and immunization coverage was among the lowest in the world.[66] In 2016, the under-5 mortality rate (U5MR) was the highest in the world.[67] Overall life expectancy at birth is very low compared to the rest of the region (55.44 years compared to 68 years)[68], and one out of every seven Somali children dies before seeing their fifth birthday (133 deaths/1,000 live births). The leading causes of infant and child mortality are illnesses such as pneumonia (24 percent), diarrhea (19 percent), and measles (12 percent).[69] These health-related issues are compounded by the fact that the total fertility rate is very high and is increasing over time (6.4 in 2009-2010 to 6.7 in 2013-2014).[70] The country was unable to achieve any of its health-related Millennium Development Goals (MDGs) (Goals 4,5, and 6).

[65] 732 per 100,000 live births - WHO. 2015. Trends in Maternal Mortality: 1990 to 2015.
[66] Somalia ranks fourth among countries with lowest DPT3 coverage globally of 42 percent - WHO and UNICEF, 2015. Estimates of National Immunization Coverage (WUENIC).
[67] 133 per 1000 live births - UNICEF. 2017. Levels and Trends in Child Mortality.
[68] WHO, 2015. Somalia Country Profile 2015.
[69] UNICEF. 2016. Humanitarian Needs Overview: October 2016.
[70] UNICEF Somalia Statistics, 2010. World Bank Millennium Development Goals Global Data Monitoring.

Table 25: Snapshot of the Somali Health System Progress towards MDGs in Comparison to Rest of Sub Saharan Africa[71]				
	Somalia		Sub-Saharan Africa	
	2009-2010	2013-2014	2009-2010	2013-2014
MDG 1: Poverty and Hunger				
% under-5 children malnourished (underweight)*	32	32	30	21
% under-5 children chronically malnourished (stunting)*	42	42	41	38
% under-5 children acutely malnourished (wasting)*	13	13	10	9
MDG 4: Child Mortality				
Under-5 mortality rate (per 1000 live births)	200	146**	144	98
Infant mortality rate (per 1000 live births)	199	91**	86	64
Measles immunization (% children 12-23 months)	24	46	72	72
MDG 5: Maternal Mortality				
Maternal mortality ratio (per 100,000 live births)	1,400	850**	900	500
% births attended by skilled staff	33	33	39	50
MDG 6: HIV/AIDS, malaria and other diseases				
Prevalence of HIV (% adults aged 15-24)	0.5	0.2	5	1.9
Contraceptive prevalence rate (% of women ages 15-49)	15	15	23	24
Number of Children orphaned by HIV/AIDS	-	110	10,200	15,100
% under-5 children sleeping under insecticide-treated bednets			-	36
% under-5 children with fever treated with antimalarials	8	8	42	37
Incidence of tuberculosis (per 100,000 population per year)	-	285	343	290
Tuberculosis cases detection rate (all new cases) (%)	73	43	46	51
MDG 7: Envrionment				
Acces to an improved water source (% of population)	35	30	58	63
Access to improved sanitation (% of population)	50	24	54	30
General indicators				
Population (million)	9	12.3	772	914
Total fertility rate (births per woman aged 15-49)	6.4	6.7	5.2	5.2
Life expectancy at birth (years)	50	55	49.6	56

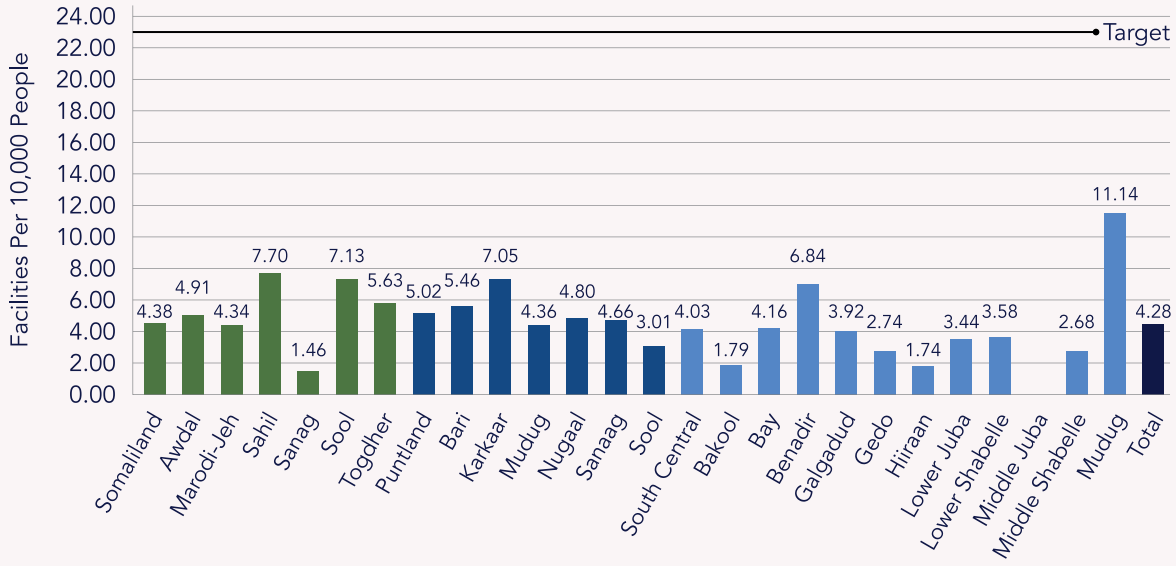
Sources for 2009-2010: UNICEF Somalia Statistics (2010); World Bank Millennium Development Goals Global Data Monitoring (2010).
Sources for 2013-2014: UNICEF-The State of World Children 2014; UN interagency estimates for child and maternal mortality, 2013; Population Estimation Study, Somalia 2014, World Bank Data Monitoring (2013).
* Indicators for under-nutrition are cumulative for moderate and severe malnutrition. The latest Somalia Food Security and Nutrition Unit data for 2015 for sever undernutrition indicate underweight: 13.4%, stunting: 12% and wasting: 13.6%
** Recent under-5 mortality estimate for Somalia is 137 per 1,000 live births, whereas infant mortality rate is 85 per 1,000 live births. as per UN interagency estimates for 2015.
***Recent maternal mortality estimate for Somalia is 732 per 100,000 live births as per UN interagency estimates for 2015.

[71] Final version strategic review of Somali Health Sector

Health service delivery is the mandate of the Ministry of Health (MOH), supplemented by the support of donors, civil society organizations, faith-based organizations and private providers. The Essential Package of Health Services (EPHS), implemented in 2008, provides the framework for health care delivery in the country. Health service delivery is structured on a four-tier system comprising hospitals, referral health centers, health centers (also referred to as maternal and child health centers), and primary health units (at the community level), all of which provide some elements of EPHS. Other than the EPHS, a number of policies and programs have been developed to support the sector: the Somalia Nutrition Strategy (2011-2013), Somalia's zonal Health Sector Strategic Plans (HSSP) (2013-2016), Somali Health Policy (2014), and the Somalia Humanitarian Response Plan (2015). The development of HSSP2 (2017-2020) is currently underway.[72] Major health programs include: The Joint Health and Nutrition Programme (JHNP) (2012-16), the Global Alliance for Vaccines and Immunization (GAVI) (2012-16), the Global Fund to Fight AIDS, Tuberculosis, and Malaria (GFATM), the polio eradication program, health consortium for Somali people, and humanitarian/health cluster and nutrition programs. Additional strategies have been implemented around: micronutrients, reproductive health, community-based health care, female genital mutilation, immunization, health workforce, drugs, behaviour change communication, and mental health.

The conflict-related fragility of Somalia over the past two and a half decades has resulted in the weakening of the health sector, its systems and its personnel, with a related focus on emergency response interventions to recurrent crises. Less than half the Somali population has access to basic health services, with most facilities located in urban areas. Countrywide, there is less than 1 health facility per 10,000 people, and many health posts do not operate fully due to human resource and infrastructure constraints.[73] A pre-drought survey identified a total of 1074 facilities in existence, of which 106 were found to be non-functional and 169 unreachable due to conflict and other similar factors. Health care service utilization data in the country remains limited, and most information that exists is based on MICS and other surveys conducted in the Somaliland, Puntland and South Central zones.

Figure 13: Healthcare Facilities in Somalia[74]



[72] Ministry of Health and WHO. 2016. Somali Service Availability and Readiness Assessment 2016.
[73] WHO. 2015. Strategic Review of the Somali health Sector: Challenges and Prioritized Actions.
[74] UNICEF. 2016. Humanitarian Needs Overview: October 2016


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Figure 14: Map of Healthcare Facilities in Somalia[75]

A serious scarcity of health workers is a major challenge faced by the sector. Approximately 3.3 million people were in need of emergency health services in 2016.[76] Somalia's population growth rate is currently at 2.9 percent per annum as per the World Bank, and if the trend continues, the country is projected to attain a population of 15 million by 2021 and close to 20 million by the year 2030. There are currently an estimated 9,300 registered midwives, nurses and doctors in Somalia against the WHO minimum requirement of 29,900, given the current population, resulting in a gap of 20,500 health professionals. The WHO minimum standard for human resource for health (HRH) is 2.3 health care providers for every 1000 population. The projected population growth is set to increase this gap from the current 1.3 to 1.0 by 2030, further straining already stretched HRH capacity. The graph below shows the projected trend in the HRH gap.

[75] Ibid.
[76] UNICEF. 2016. Humanitarian Needs Overview: October 2016.

Figure 15: Somalia Health Snapshot

Land Area:

637,657 SQUARE KILOMETERS

The terrain consists mainly of plateaus, plains, and highlands. It has a coastline of over 3,025 kilometers.

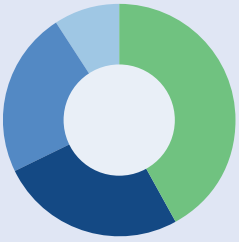
Somali GDP in 2016 was worth 6.2 BILLION

in US dollars

Source: World Bank Data

Source: https://en_wikipedia.org/wikiGeography_of_Somalia

Population: 13 million



42% Urban areas

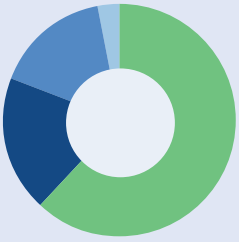
26% Nomadic

23% Rural Areas

9% IDPs

Source: National Development Plan 2017-2019

Water Facilities



62% Dug wells

19% Boreholes

16% Dams

3% Springs

6.7% total fertility rate, one of the highest in the world

mortality ratio in 2015 was **732 per 100,000 live births**

child mortality rate in 2015 was **137 per 1,000 live births**

43% of children received routine immunization of measles

Source: National Development Plan 2017-2019

Pneumonia and diarrhea are among the major killer diseases for children under five years old

55 years old is the current life expectancy

Health Resources

Somalia's health care is mainly limited to the **urban centers** and is run by **private providers** or **international organizations**

Source: World Healthcare Data

9,856 total number of available human resource for health compared to WHO's minimum threshold of 30,000

106	391	620
hospitals/referral health centers	MCH and Health centers	Health Posts

Source: National Development Plan 2017-2019

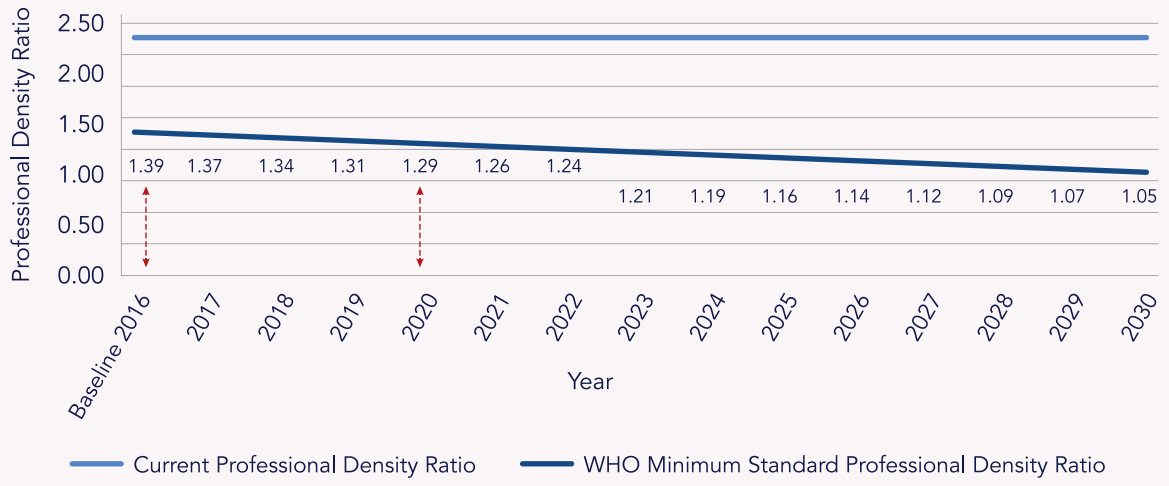
Women & Children

Children Ages 6-59 Months:
25% are acutely malnourished
5% are severely malnourished

Pregnant and Lactating Women:
38,862 are acutely malnourished

Source - FSNAU, Deyr 2015

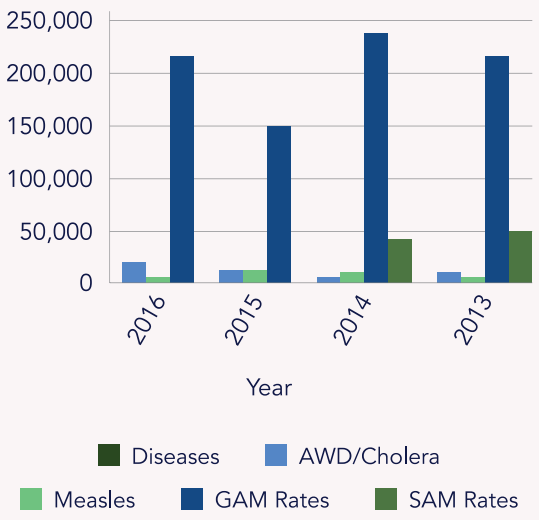
Figure 16: Projected HRH Professional Density Ratio Gap Analysis[77]



Additional challenges facing the Somali health system are: (i) persistently high burden of disease; (ii) limited institutional capacity and stewardship role of ministries of health; (iii) inadequate, unpredictable and unsustainable level of financing, with a high share of out-of-pocket spending on health; (iii) absence of balanced, motivated, well-distributed and well-managed health workforce with the appropriate skills mix; (iv) limited and unequal access to essential health services, and poor quality and safety of services across all levels of care; (v) inadequate procurement/supply system and irrational use of essential technologies and medicines; (vi) absence of national surveys and census, weak births and deaths registration, limited operational research and disease surveillance; (vii) lack of synergy of humanitarian response to health; and (viii) inadequate action on social determinants of health.

[77] DINA team computation.

Figure 17: Baseline Data on the Health Sector[78]



II. DINA Findings and Drought Impact

The overall health effects of the drought are difficult to measure, partly because effects tend to accumulate over time, and partly, because health impacts can be indirect given its link to interceding circumstances such as the loss of livelihoods. However, some impacts are palpable. The drought has worsened food insecurity, which has led to large-scale malnutrition directly affecting the health of the population. Mass displacement has placed large numbers of the population at risk of malnutrition and disease. Reduction of most of the pre-existing water sources has created an increased dependency on use of water from private vendors or, for those that cannot afford to, an increased dependency on unprotected and unsafe water sources, leading to a high risk of contracting water borne diseases such as Acute Watery Diarrhea (AWD)/Cholera. Measles and other viral respiratory infections have also increased due to dry conditions and overcrowding in IDP settlements. AWD/cholera, malaria and water-borne diseases are likely to spread further with the expected *Gu* rains particularly in new, congested settlements for IDPs, due to overcrowding, poor sanitation facilities and insufficient access to safe water. A household (HH) survey conducted as part of the DINA process concluded that IDPs are 2.5 times more likely not to have access to medical health services and 3.4 times more likely than residents to have poor/fair health status.[79] They were also 1.6 times more likely than residents to report not having access to gender-based violence health services.[80]

The advent of the drought, coupled with persistent insecurity, has left most of the health work in the hands of NGO and bilateral donors. With minimal or no financing from central government, this has created challenges in access to basic health care. The delivery of life-saving medicines and medical equipment has been irregular due to insecurity, road inaccessibility, electricity and fuel shortages, and disruption in the cold chain. Overcrowding, lack of functioning referral systems, limited access to health services, unsafe water use and hygiene practice, and underlying malnutrition pose major challenges for the control and prevention of disease outbreaks.

Damages and Losses

Losses in the health sector are many and cross-cutting. Losses in the sector primarily stem from increase in the number of new cases of disease, and increase in mobile health units leading to increased cost of maintaining and managing these units. The destruction of secondary health facilities has also added to losses in the sector due to increase in cost of managing health conditions requiring secondary care. Losses in terms of USD are detailed in Table 26.

[78] http://apps.who
[79] World Bank and IPSOS. 2017. 2017 Somalia Drought Impact and Needs Assessment (DINA).
[80] Ibid.

Figure 18: Number of People Receiving Primary or Basic Secondary Care (Per Month)[81]

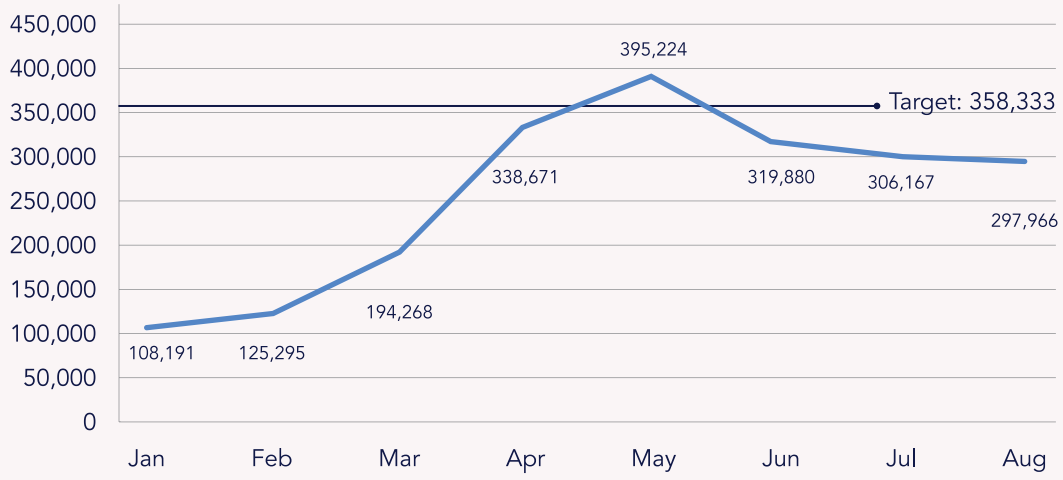


Table 26: Summary Table of Damage and Losses for Sector (in USD)				
Zones	Cholera Losses	Primary-basic Health Losses	Measles Losses	Total Losses
Awdal	-	471,591	2,324	473,915
Woqooyi Galbeed	-	1,674,404	30,860	1,705,263
Togdheer	86,695	933,759	50,200	1,070,653
Sool	32,622	740,645	14,368	787,635
Sanaag	26,359	2,872,248	-	2,898,607
Bari	40,560	1,107,777	28,661	1,176,998
Nugaal	57,009	1,086,742	8,671	1,152,421
Mudug	62,446	1,785,506	29,785	1,877,737
Galgaduud	94,196	2,818,960	11,869	2,925,026
Hiraan	8,764	1,455,726	29,960	1,494,450
Middle Shabele	57,146	3,840,978	10,845	3,908,969
Banadir	159,785	1,158,434	98,776	1,416,994
Lower Shabelle	128,448	3,299,297	31,459	3,459,204
Bay	342,122	1,711,183	-	2,053,305
Bakool	89,012	686,858	-	775,869
Gedo	128,975	1,598,081	-	1,727,056
Middle Juba	-	541,680	-	541,680
Lower Juba	70,498	3,053,807	-	3,124,306
Grand Total	**1,384,638**	**30,837,675**	**347,776**	**32,570,088**

[81] UNOCHA. 2017. Somalia Humanitarian Dashboard

Table 27: Numbers of Various Health Cadres				
Number of Health Workers by Cadre, Somalia 2016[82]				
	Somaliland	Puntland	South Central	Total
Generalist (non-specialist) medical doctors	243	191	289	**723**
Specialist medical doctors	48	49	51	**148**
Non-physician clinicians/ paramedical professionals	472	528	2273	**3273**
Nursing professionals	763	512	1871	**3146**
Midwifery professionals	405	279	613	**1297**
Pharmacists	179	89	290	**558**
Laboratory technicians (medical and pathology)	175	95	277	**547**
Community health workers	624	250	1075	**1949**
Community based health workers	560	132	955	**1647**

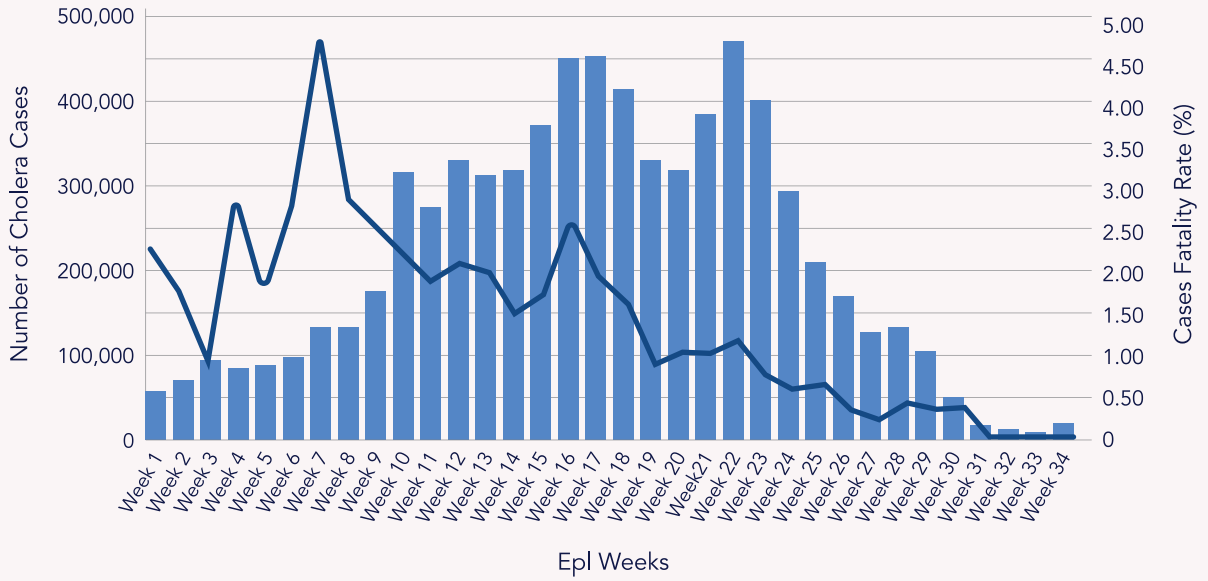
Outbreak of Epidemic-prone Diseases

The outbreak of epidemic-prone diseases such as Acute Watery Diarrhea (AWD)/cholera and measles, and malaria, some of which are cross-border outbreaks, has occurred due to the drought.

AWD/Cholera: Somalia has experienced a large-scale outbreak of cholera since the beginning of 2017. A total of 77,783 cases of AWD and 1,159 deaths (CFR 1.49 percent) were reported in different parts of Somalia from January to September 2017.[83] Of these cases, 58.8 per cent have occurred in children below five years of age. Almost half of the population (53,015) of the AWD cases are females (50.1 percent) are males and (49.9 percent). Response by the Ministry of Health, WHO, UNICEF and health partners have included active case search, effective case management, intensive household chlorination campaign, and the largest Oral Cholera Vaccine (OCV) campaign in Africa (launched in Somalia). These efforts have contributed to the reduction in cholera cases and interruption of transmission of the cholera disease. Over 1 million people were vaccinated with OCV. Due to the massive humanitarian interventions, the number of AWD/Cholera cases has declined from a peak, at the beginning of June (week 22), of 5,306 cases to the latest reported and lowest number of 93 cases in the end of September 2017. Similarly, the AWD Case Fatality Rate (CFR) has decreased from its peak of 4.7 percent in February 2017 to zero percent since August 2017. However, the risk of increasing AWD/Cholera remains due to limited access to safe water and poor sanitation – conditions which continue to exist in many parts of Somalia, especially in IDP camps.

[82] The current number of health workers will not be revised as this will be considered under the broader medium- to long- term developmental objectives. However, cost of increased need for health workers is being taken care of in the costing of increased activities as part of service delivery.
[83] UNOCHA. 2017. Horn of Africa: Humanitarian Impacts of Drought: November 2017.

Figure 19: AWD/Cholera Cases: Somalia Districts Affected by AWD and Attack Rates to Week 34[84]



Measles: Somalia is experiencing the worst outbreak of measles in four years. This is due to drought and the real threat of famine, accompanied by low vaccination rates. Measles cases were reported from all regions in 2017, with rates being much higher in southern and central regions of Somalia due to the inaccessibility of 18 districts for immunization campaigns stemming from security fears. Measles continues to be the leading cause of morbidity and mortality amongst IDPs, with ongoing transmission of measles despite the targeted measles vaccination campaigns conducted in April 2017. Between January and September 2017, over 18,000 suspected measles cases were reported across Somalia.[85] To respond to this outbreak, the FMOH, WHO, and UNICEF, in collaboration of health cluster partners, are planning to conduct a nationwide Measles Immunization Campaign targeting 4.2 million children between the age of 6 months to 10 years by the last quarter of 2017. This will be followed by developing and supporting a 5-year measles control and elimination strategy, with a focus on strengthening measles case-based surveillance systems.

A comprehensive analysis of the pre-/post-drought change in facility operational capacity, as part of the DINA exercise, did not find any statistically change (even after adjusting for NDVI and economic impact of the drought). These analyses, therefore, suggest that operational capacity and equipment among the HCFs included in the survey stayed within pre-drought baseline levels (this indicates that though operational capacity and equipment were already low at the baseline, they had not deteriorated further during the drought period).[86]

Under representation in levels of HRH continues to be a major challenge. The high health worker to patient ratio and low number of health facilities creates challenges to access of care, especially in a situation of a drought and ongoing conflict. Increasing the number of trained professionals will need to be accompanied by an increase in the available health care facilities to adequately cater for other health needs that are equally projected to increase. For the drought needs assessment and immediate needs for human resources, it is justifiable to consider this area as part of developmental need for the medium to long term.

In the absence of the required policy and programming measures being undertaken: the entire public sector system would become a shell, with a lack of equity in the services being delivered; NGOs and the private sector would continue to provide the bulk of services to most of Somalia; human resources for health and health facilities will remain a much-neglected area, further impacting the development of health systems; and the humanitarian and emergency approach will remain the main modus of service delivery with increased fragmentation, and without sufficient alignment with central and state policies and frameworks.

[84] Health Cluster Somalia. 2017. Health Cluster Bulletin: August 2017
[85] Ibid.
[86] World Bank and IPSOS. 2017. 2017 Somalia Drought Impact and Needs Assessment (DINA).

III. Cross-cutting Considerations

Gender: Gender considerations remain critical, with most of the affected being children and women, especially within the context of the accompanying conflict. Special mechanisms for women and children to access care and nutritional support should be established. These will enable equity in the distribution of available inputs to the communities.

Displacement and Migration: Even through displacement and migration affects all, the most vulnerable remain women. Coupled with the prevailing conflict the consequences on women and children remain dire.

Private Sector Impacts and Role in Recovery: The private sector remains a powerful partner for providing health services in Somalia. Indeed, without the private sector, the overall impact on health would have been unimaginable. Both local and international NGOs are playing a critical role in the implementation of health services in Somalia. Any financing that is allocated for health should consider the availability of private sector partners in delivering health services. This is especially in view of the mostly-destroyed and non-functional health infrastructure, and a chronic shortage of human resources for health (HRH).

Disaster Risk Reduction, Drought Resilience and Contingency Financing: This requires a long-term vision within a broader development agenda. The matter of human resources for health, health infrastructure and referral systems requires a more strategic focus towards health development in Somalia.

IV. Recovery Needs

Recovery Strategy

As the drought context in Somalia is compounded by conflict, in addition to drought- specific resilience measures, conflict resilience measures and rehabilitating those institutions destroyed by conflict will need to be undertaken. These include: ensuring that the current health policy strategic plan is implemented effectively, putting in place a strategic human resource plan that will increase the current level of HRH; implementing a comprehensive health services delivery plan by increasing the number of functional health facilities; increasing the number of mobile clinics and specific community interventions such as immunization campaigns and AWD/cholera awareness campaigns. Furthermore, cross-cutting issues such as water and sanitation, food rehabilitation and social protection should be an integral part of the health sector recovery strategy.

Underlying assumptions behind the recovery strategy are that: health activities are fungible; community interventions can be integrated; community health workers can cut across all three interventions; increase in IDP and migration will require more facilities, and more mobile clinics; increase in cholera and measles will require more new treatment centers and increased number of immunization campaigns, and increased number of people seeking care will require increased access to facilities and medicine availability, including availability of diagnostic kits.

Implementation of the strategy will follow the health sector strategy and policy framework. It will be implemented through Government-led initiatives, with support from a wide range of stakeholders. Both local and international NGO's will play a significant role in the implementation of the recovery and resilience plan. The role of other line ministries in implementing health service delivery remains critical.

Priority Groups

Pregnant and lactating women (PLW), children under the age of five and IDPs. The old and the vulnerable should also be considered priority due to their increased risk to disease. Prioritization in terms of needs include service delivery on reproductive health, child health, adolescent health and elderly health.

Addressing the impact of the drought in IDP settlements is a critical need. These include looking at addressing the housing problem; increasing access to water and sanitation services; increasing the availability of nutrition centers; increasing the availability of treatment points for both primary and basic secondary treatments; and increasing resilience through better social protection, and gender and vulnerable population targeting.

Table 28: Summary Needs for Health					
Summary of Drought Recovery Needs					
Intervention	Level of Activity	Timeframe			Cost (USD)
	(national/ regional)	Short-term (Year 1)	Medium-term (Years 2-3)	Long-term (Years 4+)	
Engaging the public in promotion of health, hygiene and safe drinking water, sanitation, environmental hygiene, food safety and safe waste disposal	National	X	X	X	4,118,187
Promoting food borne diseases laboratory-based surveillance by developing food safety guidelines and interventions	National	X	X	X	4,118,187
Introducing standardized rapid diagnostic technologies for prevalent communicable diseases	National	X	X	X	2,470,912
Active disease surveillance and early warning system	National	X	X	X	4,118,187
Prepositioning medical supplies and kits to undertake coordinated rapid response	National	X	X	X	4,118,187
Establishing an effective health information system that provides accurate and timely health data for evidence planning and implementation, supported by monitoring and evaluation	National	X	X	X	2,470,912
Increasing cholera treatment Centre's in all regions	National	X	X	X	8,236,375
Promoting participation in improving public health at community level	National	X	X	X	4,118,187
Ensure availability of essential medicines, vaccines and commodities	National	X	X	X	22,007,180
Establishing emergency response services	National	X	X	X	4,118,187
Ensuring immunization of all children and pregnant women against the major child killer diseases sanctioned by the health authorities including campaigns	National	X	X	X	8,236,375
Deploying more health care workers that are competent on tasks and treat patients with dignity, respect and compassion	National	X	X	X	5,765,462
Supporting fixed and mobile clinics	National	X	X	X	8,236,375
Total Health Needs					82,132,713

Nutrition

I. Overview and Pre-Drought Conditions

Somalia is one of the top ten countries with the highest prevalence of malnutrition in the world, and the third highest in the eastern and southern Africa region. 17.42 percent Global Acute Malnutrition (GAM) is prevalent amongst children under five years, with 3.2 percent being severely malnourished.[87] This is due to a combination of severe food insecurity, high acute malnutrition and high burden of disease. The projected number of children who are, or who will be acutely malnourished, has increased since the beginning of the year to 1.2 million, including over 232,000 (including IDPs) who have or will suffer life-threatening severe acute malnutrition (SAM) over the period from September 2017 to September 2018.[88] Severely malnourished children are nine times more likely to die of killer diseases such as acute watery diarrhea (AWD)/cholera and measles. Predictably, the drought impact combined with the ongoing conflict is a manifestation of the rising malnutrition outcomes.[89]

Contributing to the high levels of child acute malnutrition is the continuing complex emergency, resulting from continued conflicts, displacements, drought and disease. IDP populations face considerable challenges where high pervasiveness of women-headed households are chronically combating high levels of acute malnutrition. Many mothers are forced to travel away from their homes in search of casual labor, while children and infants are left without proper care. They are also susceptible to frequent evictions by land grabbers, leaving families with poor housing structures and limited sanitation/ hygiene facilities.

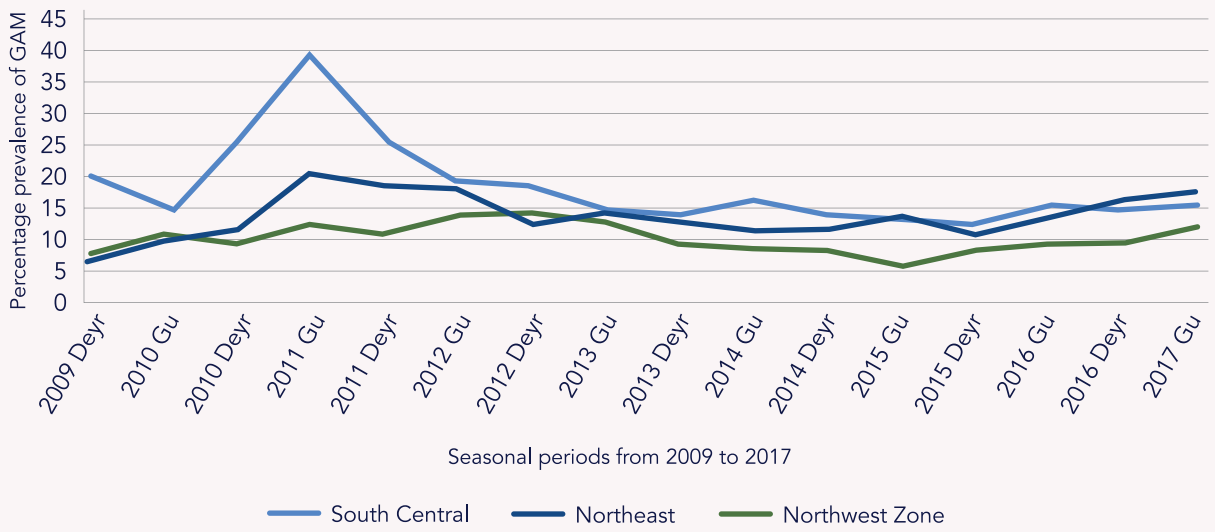
The causes of acute malnutrition include factors already documented, as well as lesser-known underlying drivers in need of urgent attention. The 2015 Nutrition Causality Analysis (NCA) study in Somalia between March and November 2015, indicates that the causes of acute malnutrition are multiple and complex.[90] The study confirmed that, in addition to insecurity, climatic and seasonal factors and notable poverty amongst some communities, dominant child care practices and select socio-cultural beliefs remain core drivers of malnutrition in southern and central Somalia, due to their negative impact on the lives, livelihoods and nutrition status of the communities studied. In all the study communities weak infant and child feeding and care practices, combined with poor hygiene, the lack of basic health and WASH facilities and women's excessive workloads were seen to have a major impact.

Nutrition Trends by Zones

Variations are observed for all the forms of malnutrition between zones in Somalia, with generally higher GAM rates observed in the South Central Zone (SCZ) than in the Northeast Zone (NEZ) and in the Northwest Zone (NWZ). There are also significant differences between NEZ and NWZ, with wasting being significantly higher in the NEZ. High levels of acute malnutrition in SCZ, (above emergency thresholds) are attributed to a high morbidity burden and the complex socio-political situation and frequent conflicts, resulting in low access to services, especially health, as well as causing population displacements and loss of livelihoods. Lower rates of malnutrition reported in NWZ are attributed to relative stability, a key basic factor as identified in the causal framework of malnutrition. However, critical nutrition situation was reported in 2007, associated with a series of rain failures along the northern mountainous Golis/ Guban livelihood zone mountains.[91]

[87] UNICEF. 2014. State of the World's Children Report 2014.
[88] UNICEF. 2017. Somalia Situation Report (Sitrep #15): September 2017.
[89] UNICEF. 2017. Somalia Situation Report (Sitrep #5): April 2017.
[90] WFP and SNS Consortium. 2015. 2015 Nutrition Causality Analysis Study: South and Central Somalia.
[91] FSNAU and FEWS NET. 2017. *Post Gu* Technical Release: August 2017.

Figure 20: GAM Trends in Different Regions of Somalia 2007-14[92]



Nutrition Trends by Livelihoods

There are no significant variations by livelihood systems for all three forms of malnutrition. The three main livelihood systems, agropastoralists, pure crop farmers (Riverine) and pastoralists recorded respective median GAM rates of 17.6, 15.9 and 14.9 percent. The levels of acute malnutrition in the different livelihoods are also not significantly different from the median rates recorded in assessments conducted by administrative boundaries in mixed livelihoods (16.5 percent) and from the national median rate of (16.2 percent). This analysis further showed that IDPs reported a median acute malnutrition rate in excess of the critical threshold (15 percent), estimated at 16.5 percent.[93]

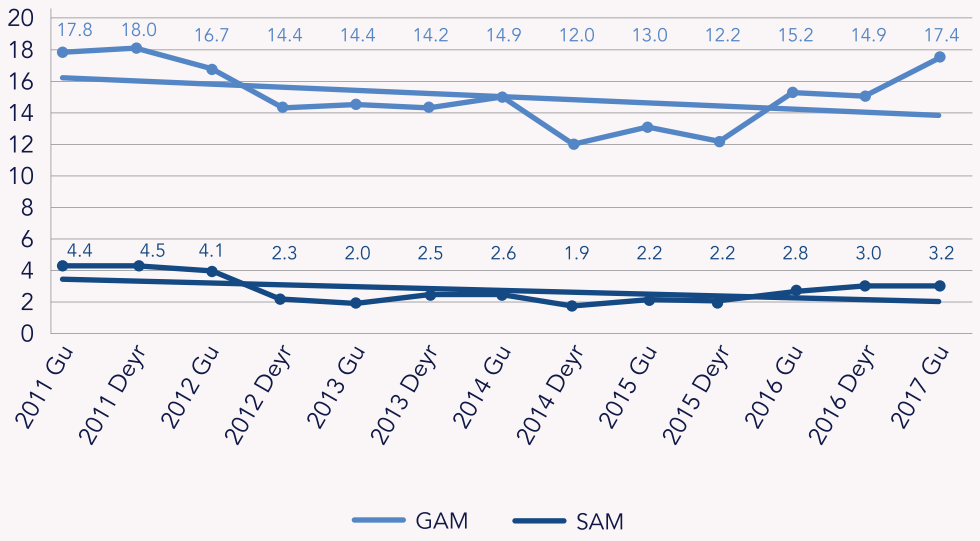
Current Statistics and Burden

Seasonal surveys conducted by FSNAU since 2007 to 2016 clearly indicates that Acute Malnutrition trends in Somalia remain stable at emergency level of GAM/SAM threshold with no significant variations in the malnutrition rates over the years ($p>0.05$). The significant deterioration of malnutrition situation seen among the IDPs can be attributed to high morbidity (disease incidence e.g. AWD, measles), low humanitarian support, and poor child feeding and caring practices. Similarly, partners on the ground generally were of the opinion that food insecurity, limited health service availability, such as poor EPI coverage, and increased morbidity, poor health seeking behavior, and difficulty of accessing clean water supply are driving factors for the current situation. Stunting or chronic malnutrition is a considerable driver given the fact that there is significant association between GAM and stunting ($r=0.38$; $p<0.05$) and SAM and stunting (r-0.51, $p<0.01$) as detected in the latest survey by FSNAU. This shows that acute malnutrition is often superimposed with chronic malnutrition, which can further aggravate malnutrition levels in the community.[94] Among others drivers of high malnutrition in Somalia are limited access to health services, immunization, WASH and disrupted trade that has led to limited access of goods and services.

Both GAM and SAM appear correlated with period of famine and severe drought (Figure 21). For instance, the period between *Gu* 2011 and Dyer 2011 represented the most severe famine in Somalia which was followed by period of relative good rains which show decline of GAM and SAM cases. Again, the onset of *Gu* 2016 season shows a rapid deterioration the nutrition situation up from 12.2 percent in 2015 to the current in GAM rate of 17.4 percent which is close to the 18 percent GAM level observed during the 2011 famine.

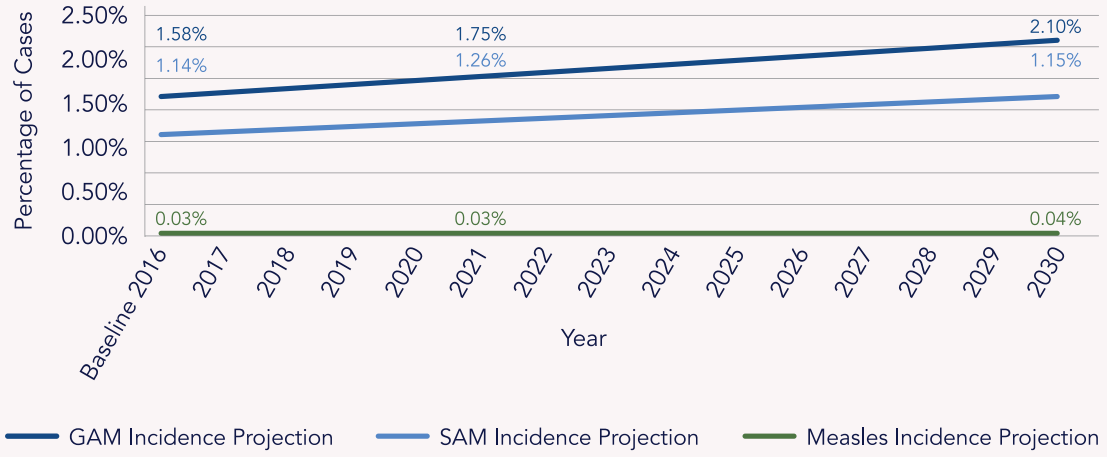
[92] UNFAO and FSNAU 2015
[93] Nutrition cluster burden estimate (September 2017).
[94] FSNAU-FEWS NET 2017 *Post Gu*, Nutrition Situation (August 2017).

Figure 21: GAM and SAM Trend of Somalia[95]



Malnutrition projection over time is set to increase over the medium and longer term (as shown for modeled graph below). The period 2016-2017 may show an increase from 1.14%- 1.17% for SAM and 1.58%-1.60% for GAM.

Figure 22: Malnutrition Projection Over Time in Somalia[96]



[95] Adapted from FSNAU/FEWSNET data summaries
[96] DINA team estimates

II. DINA Findings and Drought Impact

The current global acutely malnourished population quantified from both IDP settlements and Rural Livelihood zones have increased by 20 per cent and 10 per cent, respectively.[97] At the beginning of the year, the GAM rate was 14.9 per cent, while the SAM rate was 3.07 per cent, with 363,000 acutely malnourished and 71,000 SAM prevalence. Projected figures were 971,503 acutely malnourished and 188,000 SAM cases. Currently, the GAM rate has risen rose to 17.4 per cent, while SAM rate increased to 3.20 per cent with 388,070 acutely malnourished children and 87,250 SAM (point prevalence estimate). Projected figures (burden) would be 1,260,568 acutely malnourished and 231,829 SAM cases. Hence between September 2017 and August 2018, there is estimated to be 1.2 million acutely malnourished children, of which 231,829 are severely malnourished. The prevalence of GAM and SAM is higher in boys (6-23 months and 24-59 months) compared to girls in all livelihoods. The difference was statistically significant in all areas surveyed.[98] FSNAU *Post-Gu* 2017 preliminary results reveal that the current poor nutritional situation identified in most of the IDPs settlements and Rural Livelihood zones will further deteriorate or remain in serious or critical situation.

The median prevalence of global acute malnutrition (WHZ < -2 SD) has deteriorated from Serious in *Gu* 2016 (14.5 percent) to *Gu* 2017 Critical (17.4 percent). Regionally, Northwest and Northeast indicate deterioration to Serious (13.4%) and Critical levels (18.6%) of acute malnutrition respectively, while south central indicate sustained Critical at 16.6 percent. *Gu* 2017 assessment also shows 48 cases of bilateral edema in nineteen of the 31 livelihoods surveyed. Prevalence of malnutrition among the urban population tended to be lower, reflecting better access to a diversified diet and to public services including health.[99]

Currently, nutrition response programming is mainly undertaken by the UN, international and national NGOs. Outpatient therapeutic feeding programs (OTPs) for the management of severe acute malnutrition are being implemented across Somalia. Targeted supplementary feeding programs (SFPs) for the management of moderately malnourished under-fives and pregnant and lactating women (PLW) are being implemented. Activities for the prevention of moderate acute malnutrition will include the provision of fortified supplementary food to all children under-two and PLW. In addition, children aged 6-36 months will be targeted with blanket distribution of ready-to-use food (Plumpy Doz), every two months, in areas showing the highest malnutrition rates. Food assistance will be provided to vulnerable groups through institutional feeding and school feeding. General food ration will also be provided consisting of cereals, CSB, sugar, fortified oil and iodized salt when available, to the rural population affected by the drought, urban poor and IDPs. Good nutrition booster health interventions will be delivered through health campaigns to include vitamin A distribution, deworming and nutritional screening during child health days.

Drought Effects

The nutrition situation continues to deteriorate partly due to food insecurity, morbidity and lack of milk and high disease burden in many households. According to Somalia *Post Gu* Seasonal Food Security and Nutrition Assessment (5th September 2017), Lower Shebelle region had a higher malnutrition prevalence with approximately 31,200 children under the age of five being acutely malnourished in June and July 2017. This includes 24, 200 moderately malnourished (MAM) and 7,000 severely malnourished (SAM) children. The FSNAU report further show that there were also significant increases in global acute malnutrition (GAM) cases from *deyr* 2016/17 and gu2016. Other notable significant increases were in SAM cases in the same period. Bakool Region was slightly lower with 12,800 children being malnourished (9,100 children moderately and 3,700 severely). 'Critical' levels of GAM are present in most areas, driven by lower than normal food access, increased waterborne illness during the rainy season, and poor access to health services. High disease incidence is contributing to acute malnutrition. Between January and September 2017 over 70,000 cases of cholera and 16,000 cases of measles were reported.[100]

[96] DINA team estimates
[97] As per the recent FSNAU *Post-Gu* 2017 food security and nutrition assessment findings.
[98] FSNAU and FEWS NET. 2017. *Post Gu* Technical Release: August 2017.
[99] Seasonal trends of Malnutrition levels by Zone in Somalia (Source FSNAU, 2011-2017)
[100] UNOCHA. 2017. Somalia: Drought Response Situation Report No. 16: September 2017.

Critical issues with access to food continue in the country. In a survey conducted for this DINA, with 71 percent of respondents admitting that they didn't have enough food within the month subsequent to the survey being conducted, households have been forced to resort to limiting portions of consumed meals, shifting to less preferred foods, restricting adult consumption to leave more food for children, and relying on donations.[101] See graph below:

Figure 23: Critical Issues with Food Access[102]

IDP settlements are particularly vulnerable to malnutrition. SMART surveys conducted by FSNAU in June indicate 'Critical' levels of acute malnutrition in nine out of 12 IDP settlements.[103] IPSOS survey results have found that IDPs were four times more likely than residents to report not having enough food to eat as one of their top three most urgent relief needs. IDPs were also four times more likely than residents to report that their household experienced a decreased number of meals per day as a result of the drought. Furthermore, food status is 1.4 times more likely to have gotten worse than stayed the same due to the current drought for either IDPs or households with a child under the age of 5.[104]

Drought Impact

Good nutrition is an investment in the future of children in Somalia. Nutritious diets fuel children's growth, drive brain development, strengthen learning potential, enhance productivity in adulthood and pave the way to a more sustainable and prosperous Somalia. Poor nutrition has great impact on child development and school attendance and performance. Poor nutrition also affects productivity, which leads to loss of income, perpetuating the cycle of poverty. Hence a strong, long-term mitigation plan to avert the negative consequences of poor nutrition on the economy is required.

With continued drought and drought projection on nutrition, long-term projection remains low. The impact of the drought on nutritional status will continue for a period of time, even after the ending of the drought, until food security improves and normal livelihood mechanisms are re-established. This effect will have a negative impact on development goals of the country.

Major challenges remain such as the availability of adequate food, given the continuing drought, and constraints on the ability of communities to be resilient. Access to quality health care and WASH services for the most vulnerable remains a major challenge. Although care and treatment for children with severe acute malnutrition (SAM) is life-saving, if nothing is done to address underlying causes, these children remain at risk. Hence the need for external assistance to mitigate the impact of the drought will be more prolonged until communities are able support themselves as the drought recedes. Immediate and medium term needs in this regard remain high. Both the central Government and UN and other partners need to prioritize nutrition as one of the drivers of resilience building, as it affects the next generation in terms of productivity and national development.

[101] World Bank and Ipsos. 2017. 2017 Somalia Drought Impact and Needs Assessment (DINA).
[102] Ipsos Survey 2017
[103] FSNAU. 2017. Food Security and Nutrition Quarterly Brief: July 2017.
[104] Ibid.

If effective policy and programing measures are not taken, the impact of the drought on the health of the people especially children under five and PLW will be dire. Malnutrition levels will continue to rise and the level of SAM will increase. This will cause severe stress on resources to manage and mitigate cases, and overwhelm facilities in charge of acute care. More resources will be required to set up new treatment and rehabilitation facilities, as well as a need for more mobile clinics to reach IDP communities.

Damages and Losses

Immediate losses were incurred in treating SAM and moderate acute malnutrition (MAM) children and pregnant and lactating women (PLW), mass screenings and operational costs for the delivery of a comprehensive package of preventive, curative and promotional services in static and mobile outreach clinics in hard-to-reach areas.

Table 29: Nutrition Sector Losses

	SAM Losses	GAM Losses	Total Losses
Awdal	14,188	81,214	95,403
Woqooyi Galbeed	29,540	121,234	150,773
Togdheer	44,918	86,520	131,439
Sool	19,006	101,948	120,954
Sanaag	27,040	112,048	139,088
Bari	25,686	189,970	215,656
Nugaal	26,373	149,566	175,940
Mudug	52,700	264,973	317,673
Galgaduud	32,867	150,315	183,183
Hiraan	28,230	107,984	136,215
Middle shabele	32,360	88,736	121,097
Banadir	159,260	397,853	557,113
Lower Shabelle	65,830	203,317	269,147
Bay	35,564	76,116	111,680
Bakool	26,883	102,992	129,876
Gedo	37,274	113,543	150,818
Middle Juba	446	613	1,059
Lower Juba	29,202	96,273	125,475
Grand Total	**687,371**	**2,445,216**	**3,132,587**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III. Cross-cutting Considerations

Gender: Nutrition challenges during drought affect mostly children, PLW and older people. The higher number of cases seen in these groups reflects the dire nutrition situation in the country, and they require specific inclusion in all mitigation measures. Given the high displacement rate and the higher rate of malnutrition in IDP camps, more efforts should be made into increasing nutrition support in these areas. The drought has not spared the local communities and, clearly, the current level of treatment is not adequate to meet current needs.

Social Protection & Safety Nets: This will remain a critical area for recovery. Special social protection and safety net measure will be required to mitigate the problem. Relapse into SAM, following treatment, should prevented as much as possible and such measures would help achieve this by increasing the likelihood of access to food and water.

Displacement and Migration: This is a general trend associated with drought. The search for water and pasture for animals increases the risk of malnutrition. This, coupled with ongoing conflict, increases the likelihood of food insufficiency among migrant communities. These communities will benefit from increased mobile clinics and nutrition support programs.

Private Sector Impacts and Role in Recovery: The role of the private sector is crucial in the support of nutrition rehabilitation and recovery programs, given their direct interaction with communities - they have a better understanding of local issues and their input in the design of such programs is vital. In addition, working together with government and other UN agencies, they would form a good vehicle to deliver support and rehabilitation programs to affected communities.

IV. Recovery Needs

The recovery strategy for the sector will include: strengthening prevention and life-saving treatment for management of acute malnutrition in children U5 and PLW to be delivered at scale. Critical activities include regular provision and implementation of other interventions such as Vitamin A supplementation and deworming; nutrition surveillance; monitoring and evaluation; and capacity building and procurement of materials required for child and maternal health and nutrition promotion. In view of high number of IDP and displaced communities as a result of both drought and conflict, increased provision of nutrition treatment through static and mobile outreach services is essential. Target groups continue to be the population of children under five, PLW, the infirm and elderly, and people living with HIV/AIDS. In addition, those living in IDP settlements, where there is evidence of increased risk of severe disease, will be targeted.

Resilience measures should focus on the following:

- Rehabilitation of nutritional service delivery and provision of acute food and nutritional supplements to mitigate the current impacts.
- Due to high prevalence of GAM, which coupled with increased disease burden has led to an increased progression to SAM, continued community surveillance and training for identification of those affected is required.
- Due to increased internal migration and high population volumes in IDP camps, the use of mobile clinics and mobile treatment vans needs to be prioritized.
- Both FGS and the UN and other partners need to prioritize nutrition as one of the drivers of resilience-building, as it affects the next generation in terms of productivity and national development.

Table 30: Summary Needs for Nutrition					
Summary of Drought Recovery Needs					
Intervention	Level of Activity	Timeframe			Cost (USD)
	(national/ regional)	Short-term (Year 1)	Medium-term (Years 2-3)	Long-term (Years 4+)	
Surveillance and M&E operations	National	X	X	X	10,413,189
Mobile clinic and nutrition rehabilitation vans	National	X	X	X	20,826,378
Vitamin A supplementation	National	X	X	X	1,561,978
People living with HIV and AIDS	National	X	X	X	2,082,638
Deworming	National	X	X	X	1,561,978
Capacity building	National	X	X	X	15,619,783
Procurement of material and rehabilitation	National	X	X	X	20,826,378
Health promotion and community mobilization	National	X	X	X	10,413,189
Implementation and operational support	National	X	X	X	20,826,378
Total Nutrition Needs					104,131,888

Education

I. Overview and Pre-Drought Conditions

Since the establishment of the Somali Federal Republic in 2012, the FGS has prioritized the redevelopment and strengthening of the education system. However, the current drought has had a significant negative impact on children's education and school enrollment.

Table 31: Estimated Frequency and Impacts of Emergencies in Somaliland 2012-2016[105]								
Year	Disaster type	Region	District	Frequency	Total deaths	Schools closed	Schools occupied	Children out of school
2012	Drought	Sanaga	Elafweyn	1	4	21	3	830
2014	Drought	Somaliland	Zeila, Lughaya, Gabiley, Borama, Dilla, Hawd	1	0	30	0	2,400
2015	Drought	Toghder	Gabo gabo, Ilkacadees, Xayira and El dher	1	0	4	4	250
2016	Drought	Gabiley	Allaybaday, Agabar, Gabiley	2	100	34	0	2,500
2016	Drought	Awdal and Marodijeh	Qunuejed	2	5	72	5	6,000
Total				7	109	161	12	11.980

[105] Somaliland Education Sector Analysis 2012-2016.

As depicted in the Table 31 above which shows the drought displacements, top destinations and departure regions; the table shows that the higher populations have departed from Lower Shabelle, Bay, Mudug, Sool and Bakool. While arrivals have been dense in Banadir, Bay, Lower Shabelle and Mudug. This data points to a possible pattern of intra-regional displacement and its possible impact on the education systems. The drought has not spared some of the best performing regions in terms of enrollment. According to the Somalia Education Baseline Survey, the largest concentration of primary school learners was found in the Gedo region,[106] which accounted for 17.9 percent of located primary school learners. Of those, 45.2 percent, or 18,644, were girls. Gedo region has seen departures and arrivals estimated at over 44,000 people.

Table 32: Somalia "Drought Displacements, Top Destinations and Top Departure Regions"

Displacements Over Time		Top Destinations		Top Departure Regions		Estimated 5-18 year old children	Estimated enrolled children (Priority 1)	Estimated children not enrolled
Jan-16	21,013	Banadir	268,574	Lower Shabelle	387,082	107,430	32,229	75,201
Feb-16	7,730	Bay	240,164	Bay	248,328	96,066	28,820	67,246
Mar-16	11,603	Lower Shabelle	174,519	Mudug	121,161	69,808	20,942	48,866
Apr-16	20,568	Mudug	115,842	Sool	100,601	46,337	13,901	32,436
May-16	20,081	Sool	76,887	Bakool	94,335	30,755	9,226	21,529
Jun-16	9,827	Togdheer	55,261	Togdheer	57,293	22,104	6,631	15,473
Jul-16	14,119	Sanaag	51,046	Galgaduud	48,315	20,418	6,126	14,292
Aug-16	4,139	Gedo	44,502	Middle Shabelle	44,774	17,801	5,340	12,461
Sep-16	5,882	Bakool	43,482	Sanaag	44,597	17,393	5,218	12,175
Oct-16	85,573	Galgaduud	40,453	Gedo	41,357	16,181	4,854	11,327
Nov-16	82,199	Middle Shabelle	39,223	Hiraan	26,876	15,689	4,707	10,982
Dec-16	22,671	Woqooyi Galbeed	31,884	Bari	17,194	12,754	3,826	8,928
Jan	62,649	Hiraan	28,684	Banadir	12,884	11,474	3,442	8,032
Feb	109,583	Bari	18,262	Lower Juba	10,447	7,305	2,191	5,114
Mar	296,405	Middle Juba	18,232	Middle Juba	8,827	7,293	2,188	5,105
Apr	156,543	Lower Juba	15,540	Nugaal	7,804	6,216	1,865	4,351
May	88,154	Awdal	12,325	Woqooyi Galbeed	4,578	4,930	1,479	3,451
Jun	72,525	Nugaal	5,365	Awdal	3,792	2,146	644	1,502
Total Displaced People	**1,091,264**		**1,280,245**		**1,280,245**	**512,100**	**153,629**	**358,471**

[106] UNICEF. 2017. Somalia Education Baseline Survey 2017.

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As shown in Table 33, as of May 2017 the highest numbers and proportions of children 'forced out' of education due to drought, potential famine and associated economic pressures on families are located in regions and states that have been most affected by conflict. In these cases, the proportions of children forced out of school reached over 25 percent and in the most extreme case was above 42 percent (Sool). Of the nearly 80,000 children forced out of education by May 2017 most were found in south central Somalia, with over 38,000 children reported being out-of-school, while in Somaliland and Puntland the numbers reached slightly over 12,000 and 16,000 respectively, with more than 12,000 children out-of-school in the contested regions between Puntland and Somaliland.[107]

Table 33: Key Baseline Data for the Sector

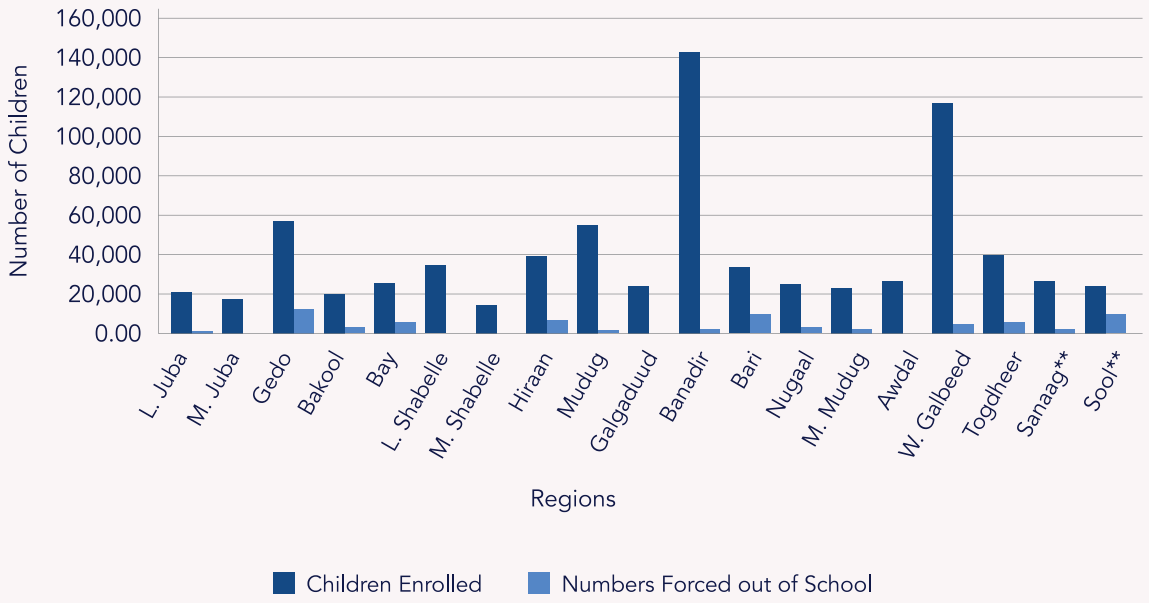
State	Region	Number of Acutely Food Insecure People					
		Stressed (IPC2)		Crisis (IPC 3)		Emergency (IPC 4)	
Jubaland	L. Juba	123,000	25%	86,000	18%	12,000	10%
	M. Juba	88,000	24%	83,000	23%	0	0%
	Gedo	161,000	32%	88,000	17%	1,000	1%
	Total	372,000	27%	257,000	19%	13,000	3%
Southwest	Bakool	66,000	18%	113,000	31%	58,000	88%
	Bay	199,000	25%	172,000	22%	160,000	80%
	L. Shabelle	352,000	29%	200,000	17%	10,000	3%
	Total	617,000	26%	485,000	21%	228,000	37%
Hirshabelle	M. Shabelle	135,000	26%	70,000	14%	0	0%
	Hiraan	62,000	12%	207,000	40%	23,000	37%
	Total	197,000	19%	277,000	27%	23,000	12%
Galmadug	Mudug	114,000	16%	283,000	39%	3,000	3%
	Galgaduud	201,000	35%	130,000	23%	8,000	4%
	Total	315,000	24%	413,000	32%	11,000	3%
Banadir	Banadir	558,000	34%	298,000	18%	14,000	3%
CS	Total	2,059,000	27%	1,730,000	22%	289,000	14%
Puntland	Bari	167,000	23%	169,000	23%	19,000	11%
	Nugaal	87,000	22%	90,000	23%	26,000	30%
	N. Mudug	n/a	n/a	n/a	n/a	n/a	n/a
	Total	254,000	23%	259,000	23%	45,000	18%
Somaliland	Awdal	136,000	20%	80,000	12%	12,000	9%
	W. Galbeed	438,000	35%	115,000	9%	8,000	2%
	Togdheer	188,000	26%	140,000	19%	6,000	3%
	Total	762,000	29%	335,000	13%	26,000	3%
Contested Regions	Sanaag**	163,000	30%	84,000	15%	54,000	33%
	Sool**	94,000	29%	65,000	20%	36,000	38%
	Total	257,000	29%	149,000	17%	90,000	35%
Total		**3,332,000**	**27%**	**2,473,000**	**20%**	**450,000**	**14%**

[107] UNICEF. 2017. Somalia Education Baseline Survey 2017.

# Primary schools	Children enrolled			#s forced out-of-school			% forced out-of-school		
	M	F	Tot	M	F	Tot	M	F	Tot
116	13,152	8,925	22,077	1,250	575	1,825	9.5%	6.4%	8.3%
56	10,356	8,071	18,427	n/a	n/a	n/a			
221	33,982	23,651	57,633	8,739	4,246	12,985	25.7%	18.0%	22.5%
393	57,490	40,647	98,137	9,989	4,821	14,810	17.4%	11.9%	15.1%
125	11,034	9,630	20,664	1,961	1,534	3,495	17.8%	15.9%	16.9%
90	16,792	9,700	26,492	3,903	2,602	6,505	23.2%	26.8%	24.6%
135	20,827	14,361	35,188	199	147	346	1.0%	1.0%	1.0%
350	48,653	33,691	82,344	6,063	4,283	10,346	12.5%	12.7%	12.6%
126	8,778	6,769	15,547	52	126	178	0.6%	1.9%	1.1%
199	24,679	15,345	40,024	4,136	3,061	7,197	16.8%	19.9%	18.0%
325	33,457	22,114	55,571	4,188	3,187	7,375	12.5%	14.4%	13.3%
84	29,402	26,252	55,654	1,240	932	2,172	4.2%	3.6%	3.9%
103	13,639	11,233	24,872	224	205	429	1.6%	1.8%	1.7%
187	43,041	37,485	80,526	1,464	1,137	2,601	3.4%	3.0%	3.2%
n/a	81,828	60,911	142,739	1,841	1,228	3,069	2.2%	2.0%	2.2%
1,255	264,469	194,848	459,317	23,545	14,656	38,201	8.9%	7.5%	8.3%
262	18936	14894	33,830	5,700	4,479	10,179	30.1%	30.1%	30.1%
99	14394	11539	25,933	1,978	1,555	3,533	13.7%	13.5%	13.6%
84	13,104	10861	23,965	1,589	1,023	2,612	12.1%	9.4%	10.9%
445	84,949	66,329	151,278	9,267	7,057	16,324	10.9%	10.6%	10.8%
138	14,922	12,995	27,917	317	160	477	2.1%	1.2%	1.7%
452	70,699	47,098	117,797	3,504	1,819	5,323	5.0%	3.9%	4.5%
200	24,068	16,332	40,400	4,837	1,866	6,703	20.1%	11.4%	16.6%
790	213,960	169,043	383,003	8,658	3,845	12,503	4.0%	2.3%	3.3%
208	14,461	12,961	27,422	1,673	900	2,573	11.6%	6.9%	9.4%
136	13,016	11,464	24,480	5,518	4,688	10,206	42.4%	40.9%	41.7%
344	27,477	24,425	51,902	7,191	5,588	12,779	26.2%	22.9%	24.6%
2,834	**563,378**	**430,220**	**993,598**	**48,661**	**31,146**	**79,807**	**8.6%**	**7.2%**	**8.0%**

Overall Puntland was most affected with over 10.2 percent of children out-of-school, followed by south central with 8.3 percent and then Somaliland with only 3.3 percent of children forced out of school. For Somalia as a whole, by May 2017, the total proportion of children forced out of schools reached an estimated 8 percent of all children enrolled in education. It is, of course, worth cautioning that figures reported by government and cluster partners could understate the actual figures of 'drop-outs' as data provided has typically been for schools that have closed and in many instances did not capture data for children who have dropped out of schools that remained open. Moreover, emergency forecasts for the remainder of 2017 expect worsening humanitarian conditions and deepening impacts on communities – including education (meaning that number of children being forced out of education would likely increase for the remainder of the year).

Figure 24: Comparison of Children Enrolled vs Forced out of School



II. DINA Findings and Drought Impact

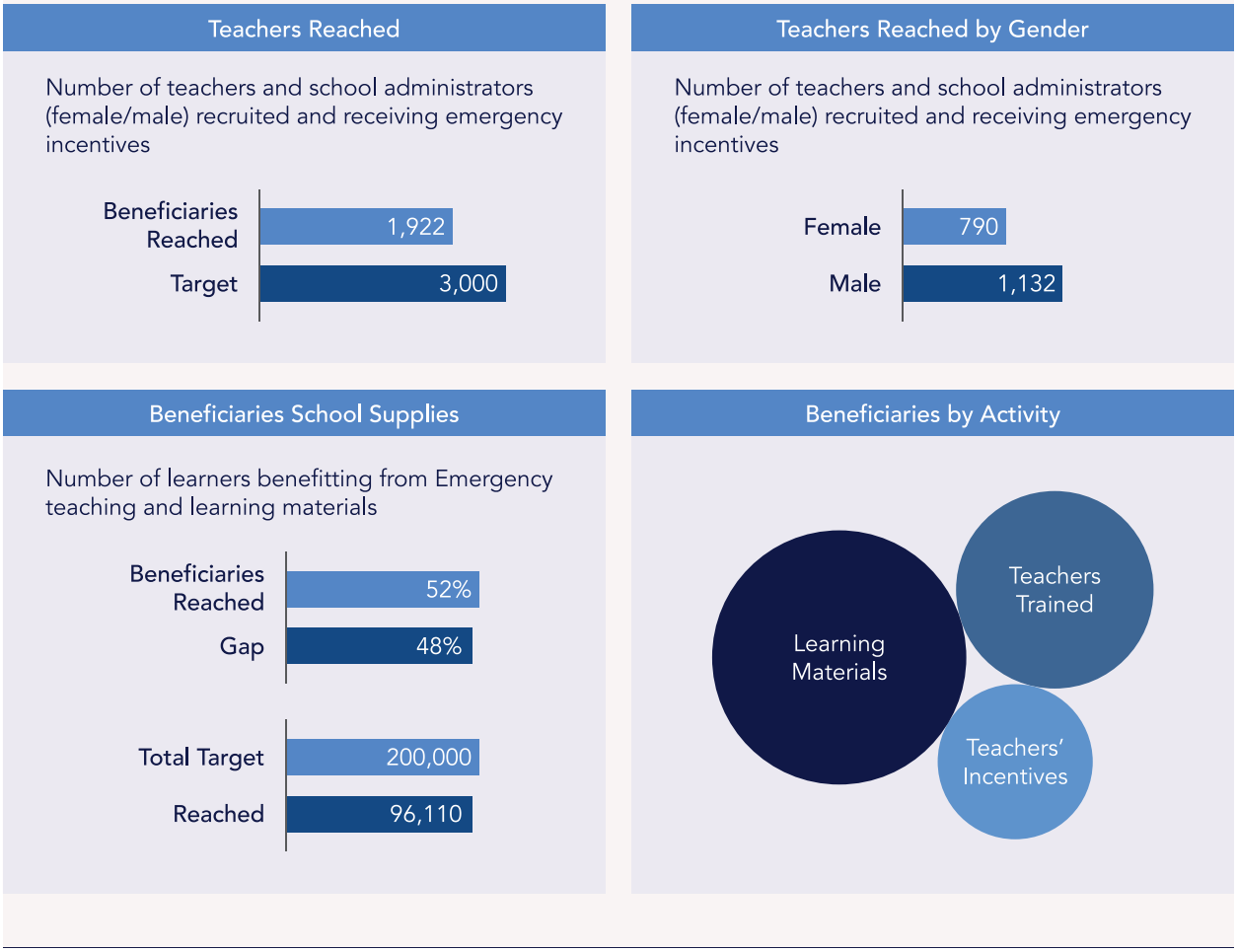
Drought Effects

With data prepared by the FSNAU and FEWS NET, schools and the numbers of children enrolled in relation to drought-affected areas and food security levels, show how the drought has affected children's rights to education and how drought impacts seem higher in regions of south central Somalia that have been more severely impacted by conflict and potentially lower levels of social cohesion. As shown in Table 33, from the internal displacements movement tracking, the table shows an estimated number of children that are enrolled per each top destination region in contrast to the existing children of school going age (5-18 years).

In terms of infrastructure, displacement has resulted in schools being abandoned, and in regions that host displaced populations the resulting increase in learners has led to overpopulated schools where IDP's have settled in their communities. Education partners have innovatively utilized 'Temporary Learning Spaces' (TLS) as a means to continue the provision of education services. These TLS's allow for quick development of learning spaces using low costs materials and fill the void where schools don't exist of additional learning spaces are required within existing schools.

Education was affected by the drought in a number of ways including children missing out on schooling days. In an already compromised learning system, it is inevitable that this will have harmful effects in their overall learning. The drought also affected the teaching profession. As shown in Figure 25 below, in 2016, the sector barely managed to reach planned targets for "Teachers receiving incentives", and number of "beneficiaries/ learners receiving school supplies". While government engages in curriculum strengthening, provision of school consumables and to large extent teachers' incentives especially during crisis like the prolonged drought have remained the mainstay of aid support towards the education sector. During the drought, additional stress was placed on the limited learning materials and emergency teachers had to be supported with incentives if emergency education was to continue.

Figure 25: Teachers and Learning Materials Data, Somalia Education Cluster, 2016[108]



[108] Somalia Education Cluster Report 2016.

Many schools in Somalia integrate the establishment of a local 'Community Education Committee' (CEC). Typically, in the pre-drought season, most schools had established Community Education Committees (CEC's) that govern running of schools. Displacements have disrupted the local school governance structures comprised of teachers and parent representatives. In the absence of a strong education system, CEC's are the basic governance structures that drive community education.

Displaced families together with their schools going children have mostly settled on the outskirts of peri-urban areas to be within reach of social services including humanitarian aid. Large groups of families, often with own social protective structures now find themselves with no protection and have to rely on host communities for their protection. Children especially girls in IDP settings have higher risks of gender-based violence and will require protective mechanisms to enable them safely access education services and support family coping mechanisms. A number of cluster assessments in 2016 identified high needs and gaps for education in emergencies, as existing capacities and resources were unable to meet the existing requirements.[109] These gaps and needs were due to a lack of adequate learning facilities, lack of trained teachers, basic emergency teaching and learning materials, as well as basic WASH facilities and school feeding. In Puntland, 70 per cent of school children did not have access to safe drinking water and 80 per cent did not have access to food provision. In Somaliland, 41 per cent of school children did not have access to safe water and 77 per cent had no access to food provision.[110] In Central and Southern regions, an estimated 90 per cent of schools did not have access to safe drinking water.[111]

The lack of appropriate access to WASH facilities increases the risk of waterborne diseases such as AWD/Cholera. During the first half of 2017, a significant number of schools closed due to AWD/Cholera outbreaks- a lack of water has direct effects on prevalence of water borne diseases especially affecting children of school going age.

The lack of access to school feeding severely hampers the health and learning abilities of children. The Somalia Nutrition Cluster projects that 1.2 million children are, or will be, acutely malnourished by the end of 2017.[112] Severely malnourished children are nine times more likely to die of fatal diseases such as AWD/cholera and measles.[113] The high numbers of malnutrition among children under five years indicates a significant likelihood of malnutrition among children of school going age as well.

Damage and Losses

It should be noted that the education sector did not experience any direct damages and losses. However as a consequence of the prolonged drought disaster impact, the sector experienced the following effects: disruption of school calendar in some regions of the country; scarcity of adequate safe water in schools; scarcity of nutritious food for children and their families; increased enrollments in displacement destinations resulting in stretched existing school resources i.e. education materials, furniture, equipment; conversely enrollment decline in some schools; and unaffordability of school fees.

On average, the prolonged drought affected an estimated 384,000 children of school going age and with varying severity scales. Movement of population affected by drought has resulted in an increase in enrollment in schools in host regions while other schools suffer from depletion or irregular attendance. After many years of conflict and fragility coupled with poor education sector financing, the education sector is not flexible enough to deal with fluctuations in attendance due to wide displacement and school resources often cannot adapt to the entry of additional students, with little and ill-equipped teachers, this eventually results in poor quality teaching in overcrowded schools and lack of water and food for many school going children. The drought continues to present challenges to many regions and the whole country in meeting the provision of education services.

Drought Impact (Economic and Social Impact)

By December 2016, 277, 605 students (122,171 girls) were enrolled in schools in drought-affected areas. The effects of the drought have had debilitating effects in all affected areas.[114] The education sector will continue to be stretched during the short-term period, with most education interventions taking an "Education in Emergencies" approach aimed at reducing the impact of the drought. Access enhancement may take over quality education provision.

[109] Somalia Rapid Needs Assessment (SIRNA) for drought affected areas in Puntland and Somaliland May 2016; Somalia Education Baseline Survey 2016; Education Cluster Survey 2016.
[110] Inter-Agency Drought Assessments in Puntland: September 2016; Inter-Agency Drought Assessments in Somaliland: November 2016.
[111] Somalia Education Baseline Survey 2016.
[112] UNICEF. 2017. Somalia Situation Report (Sitrep #15): October 2017.
[113] The Lancet Child and Maternal Nutrition, June 2013.
[114] Somalia Education Cluster. Keeping Children Safe Drought Newsletter No. 1.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Overall enrollment and learning achievement among affected regions will be affected with gains made being reversed if the planned interventions are not implemented. Many more children may miss out on their education rights further compromising the gradual gains made over the years on increasing enrollment. Not developing additional learning spaces in areas of high displacement may degrade the levels of social cohesion and further aggravate conflicts between host and IDP communities. Lack of safety nets and social protection may result in IDP families not being able to meet school fees demands and further resulting in more IDP children dropping out of school.

The Medium to Long Term Projections on the Sector and Impact on Development Goals

Somalia has one of the world's lowest proportions of primary-age children attending primary school. Nationally, the Gross Enrollment Rate (GER) is about 32 per cent (With a primary GER of 20 per cent in Central South regions of Somalia, additionally, the GER for both primary and secondary education are lowest for socially excluded groups in rural areas and lower for girls compared to boys)

Gender inequities in education are high, with girls' participation consistently lower than for boys. Current levels remain relatively low (primary GPI: Puntland .79, Somaliland .83 and SC .70/ secondary GPI: Puntland .57, Somaliland .68, and SC .44.1). The proportion of girls enrolled in primary education ranges from 44-45 per cent and for secondary education from 34-40 per cent across the three regions.

Urban residents consistently have the best education indicators while rural nomadic and pastoralist populations the worst, particularly girls. Barriers include: lack of educational infrastructure including schools; insufficient numbers of teachers in rural areas; lack of learning materials and supplies; distance to schools; as well as a curriculum that is poorly aligned to the cultural and economic needs of most nomadic and pastoral communities.

Somalia exhibits a large youth bulge (4.6 million or 38 per cent of the population is aged between 15-35 years). Youth unemployment is one of the highest rates in the world. Only 45 per cent of youth can read and write (49 per cent male, 41 per cent female), 69 per cent of youth are not currently enrolled in school. Additionally, nearly 46 per cent of youth reside in urban areas. As a result, recent reports suggest that young people who are socially excluded may turn to 'alternative' income generating activities, including petty theft, organized crime or joining extremist groups.

III. Cross-cutting Considerations

Gender: The Somalia Education Baseline Survey showed that in Gedo region where the largest concentration of primary school learners was found,[115] about 45.2 percent (18,644) were girls. In terms of movements, Gedo region has seen departures and arrivals estimated at over 44,000 people. The baseline further identified the highest percentage of female primary school learners to be found in Mudug region, in which 7,555 of 15,827 reported learners (or 47.7%) were girls. Mudug has seen departures and arrivals of over 100,000 people. Therefore, in an already difficult environment for girls, the already reached and enrolled girls should be supported to complete their education if they are to count towards improving gender equity in Somalia. By December 2016, 277, 605 students (122,171 girls) were enrolled in schools in drought affected areas.[116]

There is a need to engender the response and recovery plan to ensure that gender issues are addressed. The needs for displaced girls will vary considerably to the needs of boys especially taking into consideration the high prevalence of Gender Based Violence (GBV) affecting girls and women in IDP settings.

Serious protection concerns persist in Somalia, putting displaced civilians' and especially children of school going age at risk, Abuses, including wide spread GBV, recruitment of children, physical attacks, and forced displacement remain a pervasive feature of the conflict and displacement in Somalia. The drought also has triggered massive displacement and further exposed civilians to serious protection risks. Women including girls, children and marginalized communities are especially at risk and face specific protection concerns.

In IDP settlements, many reside in overcrowded areas with poor living conditions and limited security provision. Where the basic needs of IDP are not met due to inconsistent service provision, exclusion from accessing services, or from the sheer absence of services due to poor targeting of settlements. The lack of core services contributes to serious public health risks, preventable deaths, and increased risks of GBV especially, for women and girls, often with inadequate access to reporting and referral mechanism or accountability of perpetrators. Of specific concern is the large number of drought-affected IDP communities from conflict areas. These IDPs with their perceived links with non-state armed actors face increased exposure to security threats and discrimination in assistance provision from the host community.[117]

Social Protection & Safety Nets

Most displaced families will not be able to make fee payments to the vast majority of private run schools. Having lost most of their livestock, many displaced families will require some form of social protection if they are to continue meeting their daily needs let alone finance the education of their children. Schools too may require roll out of school feeding programs to enhance learning capacities of children.

Environment & Natural Resources

The development of planned classrooms and "Temporary Learning Structures" (TLS) and other education infrastructure will take into consideration environmental sensitivity and sustainability. Somalia's environment is classified as one of the most fragile. Development efforts will seek to mix and balance the use of local natural resources and industrial products.

Private Sector Impacts and Role in Recovery

Strengthening education systems with data management systems and support rapid education surveys using innovative tools like UNICEF supported *RapidPro* (SMS based service for data collection) can actively bring the private sector towards supporting the recovery plan. Partnering with mobile service operators for data collection through mobile telephony innovations will be pursued in support of the recovery and strengthening data collection for the whole education system.

Disaster Risk Reduction, Drought Resilience and Contingency Financing

Somalia remains prone to many hazards beyond drought. Developments e.g. temporary learning spaces towards the recovery plane should be risk informed and take into consideration risk reduction measures.

[115] Somalia Education Baseline Survey 2017, UNICEF Somalia Education Cluster.
[116] Keeping Children Safe Drought Newsletter No. 1, Education Cluster.
[117] Draft Humanitarian Needs Overview, October 2017, Somalia HCT and Partners.

IV. Recovery Needs

Recovery Needs

The proposed recovery needs will include; development of additional learning spaces to accommodate arriving school going children; enrolling additional displaced children of school going age who have not been to school; developing local Community Education Committees to support and engage on education; rapid recruitment, training (pedagogy) and incentivization of teachers; availing of adequate learning materials; and strengthening education systems with data management systems and support rapid education surveys using innovative tools like UNICEF supported RapidPro (SMS based service for data collection).

Recovery Strategy

The recovery strategy will include; responding to the needs and priorities of affected population and maximize their participation; prioritise the needs of displaced children whose learning is affected; focus on displaced children of school going age who have never enrolled in any schools; ensure national ownership and leadership of the education recovery strategy; work in partnership with civil society, donors, NGOs, and multilateral and United Nations agencies; build on national development plans and align with national priorities; reinforce national and local plans for DRR/climate risk reduction (CRR).

Recommendations for Building Resilience in the Sector

To promote equitable growth and reduce the impacts of conflict, drought, floods and disease outbreaks the following are recommended: Developing national and state capacity for resilience management through a strong resilience coordination mechanism ensuring national leadership and commitment to investment; Strengthening the ability of productive and social sectors to respond to changing conditions that offer greater potential to withstand disasters; Developing a range of instruments to protect the weakest in society (school fees, remittances, school lunches, free health care, water) beyond crisis periods; Support the accountability and transparency of sub-national planning processes (linked to the Resilience Pillar) to build trust across communities;[118] Implementing these mechanisms will help reduce the impact of crises and disasters in the education sector often resulting in loss on progress and expensive response and reconstruction efforts.

Table 34: Summary Needs for Education

Summary of Drought Recovery Needs					
Intervention	Level of Activity	Timeframe			Cost (USD)
	(national/ regional)	Short-term (Year 1)	Medium-term (Years 2-3)	Long-term (Years 4+)	
Learning spaces	Regional	X			19,200,000
Teachers	Regional	X	X		12,885,600
Learning materials/ kits	Regional	X	X	X	4,343,871
CEC structures to be supported	Regional	X	X	X	2,880,000
Education sector coordination support and data tracking costs	Regional	X	X	X	4,320,000
Total Education Needs					43,629,471

[118] The European Union Emergency Trust Fund for stability and addressing the root causes of irregular migration and displaced persons in Africa. Action Fice for the implementation of the Horn of Africa Window EUTF05-HoA-SOM-XX.

Cross-cutting Sectors

Food Security

I. Overview and Pre-Drought Conditions

Somalia is a country in protracted crisis precipitated by decades of conflict and recurrent droughts and floods. The combined impact has manifested itself in collapse of state institutions, massive population displacement internally and externally, and two devastating famines that killed an estimated 200,000 people in 1991-1992 and 258,000 in 2010-2011. The protracted crisis in Somalia has been exacerbated by widespread poverty.

Food security is a cross-cutting sector that reflects the combined effects of drought on food security related sectors such as agriculture (crop production, access to agricultural employment), livestock (livestock production and reproduction), trade and market prices (food and livestock prices and purchasing power of the population).

In Somalia, food security is closely associated with poverty. Populations displaced due to drought and conflict such as the urban and rural poor represent the majority of food insecure populations in Somalia. The urban poor and internally displaced persons (IDPs) tend to rely on casual labor employment, petty trade and humanitarian assistance as their source of food and income. Among rural livelihoods, crop production and livestock contribute to a major portion of household food and income.

In pastoral livelihoods, livestock sales provide almost half of annual household income. Livestock products, especially camel milk but also hides and ghee, provide an important secondary source of income for pastoral households. Poor pastoral households have diversified their income sources the most, and include charcoal and firewood sales (labeled "self-employment"), labor sales and gifts in their portfolios of income sources. Pastoral households are highly dependent on markets where they purchase most of their food. Camel milk, and to a lesser extent, goat milk and the meat of slaughtered animals, complements their diet. In addition, poor pastoral households receive food gifts from wealthier neighbors and humanitarian assistance.

The economy of most agropastoral livelihoods is dominated by the pastoral element: livestock sales and milk sales. Once again, poor households have the most diversified sources of income, as neither their livestock holdings nor their agricultural land are large enough to sustain the family for a whole year. Labor provides an average of 25 percent of their annual income; most of it is agricultural labor for wealthier local households. Among agropastoral households, own production of crops covers an average of 40-45 percent of annual food needs. Between 7 and 13 percent of the annual food needs of poor and middle households are covered by milk and meat from the households' own herds. The rest of households' food needs (45-50 percent) are covered through market purchases.

Households in agricultural livelihoods are normally self-sufficient in staple foods, except poor households whose land sizes are smaller (many of them are also agricultural laborers) and are obliged to purchase a large portion of their yearly cereal consumption. Households living in agricultural areas gain the majority of their income from the sale of food crops, cash crops and, sometimes, fodder. Among poor agricultural households, agricultural labor is also an important source of income.

Expenditure on staple and non-staple foods combined is highest in pastoralist communities, where all staple grains need to be purchased. Food purchases represent 50-60 percent or more of their annual household budgets. Purchase of water represents an additional item of household expenditure among pastoral livelihoods and some agropastoral livelihoods, especially during the dry season. Domestic cereal production only covers one-fifth of total requirements, with the gap being filled through private commercial imports and imported food aid.

Futhermore, the main hazards affecting rural Somali households include drought, floods, environmental degradation, civil insecurity, high food prices (reduced purchasing power), market disruption, livestock disease, crop diseases and pests. Households engage in a variety of strategies in response to shocks and hazards, including: migration to more distant range lands, purchase water


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for livestock, increase milk sales, increase livestock sales, increased charcoal/firewood sales, family splitting (in search for labor/livestock migration), seek gifts and loan in kind and cash, temporary labor migration to towns in search of employment, increase agricultural labor, search for share-cropping opportunities, intercropping short cycle crops (pumpkins, beans, etc.), increase collection of wild foods/fish, and reduce number of daily meals.

Food insecurity is widespread among displaced populations and among poor rural population affected by natural hazards which adversely affected sources of household food and income. In recent years, frequent crop production failures in crop dependent areas and severe shortage of pasture and water in pastoral areas followed by substantial livestock losses have disrupted livelihoods and have contributed to further population displacement.

The impact of drought in terms of the increases in the number of people experiencing acute food insecurity between the pre-drought baseline (2015) and the drought (2016-2017) period is assessed using the Integrated Food Security Phase Classification (IPC) framework.[119]

[119] FAO, Integrated Food Security Phase Classification Technical Manual, 2012, Rome.

Table 35: Pre-drought (Baseline) Average Number of Acutely Food Insecure People in Somalia by Region					
Region	Population	# of Acutely Food Insecure People in			% Share of Population
		Crisis (IPC 3)	Emergency (IPC 4)	IPC 3 & 4	
Awdal	673,264	69,209	0	69,209	10
Woqooyi Galbeed	1,242,003	97,749	4,086	101,836	8
Togdheer	721,364	30,134	4,940	35,074	5
Sool	327,427	12,274	1,258	13,532	4
Sanaag	544,123	39,665	0	39,665	7
Bari	730,148	81,892	3,704	85,596	12
Nugaal	392,697	12,307	742	13,049	3
Mudug	717,863	43,514	625	44,139	6
Galgaduud	569,434	36,625	1,876	38,502	7
Hiraan	520,684	27,726	2,500	30,226	6
Middle Shabelle	516,035	8,033	0	8,033	2
Lower Shabelle	1,202,222	25,083	0	25,083	2
Banadir	1,650,228	356,617	22,469	379,086	23
Bay	792,182	17,279	2,697	19,977	3
Bakool	367,227	26,716	0	26,716	7
Gedo	508,403	7,317	2,633	9,950	2
Middle Juba	362,922	9,591	0	9,591	3
Lower Juba	489,307	30,645	2,897	33,542	7
Total	12,327,533	932,377	50,429	982,806	8

The average pre-drought (2015)[120] number of people in acute food security Crisis and Emergency (IPC Phases 3 & 4) was 983,000.[121] This figure is used as a baseline to estimate the food security impact of the current (2016-2017) drought.

Government institutional and technical capacity in relation to food security monitoring, assessment, analysis and policy and strategy development is gradually improving but remains weak. Somalia doesn't yet have a food security strategy and policy. It also doesn't have safety net that could provide cushion the most households or population groups.

II. DINA Findings and Drought Impact

Endemic to Somalia in recent decades due to a confluence of natural disasters and insecurity, food security has significantly worsened during the 2016-17 drought. The 2016 *Gu* (April to June) rains were poor, started late and ended early in most regions; rainfall was better in parts of the previously drought affected northwest. In southern part of Somalia, considered the major crop producing part of the country, the 2016 *Gu* cereal production was estimated at 65,000 tonnes.[122] This represents 49 percent below long-term average (1995-2015) and 20 percent below the five-year average for 2011-2015.[123]

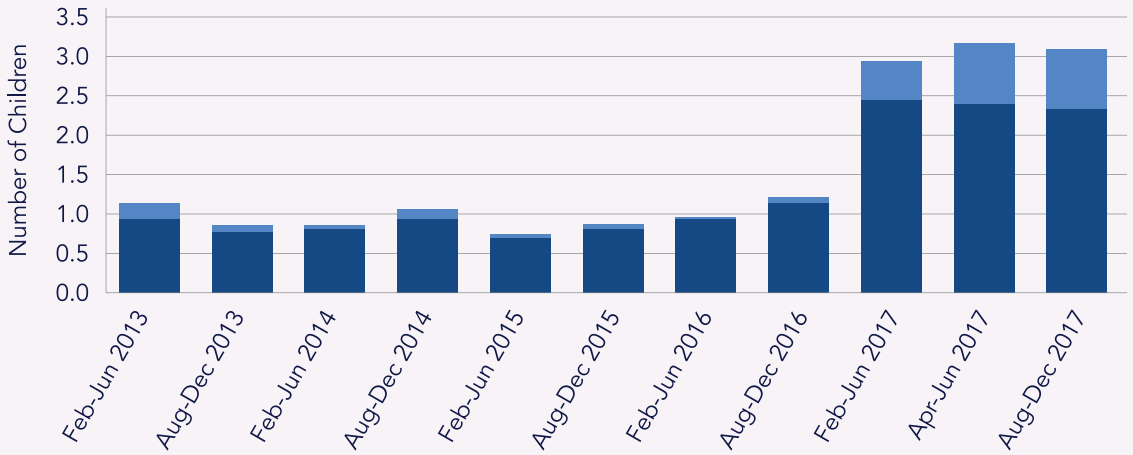
[120] A new estimate for the total population of Somalia (12.3 million) became available following dissemination of the final report of the Somalia Population Estimation Sample Survey (PESS) in October 2014. The new population estimates ware used as a basis for food security assessments starting in 2015. Prior to 2015, food security assessments were based on a total Somalia population figure of 7.5 million which was estimated by UNDP in 2005.Thereore, the average for 2015 was used as a baseline instead of the average for 2013-2015.
[121] FSNAU-FEWS NET, Somalia 2015 *Post Gu* Assessment Results, 31 August 2015. Nairobi and Washington.
[122] FS FSNAU/FEWSNET 2016. Somalia Food Security and Nutrition Analysis: *Post Gu* 2016. Technical Series Report No. VII.69.
[123] Ibid.

Poor 2016 *Gu* rainfall, locally significant floods, trade disruption, and new and continued population displacement contributed to a worsening of the food security situation in Somalia since the beginning of 2016. Acute malnutrition has also worsened over the same time period and remained high in many parts of the country. As a result, approximately 1,139,000 people were classified in Crisis and Emergency (IPC Phases 3 & 4) across Somalia between August and December 2016. Additionally, 3.9 million people were classified as Stressed (IPC Phase 2) through the December 2016, bringing the total number of people facing acute food insecurity across Somalia to five million (see Figure 26 below).[124]

The poor 2016 *Gu* season rainfall was followed by another poor rainfall during the 2016 *Deyr* (October-December) for the second consecutive season. The 2016 *Deyr* (October-December) rainfall was much below average and poorly distributed across most parts of Somalia. Coupled with low river water levels, this greatly impacted the *Deyr* season cereal harvest which is estimated at 32 000 tonnes, 70 percent below long-term (1995-2015) average and 75 percent below the five-year average for 2011-2015.[125] As severe drought gripped most parts of Somalia, food crisis worsened in rural areas. Near total crop failures and reduced rural employment opportunities, widespread shortage of water and pasture, consequent increases in livestock deaths, and rapidly diminishing food access among poor households as staple food prices continued to rise sharply and livestock prices decreased significantly. Rising food prices also affected food access among displaced and poor urban households. Total loss of livestock and destitution were reported in some northern pastoral areas as a result of worsening drought conditions. Drought-related distress migration also increased substantially. Acute malnutrition remained high and widespread across Somalia. As a result, over 2.9 million people faced Crisis and Emergency (IPC Phases 3 and 4) across Somalia between February and June 2017. Additionally, more than 3.3 million people were classified as Stressed (IPC Phase 2), bringing the total number of people facing acute food insecurity across Somalia between February and June 2017 to over 6.2 million.[126]

Results from the 2017 post-Jilaal (January-March assessment conducted in March and April 2017 indicated further worsening of the food security in the country. Severe water shortage in parts of southern Somalia during the dry 2017 Jilaal season led to a severe AWD/cholera outbreak and expansion to more regions.[127] Data from UNHCR indicated that an estimated 437,530 persons were displaced in the first quarter of 2017 due to drought related factors. As a result, an estimated 3.2 million people were classified as Crisis and Emergency (IPC Phases 3 &4) between April and June 2017. Additionally, 3.5 million people are classified as Stressed (IPC Phase 2) through June 2017, bringing

Figure 26: Number of People in Crisis (IPC 3) and Emergency (IPC 4)



[124] Ibid.
[125] FSNAU-FEWS NET, Somalia 2016 *Post Deyr* Technical Release, 2 February 2017. Nairobi and Washington.
[126] Ibid.
[127] FSNAU-FEWS NET, Somalia Food Security Alert, 9 May 2017. Nairobi and Washington.

the total number of people facing acute food insecurity across Somalia to a peak of 6.7 million.[128] Large-scale humanitarian assistance which started in early 2017 helped reduced household food consumption gaps and contributed to reduced staple food prices. However, an elevated risk of Famine (IPC Phase 5) remained due to the combination of severe food consumption gaps, high acute malnutrition, high disease burden, and reliance on humanitarian assistance.

For the third season in a row since the beginning of 2016, the rains performed poorly during the 2017 *Gu* (April-June) season, leading to persistent drought conditions across most parts of Somalia. The 2017 *Gu* rains started late, ended early and were below average in most parts of Somalia. The *Gu* season cereal harvest, which is estimated at 78,400 tonnes, is 37 percent lower than the long-term (1995-2016) average.[129] *Gu*/Karan cereal production in northwest Somalia is estimated at 6,500 tonnes, 87 percent lower than the 2010-2016 average. As a consequence, poor households in crop-dependent livelihood zones of the northwest and southern Somalia have little or no food stocks. Farm labor opportunities were also limited. In pastoral areas affected by protracted and persistent drought, livestock production and reproduction have declined sharply.

Depletion of livestock assets due to distress sales and mortality has contributed to increased indebtedness and destitution among many pastoralists. As a result an estimated 3.1 million people were classified be in Crisis (IPC Phase 3) or Emergency (IPC Phase 4) through December 2017.[130] Additionally, 3.1 million people were classified as Stressed (IPC Phase 2), bringing the total number of people facing acute food insecurity across Somalia to 6.2 million for the period between August and December 2017.[131]

The modest decline in the number of acutely food insecure people is the result of scaled up and sustained humanitarian assistance in the first half of 2017 (Figure 27) and locally significant 2017 *Gu* (April-June) season rainfall.[132]

Climate forecasts for the 2017 *Deyr* (October-December) season indicate increased likelihood of below normal rainfall for most parts of Somalia.

The drought that persisted in 2016 and 2017 led to an increase of 1.6 million in the total the number of people who need urgent humanitarian assistance (IPC Phases 3 and 4) compared to the 2015 baseline. The details are shown in Table 36.

Figure 27: Number of People Assisted through Food and/or Cash, Jan-Sep 2017

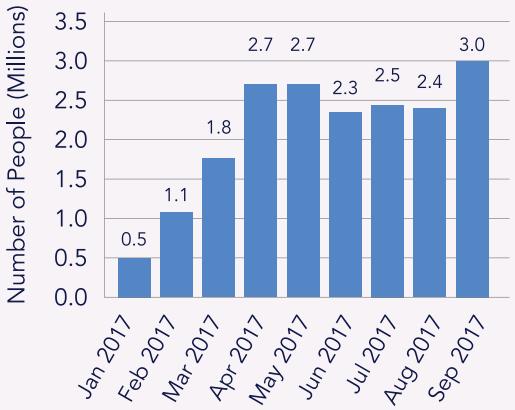
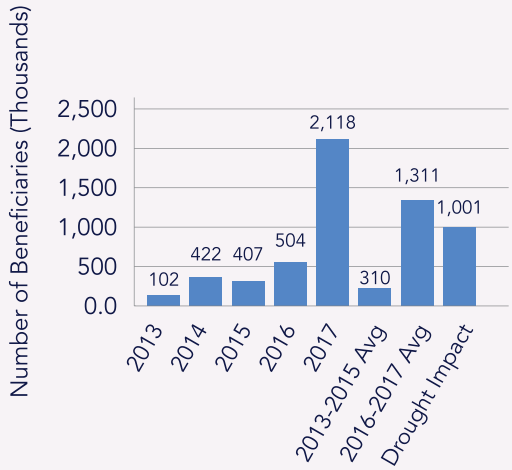


Figure 28: Monthly Average Number of Beneficiaries Assisted Through Food and/or Cash



[128] Ibid.
[129] FSNAU-FEWS NET, Somalia 2017 *Post Gu* Technical Release, 31 August 2017. Mogadishu and Washington.
[130] FSNAU-FEWS NET, Somalia Quarterly Food Security and Nutrition Brief, 28 September 2017. Nairobi.
[131] Ibid.
[132] FSNAU-FEWS NET, Somalia 2017 *Post Gu* Technical Release, 31 August 2017. Mogadishu and Washington.

Table 36: Impact of Drought on Number of People Requiring Urgent Food Security Assistance						
Region	Population	Baseline (2015)	Current (2016-2017)	Drought Impact	Drought Impact on # of IPC 3&4	
		IPC 3&4	IPC 3&4	IPC 3&4	As % of Regional Population	As % of Total IPC 3&4
Awdal	673,264	69,209	102,061	32,851	5	2
Woqooyi Galbeed	1,242,003	101,836	121,547	19,712	2	1
Togdheer	721,364	35,074	127,915	92,841	13	6
Sool	327,427	13,532	90,871	77,340	24	5
Sanaag	544,123	39,665	141,719	102,054	19	6
Bari	730,148	85,596	141,668	56,072	8	3
Nugaal	392,697	13,049	95,569	82,520	21	5
Mudug	717,863	44,139	231,715	187,576	26	12
Galgaduud	569,434	38,502	159,204	120,703	21	7
Hiraan	520,684	30,226	198,696	168,470	32	10
Middle Shabelle	516,035	8,033	56,756	48,723	9	3
Lower Shabelle	1,202,222	25,083	151,754	126,671	11	8
Banadir	1,650,228	379,086	359,194	-19,892	-1	-1
Bay	792,182	19,977	262,231	242,254	31	15
Bakool	367,227	26,716	141,087	114,371	31	7
Gedo	508,403	9,950	73,088	63,137	12	4
Middle Juba	362,922	9,591	56,134	46,543	13	3
Lower Juba	489,307	33,542	82,266	48,724	10	3
Total	12,327,533	982,806	2,593,475	1,610,669	13	100

Table 37: Commercial Import of Cereals in Somalia (in tonnes)			
Type of Cereal Imported	Pre-Drought (2013-15 Average)	(Current Drought 2016-2017 Average)	Drought Impact
Rice	178,999	242,348	63,350
Wheat Flour (Cereal Equivalent)	262,052	301,661	39,609
Pasta (Cereal Equivalent)	155,541	206,996	51,455
Total	596,591	751,005	154,414

The response to the 2016-2017 drought also led to an increase of one million in the number of food insecure people assisted through food and/or cash as part of the ongoing humanitarian response. The monthly average number of people that received food security assistance (food or cash) has increased from a pre-drought baseline of 300,000 to over 1.3 million during the current drought (see Figure 28).[133]

Table 38: The Estimated Cost of Food Security Assistance (cash and/food) Due to the Current Drought (in USD)	
Region	**2016-2017 (21 Months)**
Awdal	8,102,364
Woqooyi Galbeed	14,337,078
Togdheer	19,292,623
Sool	33,682,166
Sanaag	56,523,519
Bari	60,094,509
Nugaal	24,363,638
Mudug	33,378,901
Galgaduud	12,236,091
Hiraan	15,073,768
Middle Shebelle	3,857,220
Lower Shabelle	5,535,627
Banadir	23,044,636
Bay	30,056,169
Bakool	16,808,229
Gedo	22,450,986
Lower Juba	20,231,627
Middle Juba	443,948
Grand Total	**399,513,099**

[133] Ibid.

Domestic production decline as a result of the current drought has also contributed to increased commercial imports of 154,400 tonnes of cereals per year during 2016-2017.

Commercial import of cereals increased from an annual average of 596 600 tonnes during 2013-2015 to an estimated annual average of 751 000 tonnes in 2016-2017 (see Table 37).

Damages assessment is not relevant in the analysis of the impact of drought on food security. However, losses are estimated as follows:

Table 39: The Estimated Cost of Increased Commercial Imports Due to the Current Drought

Type of Cereal Imported	Increased Commercial Import Due to Drought (Tonnes)	Import Price (CIF) Estimated (USD/Tonne)	USD
Rice	63,350	273	17,309,651
Wheat Flour (Cereal Equivalent)	39,609	239	9,475,630
Pasta (Cereal Equivalent)	51,455	239	12,309,673
Total	**154,414**	-	**39,094,954**

1. The cost of food security assistance (cash and/food) due to the current drought:

An estimated USD 399.5 million has been spent on providing food security assistance in response to the current drought (see Table 38).

The above estimate is obtained by multiplying the average number of people assisted in 2016 and 2017 by the region-specific average transfer value of for food security related cash based interventions. This typically represented 80 percent of the cost of the monthly Total Minimum Expenditure Basket (MEB) among poor households.

2. The cost of increased commercial imports due to the current drought:

An estimated USD 39.1 million has been spent over the 2016-2017 drought period on increased commercial import of cereals to Somalia. The estimate is obtained by multiplying the estimated increased volume of commercial import of cereals with the discounted retail price of cereals at the main ports of entry (Berbera, Bossaso and Mogadishu markets). Average import prices (cost, insurance plus freight costs) of cereals assumed to be 20 percent lower than retail prices in these markets (see Table 38).

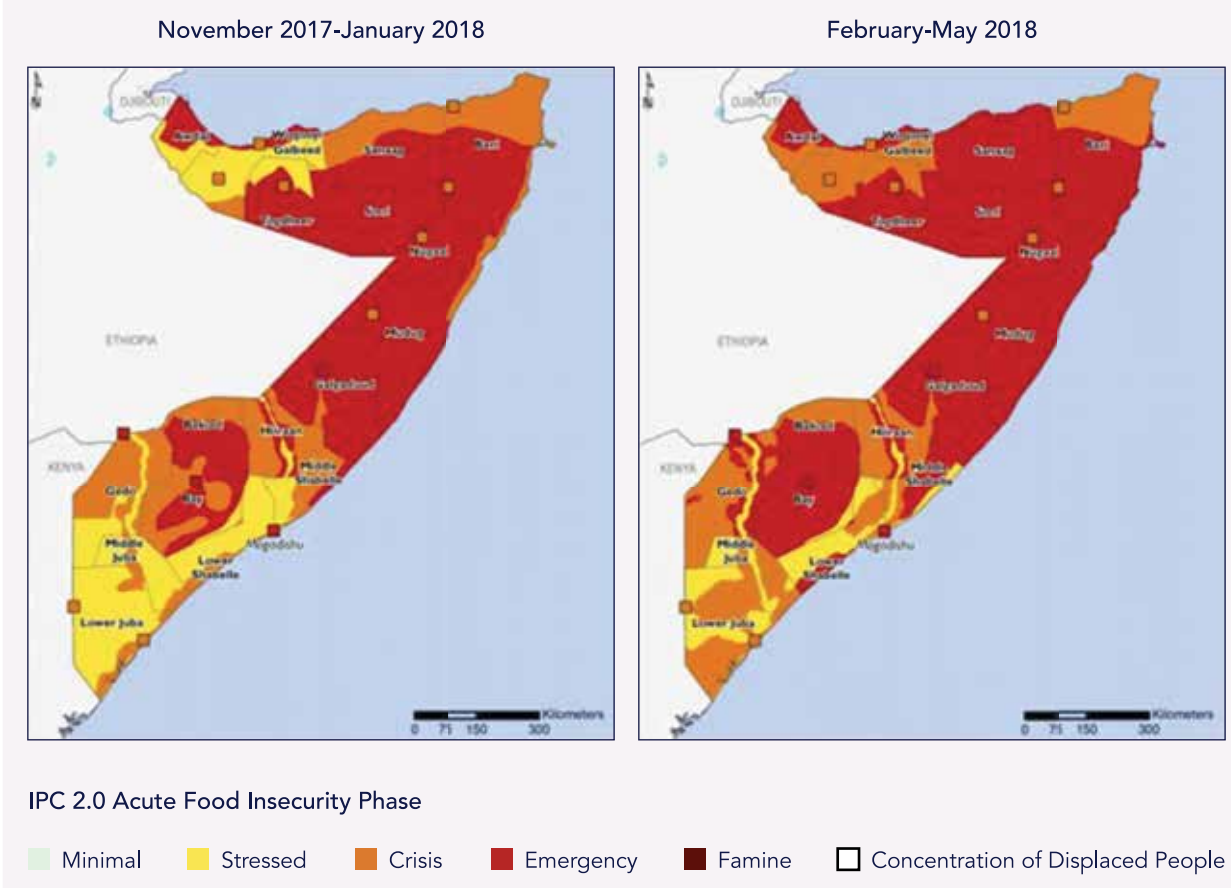
III. Recovery Needs

Continuing gaps in assistance to populations in stressed IPC Phase 2 could lead to further deterioration of food security, forcing some households to adopt "irreversible" coping strategies.[134] Humanitarian assistance will need to be scaled up for the remainder of 2017-2018 to prevent a deterioration of food security and livelihoods conditions. Although famine has been averted, the elevated risk (IPC Phase 5) still looms as a result of severe food consumption gaps, high acute malnutrition, elevated disease burden and dependence on humanitarian assistance.[135] Food insecurity and the resulting humanitarian needs are projected to deteriorate through May 2018 as per the maps in Figure 29.[136]

While urgent food security assistance should be provided to all people in IPC Phases 3 and 4 (i.e. rural, IDP and urban), particular attention must be paid in ensuring adequate access to food security assistance for rural populations in hard-to reach areas that are plagued by continued physical insecurity. This is not only necessary to prevent further displacement but it may also facilitate voluntary return of IDPs.

Due to very high levels of poverty, limited livelihood assets and opportunities, IDPs remain extremely vulnerable. The pre-drought number of displaced people in Somalia (1.1 million) is estimated to have reached over 2 million due to the current drought. One aspect of the displacement due to the current drought is that most of the newly displaced are displaced not very far from their places of origin. As a result, this recent tide of displacement has a greater chance of being reversed with the right mix of support interventions. Providing food security support in rural areas is not only important in preventing further displacement, it may also be instrumental in facilitating early and voluntary return among recently displaced populations.

Figure 29: Maps 1-2: IPC Acute Food Insecurity Phase – Projections[137]



[134] FEWSNET 2017. Somalia Food Security Outlook – October 2017 to May 2018: "A fifth consecutive below-average season likely; Famine (IPC Phase 5) risk continues."
[135] Ibid.
[136] Ibid.
[137] Ibid.

To sustainably reduce the level of acute food insecurity in Somalia, durable solutions for IDPs aimed at either local integration or reintegration in place of origin should be given a priority in the medium to long-term.

Given the cumulative impact of the current drought, both immediate and medium term interventions should also provide livelihood protection and rehabilitation support. Livelihood support to people in Crisis and Emergency (IPC Phases 3 &4) will help prevent further deterioration and facilitate the recovery process from the ongoing drought. Livelihood protection support is critical in preventing further deterioration among people classified in Crisis and Emergency (IPC Phases 3 &4) and in supporting their timely recovery from the current drought.

For over the past two decades and most recently, since the Famine of 2010-2011, there has not been a year when Somalia did not seek urgent humanitarian assistance to feed its population. The recurrent nature of the food security crisis in Somalia underscores the predictable and protracted nature of the humanitarian need, at least in part. Addressing protracted crisis using short-term humanitarian response mechanisms does not yield a lasting impact and is likely to be costlier over the long run. The time gap between assessment of food security needs, mobilization of resources and delivery of assistance to affected population is likely to have contributed to erosion of livelihood assets, coping mechanisms and in the end to the worsening of food insecurity.

Considering the strong association between food insecurity and poverty, the very high and widespread poverty and unemployment in Somalia will also contribute to sustainable improvement in the food security of its population. The following short-, medium- and long-term recovery and resilience needs have been identified in order to address persistent and high levels of acute food insecurity in Somalia. Short- to medium-term interventions will focus on improved household food storage to reduce food waste and improved food security early warning systems. Medium- to long-term interventions will support development of a national food security strategy and policy and a national poverty reduction and resilience strategy. It is also noted that the prioritization of road investment on infrasturcture as detailed in the Transport sector will take into consideration the potential for direct positive impact on humanitarian response, either reducing logistics overheads or extending assistance and markets to secondary towns.

Table 40: Summary Needs for Food Security

Summary of Drought Recovery Needs[138]					
Intervention	Level of Activity	Timeframe			Cost (USD)
	(national/ regional)	Short-term (Year 1)	Medium-term (Years 2-3)	Long-term (Years 4+)	
Improved food storage to reduce waste	National	X	X		20,000,000
Improved food security early warning systems	National	X			5,000,000
Support for the development of a national food security strategy	National	X			120,000
Support for the development of a national poverty reduction strategy	National	X			240,000
Total Food Security Needs					25,360,000

[138] Given the ongoing nature of the drought, the cost and extent of recovery needs interventions will be updated as part of the subsequent Recovery and Resilience Framework (RRF) process.

Assessment Considerations

The impact of drought in terms of the increases in the number of people experiencing acute food insecurity between the pre-drought baseline (2015) and the drought (2016-2017) period is assessed using the Integrated Food Security Phase Classification (IPC) framework. The impact of the current drought is estimated by comparing pre-drought (2013-2015) and current (2016-2017) information on the following:

- Increased volume and expenditure on commercial import of cereals
- Additional number of acutely food insecure people across Somalia that need urgent humanitarian assistance (IPC Phases 3 & 4)
- Estimation of the cost of food security assistance (food and/or cash) provided during the current drought (2016-2017) using data on the Cost of Minimum Expenditure Basket (CMEB) which has been developed and regularly updated by the Food Security and Nutrition Analysis Unit (FSNAU)

IPC Chronic analysis has not yet been undertaken in Somalia. Therefore, an indirect approach is taken in order to inform recovery and resilience needs for food security. The more predictable (chronic) component of food insecurity (in terms of magnitude) is estimated by taking the minimum number of people in IPC Phases 3 & 4 over the 2015-2017 period for each region.

Urban Development and Municipal Services

I. Overview and Pre-Drought Conditions

Somalia has experienced rapid urbanization due to significant forced migrations caused by protracted conflicts, insecurity, and cyclical natural disasters. Somalia's current urbanization level is estimated at around 33-40 percent,[139] and the country is urbanizing at a rapid rate of about 4 percent nationally.[140] With a GDP per capita of roughly USD 503, Somalia's urbanization rate is higher than countries at similar levels of development. The rapid urbanization is caused by

[139] http://ww2.unhabitat.org/habrdd/conditions/eafrica/somalia.htm. The CIA World Factbook estimates 37.7 % for 2011.
[140] The CIA World Factbook estimates 3.79 % for the period of 2010-2015.

significant forced displacements from rural areas into urban areas driven by decades of internal conflicts, insecurity, political turmoil, human rights violations, and governance failures, in addition to the traditional economic rural-urban migration. These challenges are compounded by cyclical environmental adversities such as drought and famine. Many communities in urban areas have further faced forcible land acquisitions and evictions, culminating in even more displacements.

As of October 2017, there are an estimated 1.1 million protracted IDPs in Somalia, many of whom reside in urban areas.[141] Most of them live in outskirts of urban areas in southern and central Somalia.[142] Mogadishu has attracted the largest number of IDPs in the country – over 464,000 IDPs out of its total population of approximately 1.7 million. Over 28 percent of the city's residents are IDPs, and they mainly live in informal settlements. If similar migration trend continues, Mogadishu's population is expected to grow at an alarming rate of 3.52 percent between 2006-2020. Baidoa, one of the strategic towns in southern Somalia, hosted 9,327 households or approximately 55,962 IDPs living in 72 settlements as of April 2016. IDPs had been displaced primarily because of drought, concomitant conflict and loss of livelihoods.[143] Kismayo, the third largest city in Somalia and the capital of Jubaland State, was host to about 18,000 IDPs in 79 different sites as of December 2016. IDPs have arrived more recently because of prolonged drought and conflict.[144] Secondary cities are also affected by this trend, but to less severe levels in the short term.

The country has also witnessed a steady flow of returnees and refugees from neighboring countries. Refugee camps in the Horn of Africa house over 1.1 million Somali refugees (or close to 11 percent of the country's population). Most of them are in Ethiopia, Kenya, and Yemen. Since December 2014 till June 2017, over 68,600 refugees have returned to Somalia from Kenya, around 32,000 refugees have returned from Yemen, totaling approximately 101,000 refugees returning to Somalia since December 2014.[145] More recently, conflict in Yemen has caused close to 37,000 Yemeni refugees to seek shelter in Somalia by April 2017.[146]

Many of these IDPs and returnees have settled in urban areas such as Mogadishu, Baidoa and Kismayo, and their number is likely to increase. A recent assessment in Baidoa indicates that nearly 50 percent of IDPs arrived five or more years ago. Close to 50 percent of the recent IDPs in Baidoa have expressed their intention to permanently settle in the city.[147] In Kismayo, much of the displaced population has been there 20 years or longer.[148] Those returning from Dadaab and Kakuma camps in Kenya are also likely to remain in urban centres as they have little farming experience and are relatively well educated and equipped with skillsets more useful in urban settings. Even those intending to return to farming are unlikely to do so soon due to the acute drought and insecurity in rural areas.

Significant influx of migrants and unplanned urbanization have placed considerable strain on land and housing. Land is a socially and economically sensitive issue in Somalia, particularly in urban areas. Absence of a coherent land administration system has introduced significant uncertainty. In the absence of a legal framework that allows clear access to land and property, marginalized groups such as IDPs, women, youth, and members of minority clans have been disproportionately affected.

Basic services and infrastructure in urban areas are inadequate and face increased pressure. Provision of basic services such as health, education, water and sanitation, power, and solid waste management are reaching saturation with influx of people.

Despite the recent positive economic outlook in Somalia, unemployment and underemployment remain high. Since 2013, the economy has shown positive developments in Somalia, particularly in the three cities of Mogadishu, Baidoa and Kismayo. Yet, the positive outlook has not translated into immediate job opportunities. Approximately 40 percent of the labor force in urban areas are unemployed. Urban livelihoods in Somalia largely rely on an informal economy based on trade, hospitality, transport, utilities (energy and water), communications and construction sectors. Somalia is faced with a very young population, 70 percent of which is under the age of 30. IDPs who tend to have lower education and skills are further disadvantaged by their unstable living conditions and lack of personal connections. IDPs lack permanent job opportunities and mostly engage in daily wage labor. Working as

[141] UNOCHA Humanitarian Bulletin July 2017.
[142] UN Human Rights Council, 2010.
[143] Infrastructure Mapping Exercise: Baidoa, Intersos and REACH (2017) "Baidoa IDP Settlement Assessment".
[144] REACH (2016). "Kismayo IDP Settlement Assessment".
[145] UNHCR (2017). "Repatriation Update Somalia (June 30, 2017)".
[146] http://dat.unhcr.org/yemen/regional.php.
[147] IOM (2017). "IOM-DTM Somalia Intention Survey – Baidoa". (Draft)
[148] World Bank (2017). "Somalia Urban Infrastructure Dynamic Needs Assessment: Kismayo and Baidoa". (Mimeo)

porters and construction workers reportedly only earn USD 1-5 a day in Mogadishu or Kismayo.[149] Employment opportunities in secondary cities are more limited and depend on unique local conditions or infrastructure.

In all urban areas, high poverty rates exist, particularly among IDPs. Poverty in IDP settlements remains very high at 70 percent, while poverty rate in Mogadishu is also quite high at 57 percent. Overall urban areas' poverty rate is estimated at 52 percent, meaning more than half the people live in poverty in urban areas.[150]

Yet the Government has limited capacity and resources to address these challenges. District Councils and municipal governments in Somalia have the primary responsibility in providing basic services such as water and sanitation, power, transport, and solid waste management (with more limited activities pertaining to education and health). But they vary widely in geographic and population jurisdiction as well as fiscal and organizational capacity. Capacity and fiscal constraints often limit the ability of the local governments to undertake basic municipal functions, and outside of a few larger cities, these constraints deepen rapidly. The capacity of secondary cities is more constrained than in major urban hubs.

II. DINA Findings and Drought Impact[151]

The 2016-2017 drought has resulted in around 975,000 newly displaced people since November 2016.[152] Majority of the new displacements have occurred in regions such as Mudug, Bay and Benadir. Most of the drought-displaced people are hosted in settlements in Mogadishu (161,000 people), Baidoa (174,000 people)[153] and Kismayo (42,000 people).[154] These three cities alone host almost 40 % of the total drought-related displacements with the remaining 60 % hosted by other secondary cities.[155]

The large and rising influx of drought-related displaced people in Somalia's urban areas has put additional stress on the already strained key sectors particularly land and housing, health, education, water and sanitation, and jobs. In many cases, urban centers have been unable to cope with the constant and large influxes of IDPs, and have been unable to keep up with the provision of basic services that are acutely needed. This has put increased pressure on the delivery and quality of services and the local governments' financial outlook.

Effects on Space and Settlements

IDPs have moved to urban centers, settling on public and private lands within and in the outskirts of cities. Mogadishu has seen construction of over 7,000 new structures - 6,035 shelters and 1,130 tents - since the onset of the drought. 34% of the settlement present in town have been established within the last 6 months.[156]

Baidoa has experienced a 67% increase in IDP-related housing structures, totaling around 34,000 structures such as shelters and tents.[157] Within 7 months (September 2016 – April 2017) the area occupied by IDP settlements in Baidoa fringes increased by 177%, and now constitutes more than 10 % of the built-up area of the town.[158]

Since 2016, the drought is estimated to have brought 41,760 IDPs with 6,960 new structures built, while in 2014-15, Kismayo only had 2,951 IDP structures and an estimated 17,712 IDPs. The number of IDPs in the city has more than tripled, bringing the total number of IDPs close to 60,000, including 10,000 returnees from Kenya.[159] [160]

The *ad hoc* IDP settlements have exacerbated the urban sprawl in the cities compounding pressure on land and service delivery. Increased population density and overcrowding in Somalia's urban areas will further exacerbate the current poor level of public services and will increase demand for land and shelter. Pressure on land will increase, and the unplanned urbanization will take a toll on the cities and environment.

In the absence of security of land tenure, IDPs are highly vulnerable to forced eviction. As urbanization continues and demand for land surges, forced eviction of IDPs from

[149] Ibid.
[150] World Bank (2017). "Somalia: Promoting Sustainable Poverty Reduction and Shared Prosperity – A Systematic Country Diagnostic".
[151] Due to data limitations, the urban sector assessment focused on the three major cities in Central South that have the highest levels of displacement, namely Mogadishu, Kismayo and Baidoa.
[152] Drought Displacements in period 1 Nov 2016 to 30 Jun 2017, UNHCR Somalia.
[153] Humanitarian Bulletin, July 2017, UNOCHA.
[154] IPSOS (2017)
[155] Secondary cities are not in the focus of longer term development investments and support, but are mostly served by humanitarian agencies and charities.
[156] IOM, Displacement situation report, October 2017.
[157] New construction within the vicinity of Baidoa, UNOSAT shelter count.
[158] Baidoa Urban Profile, UN-Habitat
[159] IPSOS geospatial data analysis.
[160] UNHCR "Cumulative Drought driven displacements: 1 Nov 2016 to 23 Jun 2017".

both private and public lands continues. Over 109,000 IDPs have been forcefully evicted across the country between January and August 2017.[161] Forced eviction negatively affects IDPs' livelihood opportunities and strains communities' level of self-reliance and resilience.

Considerable number of drought-induced IDPs live in emergency or temporary shelters. Most of the drought induced IDPs currently reside on government or private land and do not have the authorization to build more permanent types of shelter. Recent assessments in the three cities have found that over 70 % of the surveyed IDPs reside traditional shelters. The poor shelter conditions demonstrate pressing needs for better land tenure security and decent quality of shelters.

With a high proportion of IDPs opting to permanently settle in cities, there is a need to provide security of land tenure and permanent shelters. Surveys have shown that about 50 % of IDPs in Baidoa,[162] close to 90 % in Kismayo,[163] and about 50 % of IDPs in Mogadishu prefer to settle permanently in the cities. There is thus a need for an inclusive engagement involving all key stakeholders along with the local authority to improve security of land tenure in the three main urban areas, as well as in secondary cities.

Effects on Infrastructure and Physical Assets

There is a significant need to reconstruct or upgrade existing roads. The overall investment required in the transport sector is expected to be 20 % of the overall investment needed in the Somali economy, or 4 % of GDP in the next ten years.[164] Sudden urban expansion caused by IDP settlement further aggravates this situation. In many towns, these settlements occupy large areas of subserviced land. Road access is insufficient and will require major investment to connect spread-out sites to the existing urban fabric and ensure effective market linkages and access to services.

Urban sprawl leads to congestion of vital regional roads and major transport infrastructure. In Baidoa, IDP settlements in the south-west part of the town encroaches on the space around the airport and poses security issues as well as hampers its operations. In Mogadishu, displaced population is largely concentrated in its peripheral districts around the Afgoye road, Somalia's main trade corridor. Urban growth is expected to continue along this zone, exacerbating pressure on the already congested route.

The recent drought has made water supply pre¬carious, and with increasing number of people moving into urban areas the situation is worsening. Uncontrolled and informal exploitation of the aquifer threatens sustainability, safety and access to water supplies in the city. Boreholes and wells are spreading without coordination, threatening the durability of ground water resources. This is a matter of concern especially in coastal areas like Mogadishu and Kismayo, where studies show that the movement of saline/fresh water wedge of the underground aquifer is considerable, progressing inland in years with less rain.[165]

The steady development of constructed areas not properly planned is a significant risk for environmental degradation. Uncontrolled urbanization can alter the natural waterways considerably, which are no longer draining storm water to traditional outlets. The less permeable surfaces associated with urban development results in increased storm water runoff volume and peak discharge, which is often evidenced by chronic flooding and degraded water quality. Urbanization also slowly reduces permeable soil and rural areas and cause removal of vegetation. This provokes erosion as well as maceration of the soil, posing additional environmental threats.

Effects on Access to Basic Services

With 40% of the displaced population in school age (5-17), access to education, both primary and secondary school, needs serious attention.[166] Three main obstacles are hampering school-age children among IDPs from attending schools: family reasons; affordability; and lack of school facilities nearby. Many children help earn a livelihood for the household and therefore don't attend classes. Furthermore, as most formal school within towns require a high fee, education for IDPs is almost entirely provided by humanitarian agencies, who are unable to cover the high demand. A strategic approach is therefore needed to enhance both access to schools

[161] Norwegian Refugee Council
[162] IOM (2017)
[163] REACH (2017)
[164] Somalia Transport Sector Needs Assessment.
[165] Water Quality Study Mogadishu and Kismayo, Geneva Foundation.
[166] UNHCR, Somalia displacement dashboard - Cumulative Internal Displacements and Trends 1 January - 30 September 2017.

(through rehabilitation/construction of more schools and teacher training) as well as abilities to attend school (through financial support such as school vouchers).

Additional to existing pressures of the limited number of health facilities, the drought increased the pressure with a sharp rise in communicable diseases such as acute watery diarrhea (AWD)/cholera and the (re-)emergence of infections like measles. The severe drought and its consequences, including water scarcity and malnutrition, are major factors contributing to the ongoing cholera outbreak.[167] More AWD/cholera cases are reported in districts of high presence of IDP settlements, where these conditions are prevalent. Baidoa registers the highest number of cholera cases in Somalia at 12,144 as of July 2017. Kismayo and Mogadishu are also among the most affected, with 2,925 and 6,619 cases respectively.[168]

There is an acute need to increase the supply of clean water and improve sanitation. Residents in Mogadishu rely on water from privately-owned boreholes or shallow wells.[169] Water quality is generally considered very poor, and local media frequently report on water borne diseases caused by groundwater contamination. Water supply system needs to be geographically extended beyond the city center to cover the IDP settlements in the outskirts.

Solid waste management is being neglected and the problem is compounded by the influx of IDPs. All cities urgently need a sufficient solid and liquid waste, as well as a sanitary landfill site. IDPs in the three cities hardly have any access to waste collection, and they mostly dispose of their waste by burning it, exacerbating the environmental threats.[170]

Effects on Economy and Livelihoods

With the influx of additional labor supply, competition over jobs is likely to intensify in the longer-term. Currently, many drought IDPs rely on external assistance such as cash transfer programs. However, this is not sustainable in the long-term. As a large portion of the IDPs likely settles in cities, competition over jobs will intensify as some IDPs seek sustainable livelihoods beyond external assistance. With 73% of the population below the age of 30, increased unemployment and underemployment among youth can become a social problem, and if not addressed quickly, can lead to potential social unrest.

Mogadishu and Kismayo offer a range of job opportunities, while Baidoa has a more limited potential. Areas such as construction, services, trade, telecommunications and financial services (money transfers) present high growth potential in Mogadishu. The most dynamic sectors in Kismayo include construction, retail, telecommunication, and hospitality, while the port serves as a revenue and job generator. In Baidoa, while prospects are more limited compared to the other two cities, construction, retail, and agriculture present the highest prospects of job generation in Baidoa. But access to jobs is hindered by traditional clan-based recruitment practices in both the public and the private sectors, which work to the disadvantage of the IDPs, who often come from minority clans.

Effects on Governance and Institutions

Increased pressure on services and infrastructure is exacerbated by inadequate government capacity and resources. Capacity and fiscal constraints often limit the ability of municipalities to undertake basic functions. Responsibilities and division of labor between sub-national governments and federal government are still blurred. In the absence of public provision of infrastructure and services, international aid agencies and the private sector have stepped into the void. In terms of addressing the needs of the IDPs, it is almost entirely covered by humanitarian aid agencies with limited coordination with the government, which is unsustainable in the longer-term.

While private service providers fill in an important void, overreliance on private service delivery hinders the network approach to service delivery and results in fragmented service provision. There is a need to strengthen the regulatory environment and the capacity of the government to play the necessary regulatory role. Moreover, there is a need to shift from a fractured, highly inefficient service delivery approach to a networked system approach that allows for greater reach and efficiency.

Increased Risks and Vulnerabilities

Current unplanned and unregulated city expansion has led to arbitrary distribution of land and has aggravated contestation over land. Vulnerable populations hardly benefit from increased investments that have emerged

[167] The current level of available doctors, nurses and midwives is estimated at 4 for a population of 10,000. There are an estimated 1,223 health facilities resulting to an access ratio of 10,000 people per health facility.
[168] WHO and Somalia Ministry of Health, Situation report for Acute Watery Diarrhea/Cholera, Epidemiological week 29 (17th to 23rd July 2017).
[169] ReDSS (2017).
[170] Ibid.

in stabilizing and growing cities such as Mogadishu and Kismayo. Rapid urban growth produces sprawling peri-urban zones where systems of urban and rural land tenure can collide and produce intense land disputes without effective mechanisms to resolve them. Nascent formal institutions are unequipped to equitably re-establish tenure units, and customary rights are often arbitrary and not accessible to returnees and migrants who cannot access, control and transfer land customary rights on the same grounds as local communities.[171]

Intense competition over land exacerbates forced evictions particularly among IDPs. Forced evictions are an immediate protection concern. Forced eviction relates to structural problems such as lack of land tenure security, lack of access to justice/channels of recourse and adequate frameworks and tools to integrate the displaced population into the urban population of the city. IDPs from minority groups and female-headed IDPs are the most vulnerable as they do not possess the social network or male household member to rely on. Where land tenure is insecure, IDPs are also unable to sustain their livelihoods. To stop this cycle of multiple displacements, IDPs need to be issued land agreements, recognized title deeds or rental agreements obtained through existing legal frameworks as a means of securing their housing, land and property rights.

In the absence of secure land tenure, IDPs and other urban poor have no choice but to rely on a system of "gatekeepers". IDPs settle on public or private lands known as "camps" or "settlements" which are managed by informal settlement managers known as "gatekeepers". Taxation of IDPs is a lucrative income for many gatekeepers that some forcibly prevent IDPs from moving out of their settlements by mobilizing their own militia. There have been cases where gatekeepers committed grave human rights abuses,[172] and they lack both upward and downward accountability.[173] There is no transparency in how they "price" their services, there are no minimum standards or code of ethics they need to comply with, and they can undermine the legitimacy of the local authorities.

Physical safety, particularly those of women and children, remains one of the most prominent protection risks. Women and children make up an estimated 70 to 80 % of the IDPs. About half of them are female-headed households. These women and children are vulnerable to sexual violence, harassment and forced prostitution, as they have limited social group protection, absence of male family members, and general lack of security in IDP settlements.

III. Recovery Needs

Recovery Needs, Prioritization of Needs and Population Groups

In the short-term (within the next year), provision of temporary shelter with security of tenure to most the drought-displaced people living in make-shift tents is urgently needed. Based on the assessment, about 70 % of the newly arrived still live in emergency shelter/make-shift tents (buuls). These shelters are neither durable nor hygienic. Safe settlements with no threats of eviction are needed to provide vulnerable communities with protected and healthy living spaces and environments, while ensuring sufficient privacy and dignity for the groups, families and individuals with them. For the short term, newly arrived IDPs require temporary shelter until their situation stabilizes and ultimately decide whether they would like to settle down in the urban areas or return to their places of origin. This requires the government to provide adequate public land so that IDPs can stay for an extended period without fear of eviction.

At the same time, access to basic services should be improved through local government institutions. In doing so, IDPs and other vulnerable groups should both benefit by prioritizing areas that host a high number of IDPs, returnees, and the urban poor. With international assistance disproportionately focused on IDPs, it can lead to perceived inequity among the host communities, leading to social tension. The distributive impact of any assistance should therefore extend uniformly across the two communities, instead of exclusively targeting one of the other. Such an equitable approach would help mitigate any social tensions arising from perceived or real preferential treatment of the IDPs over host communities. Delivery of services should be planned and managed by the local government authorities to build their service delivery capacity.

[171] Rift Valley Institute (2017). "Land Matters in Mogadishu".
[172] Human Rights Watch (2013). "Hostages of the Gatekeepers: Abuses against Internally Displaced in Mogadishu, Somalia".
[173] Ibid.

In the medium term (in the next 1-3 years), the assistance should have a broader focus to improve the urban resilience by investing in the most affected sectors such as housing, water and sanitation, health, education, as well as job creation in cities that have experienced and are likely to experience large influx of IDPs. This should be done by strengthening the sub-national government's ownership of the process. Once the immediate needs have been addressed, local governments, in collaboration with international development partners, CSOs and academia, should work to develop 3-5 year comprehensive spatial and investment plans to address the longer-term developmental needs in key services such as housing, water and sanitation, health and education and employment opportunities. Systematic spatial planning will prevent cities from turning into urban sprawls and help guide future investments to ensure cost-efficient investments, including job creation.

Concurrently, support to strengthen the capacity of the sub-national government needs to take place so that they can fulfill their responsibility and be in the driver's seat. Effective sub-national governance structure is not only instrumental in stabilization and institution-building but also for service delivery and resilience building. As such, the capacity of sub-national governments and their ability to generate own-source revenues need to be strengthened so that they can fulfill their responsibilities.

In the longer-term (beyond 3 years), support should focus on three key areas: regulating service delivery; streamlining intergovernmental relations; and strengthening institutions related to land and housing. First, cities will need to define minimum standards for each sector and harmonize the quality of services provided by various actors. There is a need to ensure that all segments of the society are benefitting equally from the services. Second, division of functions and responsibilities between federal, regional, and local governments need to be clearly laid out and adhered to, to avoid redundancy and maximize the limited resources. Finally, support to craft key policies and systems is critical. These include inter alia development of national land/urban development policy, reconstruction of national land cadaster and registry, national public land inventory, and national housing policy that not only considers the protracted displacement and urban poor, but also future rural-urban migration and population growth.

Regarding target beneficiaries, it is important to design interventions that benefit all vulnerable groups to ensure equity. Rather than providing specific interventions targeted solely at IDPs, it would be important to provide more area-based, vulnerability-focused interventions that benefit all vulnerable groups and include certain activities that address IDPs' specific needs.

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Recovery Strategy for the Sector

With almost 20 percent of the Somali population affected by displacement, sustainable recovery, peace and development in Somalia can only be ensured with the integration of the displaced populations as an integral part of the urban development strategy. Spatial development and investment planning will need to take into account the migratory population and their dynamics with the host communities, and any interventions must benefit all groups in an equitable manner for long-term stability. The planning should be community-driven to ensure that their needs and voices are reflected. There is a need to seek consensus on this principle with Somali governments, as policies toward IDPs still vary widely across different stakeholders.

A phased approach that distinguishes short and long-term perspectives is required. In the short-term the focus should be on the identification of priority areas such as sites and services, provision of other basic services, undertaking the upstream work required to implement priority resilience focused investments and undertaking in-depth analytical work that will inform the medium to long-term priorities. The planning and management of service delivery should be spearheaded by the local authorities to strengthen their capacity and legitimacy in the eyes of the people. The medium-term recovery needs should focus on implementation of the priority, area-based interventions listed above that will serve as a catalyst for a longer-term, integrated program of urban support for economic development, including formal job creation activities and key infrastructure development. Mapping of and investing in connectivity gaps is another key part of this approach. In the long-term, support should center on building local institutions for sustainability. Strengthening local government capacity for spatial planning and investment planning is critical.

The assistance should use the existing government systems to help strengthen the government's regulatory and oversight capacity. This can be done by government creating an overall regulatory environment while exploring effective public-private partnership arrangements. Second, any assistance must be based on solid understanding of the local contexts and dynamics so as not to exacerbate the tensions on the ground. Third, any planning process should be participatory and inclusive.

Table 41: Summary Needs for Urban Development and Municipal Services

Summary of Drought Recovery Needs					
Intervention	Level of Activity	Timeframe			Cost (USD)
	(national/ regional)	Short-term (Year 1)	Medium-term (Years 2-3)	Long-term (Years 4+)	
Temporary shelters	Regional	X	X		33,000,750
Permanent shelters	Regional		X	X	61,018,100
Primary school construction	Regional		X	X	4,787,980
Latrines	Regional		X	X	1,443,100
School vouchers	Regional	X			22,869,411
Operating costs	Regional		X	X	7,222,000
Mobile clinics	Regional	X			1,335,104
AWD/cholera treatment	Regional	X			480,000
Water trucks	Regional	X			2,855,230
Boreholes	Regional		X	X	1,665,108
Sanitation	Regional	X	X		4,296,751
Skill training and placement	Regional	X	X		147,800,160
Capacity building for municipal government	Regional	X	X		4,500,000
Total Urban Development and Municipal Services Needs					293,273,694

Livelihoods and Employment

I. Overview and Pre-Drought Conditions

The 2014 Population Estimation Survey for Somalia (PESS) estimated the population at 12.3 million. The mean age is 20 years, with 45 percent of the population below 15 years of age. Those under 15 have grown up in a period of instability, with limited opportunities for working government institutions, education and training. This poses a fundamental challenge to future workforce development and employment creation in Somalia.

Pre-Drought Labor Market

Somalia's labor market is overly dependent on the livestock sector, which provides employment to approximately 60 percent of the workforce. The informal sector accounts for 40 per cent of employment. There is a high incidence of own account workers (OAW) and contributory family workers (CFW), with these types of jobs characterized by job insecurity, vulnerable employment, low incomes, poor working conditions, atypical forms of contracts, and non-existent occupational health and safety standards. For those who are employed there is a significant rate of underemployment (19 percent), which when combined with an open unemployment rate of 22 percent, implies that almost half of the work force are either unemployed or work in low paying jobs.

Somalia's open unemployment rate of 22 percent does not fully reflect the situation in the employment sector. This is because in the absence of any formal system of social protection, people cannot afford to be unemployed and must rely on a range of coping opportunities to survive.[174] Whilst the age dependency ratio differs significantly across regions, for Somalia as a whole this is computed as 52.4 per cent, implying that every household member who is economically active has supports two dependents, the dependency ratio. Vulnerable employment maintains people in a state of sustainable poverty rather than provides the means by which they can lift themselves out of poverty.

Youth Employment

A striking feature of Somalia's labor profile is the high level of open unemployment amongst the youth. Statistics are not entirely reliable, but show figures from as low as 22 percent to as high as 60 percent.[175] Those aged 15-19 bear the greatest burden of unemployment, with estimates of 34.8 percent for males and 34.0 percent for females. If the lower figures are applied it means that youth in Somalia are 1.6 times more likely to be openly unemployed compared to adults.

When the open unemployed rate is combined with the underemployment average of 19.5 percent, it means that 48 percent of youth are either unemployed, and/or in low productive, low paying employment.[176] From a human development perspective, this is an alarming figure, and when coupled with the fact that this group has historically been the main source of combatants in the various conflicts, the urgency to address youth unemployment is clear.

Education Skills and Employment

Somalia's adult literacy rate is significantly below global norms. More than 57.4 percent of Somalia's children are not in formal schooling, and skill levels are low. Only 3 percent of males and 2 percent of females in urban areas have had any form of formal vocational training.[177] What training has been provided is usually supply driven, of variable quality, and with weak linkages to the labor market. There are a number of training institutions and vocational training centers, often run by NGOs or as private establishments. There are however no national or regional databases that can provide information on what type of courses are being offered, and no form of certification. There are no active forums or mechanisms in which the demand side (private sector), the supply side (training providers), and the regulatory authority (Government) engage with each other, and there is no labor market information services.

Livelihoods

For the purpose of this exercise we have concentrated on the livestock sector (pastoralists and agro pastoralists), and on employment in urban areas.

Rural: According to the Food Security and Nutrition Analysis Unit (FSNAU),[178] there are 17 livelihoods zones associated with livestock and crops in Somalia, each of which has its own dynamic characteristics. Pastoralist and agropastoralist communities have borne the brunt of the impact of the drought. They live a complex and vulnerable existence dependent on grazing with little access to social services such as education and health.

[174] It is estimated that 69% of Somalis live in poverty on an estimated income of USD 1.9 per day. Please see Annex for Labor Force Data (The data has been abstracted from a Somali Labor Force Survey (confined to xx districts) carried out in 2014, A Labor Force Survey of Somaliland 2012 and various reports, articles, etc.
[175] Statistics are not reliable, other sources (UNDP) refer to upwards of 60%.
[176] UN Definition of youth; Those between ages 15 -24. Estimated at 26% of population according to UNFPA PESS.
[177] Somali Labor Force Survey 2014.
[178] Somalia Livelihood Profiles 2016 FSNAU/FEWSNET.


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Income from livestock comprises between 30-70 percent of total income for agro pastoralists and pastoralists respectively. The remainder of their household income is earned from a combination of casual labor, gifts and remittances, humanitarian assistance, charcoal production and firewood collection. This varies according to the livelihood zone and the relative 'wealth classification' of the household within that zone. Most households live on the verge of poverty, existing between the Livelihood Protection Threshold and the Household Survival Threshold.[179] Poverty and lack of alternative opportunities lead these communities to over-exploit natural resources through overstocking and overgrazing, and by charcoal production. This in turn undermines the sustainability of the environment on which their livelihoods are dependent.

Urban Labor Markets: The urban labor market is characterized by low paid, irregular employment in the service and construction sectors. A survey carried out in Mogadishu in 2014 indicated that 57 percent of IDP households, and 27 percent of settled households depended on casual labor as the main source of income. Underemployment was a feature across all sectors, with IDPs obtaining approximately 17 days of work per month and settled households approximately 21 days per month.[180] Although officially unemployment was stated at 22 percent, it is felt that this does not reflect the true employment rate, as high levels of underemployment force many people to take on two or three part-time jobs. Women rely on low skilled, low paying service jobs, including cleaning, washing, and child-care. They are also heavily involved in petty trading.

In spite of high unemployment and underemployment, a labor survey in Mogadishu (September 2017) indicated there was a demand for skilled labor across a number of sectors.[181] These included construction, services sector, telecommunications, finance, health services, garment sector, print and media, and hospitality services.

II. DINA Findings and Drought Impact

Drought Effects

The drought has exacerbated what was already a dire situation in relation to employment and livelihoods. In the crop and livestock sectors, it has damaged assets

[179] Using the Household Economy Analysis as applied by FSNAU.
[180] Overview of Mogadishu and IDP Assessments, FSNAU 2014.
[181] Africa Working Private Sector Market Scan Report, Mogadishu, Somalia September 2017.

that were critical for the generation of household incomes, and it will take several years to return to pre-drought income levels. Jobs have been lost and incomes reduced in across value chains and businesses. At the same time, increased aid flows and increased investment in urban areas such as Mogadishu have offset some of these losses, and may be maintaining overall employment levels.

As more people migrate to urban areas in search of jobs, services and humanitarian assistance, there is also a shift in employment type, from one based on a rural pastoralist agriculture economy to a more urban based one. Whether this trend will continue is impossible to determine, but a large proportion of those who have moved are unlikely to return to their places of origin. Unfortunately, the skill levels of those migrating to urban areas is low, and the influx adds to urban underemployed and the unskilled labor pool, increasing competition for unskilled jobs, adding to the levels of under employment and increasing levels of household poverty.

Combining the estimated numbers of pastoralists' and agro pastoralist who have ceased their livelihood, combined with data on IDPs, humanitarian assessments and the loss of national GDP it is estimated that the combined open unemployment rate is over 50 percent. Of those who are employed the vast majority remain underemployed, with 95 percent engaged in vulnerable and precarious forms of employment.

Effects of Drought on Urban Labor Market

The impact of the drought on unemployment and livelihoods in urban areas is complex, and in the absence of reliable data and restricted access, difficult to determine with any degree of certainty. Analysis of the impact on the influx of one million largely unskilled people since November 2016 to IDP camps situated close to urban areas is complicated by the fact that they may have migrated as a result of drought, insecurity, the desire to access services, (humanitarian assistance: cash transfers, water, health, and education) and most probably a combination of all three.

In all cases the new arrivals add to an already bloated pool of unskilled people seeking casual work. Interviews indicate that increased competition has added to the rate of underemployment for both settled and newly arrived populations. There is conflicting information and opinions in regard to daily labor rates for unskilled casual work. One would expect a decrease due to the additional competition for jobs, however data from FSNAU indicate that wages have remained steady.[182] This is probably due to the increased aid flow, and increased activity in construction and services sectors due to the presence of UN, AMISOM, and other security and logistic companies. In the case of Mogadishu, it is also due to local and diaspora investment, particularly in the construction sector.

An additional factor is the impact of humanitarian assistance, and particularly cash transfers that are estimated at USD 40 million per month.[183] While this is a very necessary intervention (providing incomes for those in need, injecting cash into markets, maintaining the demand for low paid casual labor, ensuring the incomes of petty traders), the impact of this on the labor market and migration is unknown. The possibilities of people migrating to IDP camps to access cash transfers or other humanitarian assistance needs to be examined, and further independent research is needed.

The paradox of unemployment in urban areas is that in spite of high unemployment and underemployment rates, there are skill shortages across many sectors that are currently being filled by foreign workers. A combination of general skills shortages, clan affiliated recruitment systems and lack of labor market information perpetuates this situation.

In the absence of data, it is impossible to determine the direct impact of the drought alone. The biggest impact has been on migration, the increased competition for unskilled work, and the structural changes from rural to urban-based employment.

Effects of Drought on Infrastructure and Physical assets

The drought has reduced public revenues, and decreased the capacity of local authorities to address infrastructure needs. Whilst there is potential to create short-term jobs in rehabilitating and providing new infrastructure, both urban and rural, there are serious constraints and risks involved, particularly in urban areas where there are contentious issues in regard to land title and ownership. There are many layers of vested interests and gate keepers, and many reports and examples that

[182] Regular FSNAU updates usually comment on wage rates.
[183] Scaling Up CTP in Somalia: Reflecting on the 2017 Drought Response, Report from An Inter-Agency Reflection Workshop Report by CaLP, September 2017. https://reliefweb.int/sites/reliefweb.int/files/resources/1508402389.2017-09%20-%20Somalia%20CTP%20in%20Drought%20Reflection%20Rpt%20-%2

indicate that they have undue influence over issues such as the management of IDP camps, awarding of contracts, and the identification of beneficiaries for humanitarian assistance. Unless these issues are factored into the infrastructure plans, and steps taken to neutralize their influence through the establishment of district authorities with some level of capacity to procure and manage infrastructure investment, large-scale investment should be delayed and/or linked to progress in establishing appropriate local institutions.[184] In the roads and environmental sectors in Somaliland and Puntland this has already been achieved, and investment in infrastructure in these regions would be appropriate. For other areas, it is felt that the risk involved are too high, and large-scale investment in urban areas could act as a pull factor, further accelerating urbanization and potentially acting as a trigger for further conflict.

Effects on Governance

For decades, a large proportion of the Somalia population has been dependent on aid and humanitarian assistance. Most if not all has by necessity been provided through UN agencies and NGOs. One of the side effects of humanitarian assistance is that the population increasingly view the external actors as the de facto main service providers, in effect a parallel system of government next to an under resourced, sometime predatory and poorly functioning administration. The drought has forced more people to become dependent on humanitarian assistance, further weakening the perception of the relevance of state institutions. This is something that needs to be addressed within the context of the current efforts on institution- building.

Increased Risks and Vulnerabilities

Decreasing livelihood opportunities has increased the available pool of unskilled worked particularly in urban areas. This will lead to increased competition for unskilled jobs and an increase in the levels of underemployment and vulnerable employment. As a result, there may an be increase in inter and intra community tensions. There has also been an increase in the number of female-headed households as men migrate to seek employment. Unsubstantiated reports have been received in regard to increases in child labor. Rangelands have been depleted and are more fragile, further increasing its vulnerability to flooding and drought.

Damage and Losses

The drought has exacerbated what was already a dire situation in relation to employment and livelihoods. In the livestock sector, it has damaged assets that were critical for the generation of household incomes. It will take a number of years to return to the pre-drought income levels. Jobs and incomes in related value chains have also been reduced. Combining the estimated numbers of pastoralists' and agro pastoralists who have ceased their livelihood, combined with data on IDPs, humanitarian assessments and the loss of national GDP it is estimated that the combined open unemployment rate is over 50 percent of those who are employed, and the vast majority are underemployed.

Table 42: Estimated Direct Losses in the Livestock Sector[185]

Estimated Loss	Household Type	
	Pastoralist	Agro/Pastoralists
Number of Livelihoods Affected	487,591	479,832
Total income losses (milk sales and animal sales), using standard off take rates	USD 609,495,380	USD 262,376,953
Estimated work days lost based on 3 USD per day (indicating future losses from decreased assets that generate jobs).	USD 203,165,127	USD 87,458,984
Number of jobs lost (extrapolated from FSNAU reports).	450,000	350,000

[184] The Joint Programme for Local Government, supports the establishment and capacity building of local district authorities so as they can act as civil authorities and accountable primary service providers to their constituents.
[185] This is drawn from livestock losses and FSNAU/FEWSNET assessments.

The Drought Impact (Economic and Social Impact)

The Aggregate Economic and Human Development Impact on the Employment and Livelihoods sector

On a macro-level, the drought has severely reduced incomes for pastoralists and agro pastoralists. As a result, it is probable that all those classified as poor according to the FSNAU HEA have been forced to abandon their livelihoods. Similarly, perhaps 80 percent of 'better off' and 50 percent of agro-pastoralists have also had to abandon their livelihoods.[186] This represents a loss of an estimated 250 million workdays of employment, adding to the current high unemployment rate, and reducing upstream and downstream employment and livelihood opportunities.

Internal migration to urban areas in search of unskilled casual work has increased. This has had a downward trend on wage for unskilled workers, further increasing the informality and precarious nature of the labor market. In urban areas, and specifically in IDPs camps where households may be dependent on casual labor for 60 percent of their household income needs, this is forcing more households into poverty. For those that remain in the rural areas, they are increasingly dependent on humanitarian aid and will continue to do so until their livestock and other assets have been restored. Women who dominate some livestock related value chains have been disproportionally affected. There has also been an increase in the number of female-headed households as men migrate in search of work.

The drought has also had a significant impact in changing the nature of employment to one associated with an urbanized society. This has implications in regard to education and skills that need to be addressed through significant and innovative investment in education, vocational training and skills development.

The Medium to Long Term Projections on the Employment and Livelihoods Sector and Impact on Development Goals

Given the current political, economic and security environment, the outlook is not positive. While it may be possible to recover assets and restore incomes in the livestock sector, it will still be vulnerable to variable climate conditions. The over-dependency of the economy on primary production of livestock has to be addressed through diversification, processing and investment in areas that will generate higher value jobs. Whilst there has been a significant increase in humanitarian aid, greater and longer-term predictable investment by the

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[186] Below the survival threshold according to HEA methodology.

international community in development assistance is required, thus building a strategic, long-term approach to employment and development, including skills development for a young workforce. At the same time the government will need to address policy and regulatory framework issues. The security situation will ultimately determine whether these efforts can be sustained.

Major Challenges for the Sector

There are a number of challenges, many of which are referenced in earlier parts of this sector. These include:

- The lack of national policy and capacity to enable government to lead and coordinate investments and activities to promote employment and livelihood creation.
- An over reliance on production of livestock, and lack of value addition industries.
- The lack of policy and regulatory framework in the energy sector, and high energy costs, low accessibility, and dependency on biomass.
- Cultural preferences that restrict the potential of fisheries as a long-term source of employment and livelihoods.
- Low levels of skills, with a lack of synergy in vocational training and labor markets.
- Low levels of education and low literacy rates.
- Lack of merit-based hiring in both public and private sectors.
- Social exclusion of women.
- Continuous insecurity and threat of violence and conflict.

III. Cross-cutting Considerations

Gender: Women have been disproportionally affected by the drought. It is estimated that women constitute 60-80 percent of domestic meat trade, milk trade, hides and skins, and petty trade (kiosks).[187] These are precarious occupations and dependent on livestock. Capital investment in all of these occupations is minimal. As the livestock sector recovers, many will recommence their enterprises without external assistance. It may be better to avoid the well-trodden path of credit and access to finance in attempting to reestablish vulnerable women in occupations /livelihoods which as the recent drought have demonstrated are themselves high risk and vulnerable.

The design of the recovery efforts should therefore attempt to address the vulnerability aspects of women enterprises by supporting women entrepreneurs across all sectors through organisation of associations, cooperatives, and networks, etc., and to strengthen their resilience through solidarity, self-support, and training. In addition, women entrepreneurship and participation can be supported in nontraditional sectors or occupations with growth potential which are less vulnerable to fluctuations in weather, external markets and natural disasters.

Youth Employment: Youth face additional challenges in accessing employment, with dissatisfied youths posing threats to a peace. Additional measures must be taken in terms of education, skills development, labor market information services, entrepreneurship and finance if the backlog and vast deficiencies in their education and skills is to be addressed. Innovative approaches are needed, linking immediate temporary employment with access to literacy and numeracy training, together with attachments to the private sector, entrepreneurship, business development, innovation in the way skills / vocational training is designed and delivered.

The need for coordination by government through the adoption and application of policies, guidelines standards, etc. by all of those involved in this sector will be necessary before any significant investments by development partners can be justified. This should be a key outcome of the recovery plan.

Social Protection and Safety Nets: In the absence of a formal social protection system, more people are dependent on humanitarian assistance. Cash for work and cash transfers are being utilized by a number of humanitarian agencies. A working group, the Cash Working Group, (CWG) has been established that consists of those agencies and NGOs implementing initiatives. There is to date no government involvement in the proceedings, and it is important that government should gradually play a more substantive role.

Natural Resources and Energy: The issue of charcoal production and the rehabilitation and management of rangeland needs to be addressed if any degree of sustainability is to be built into the recovery of the livestock sector. In spite of numerous export bans over the past thirty years a thriving export business still continues. The overreliance on biomass as a source of energy needs also to be addressed.

[187] The Somaliland Livestock Value Chain Analysis A Proposal for Livestock Value Chain Development in Somaliland. Dr Alfred Muthee, 16th January 2012.

Rehabilitation works, including reforestation, improvement of water harvesting, and erosion control can provide a large number of short, medium and long term employment opportunities. Experience elsewhere in Somalia indicates that this work is particularly suitable and most appropriate for a community contracting type of approach that ensures ownership and the long-term stewardship of the environment. Excellent examples have already been implemented in Somaliland and Puntland[188] and these can be expanded and replicated throughout the country.

In addition, efforts must be made to develop the renewable energy sector which has the potential to involve women and youth and also to provide power sources to sectors which are currently under developed because of energy deficit and/or high costs.

IV. Recovery Needs

Whilst livelihoods will continue to be the most important productive sector for the foreseeable future, the long-term dependence on livestock (particularly live exports) must be reduced, and efforts focused towards other sectors. Livelihoods interventions should take into account the changing economic model in Somalia and align with the demographic shifts in urban and rural areas. The transitions in the rural economy towards a modernized agricultural sector will require increased skills in industries along the value chain as well as water shed management. Sectors in the urban areas such as construction and logistics could potentially provide livelihoods opportunities therefore training and skills training in this sector should be linked to infrastructure investment activities. Other sectors that have the potential to contribute to a diversification of the economy include coastal fishing and social sectors, building on the investments in social sectors that come through Humanitarian interventions and building on this foundation to work towards a more skilled local workforce.

Short Term Recovery Strategies

Continue to support and expand the various short term employment and livelihood support to affected communities through initiatives such as cash for work, cash transfers, and livestock support to pastoralists, that are currently being implemented by UN, NGOs etc. It is proposed that government initiate dialogue with those implementers to develop a common set of systems based on the best documented practices with a view to the responsibility for the implementation of these programs being assumed by government authorities.

Medium Term Recovery Strategies

The dire humanitarian situation which has been a feature of Somalia for almost 30 years is testament to the need to prioritize employment and livelihoods if this humanitarian cycle is to be broken and economic recovery occurs. Doing so will require a paradigm shift that recognizes and supports the ongoing state building efforts, appreciates the operational constraints, and recognizes the potential and limitations of both public and private sectors.

The recovery process should be used to strengthen government institutions at all levels and build their credibility with their constituents. Increased public-private partnership dialogue is needed to assist government, sectorial stakeholders, private producers, farmers groups, cooperatives, trade unions, etc, to more proactively engage with each other to develop a common vision that will allow them to design, plan and implement livelihoods, employment and vocational training strategies and interventions that will be demand driven, economically viable, producing decent jobs and livelihoods and enhancing equitable and inclusive growth and development.

Lastly, increasing access to finance will be key to developing more sustainable jobs including financial support to small and medium business to develop. This should be done in two parallel tracks; firstly, targeting businesses in specific sectors critical for recovery and humanitarian aid delivery (such as logistics and construction) and that can provide livelihoods and employment in the near term, and secondly, by supporting the financial sector to diversify and provide financial products to small and medium sized businesses. The latter will depend on a minimum level of regulation and policy and the ability of the Central Bank of Somalia to engage with the financial sector.

Recovery Needs

Employment creation: Continue to create short-term employment by using existing cash for work, promoting the concept of decent work with standard contracts of employment, and appropriate occupational health and safety standards.

Institutional: The success, resilience and sustainability of the RRF will be dependent on effective coordination, leadership, management, ownership and oversight by the Somali authorities. They are not now in a position to fulfill that role. Technical support is required, and the recovery process must be used to support the state building efforts.

[188] Puntland Ministry of Environment and UNDP.2016 / Somaliland ILO, 2003, IFAD 2013.

To ensure the centrality of employment throughout all government planning it is recommended that an employment specialist is embedded in The Ministry of Planning, Investment and Economic Development (MoPIED)to advise and support government in mainstreaming employment and concepts of decent work into all government and sectorial development plans.

There is also a need for more engagement between Government, the private sector, producer groups, trade unions, development partners through improved public private dialogue which can be facilitated through an enhanced form of "tripartism".

Strengthened labor information and employment services: It is recommended that labor market information and employment services be established in 6 major urban areas over the five-year period.

Social Protection: Maintain and expand if necessary existing social protection through cash transfers using existing implementation agencies. Building on the progress already made and with external independent technical facilitation[189] develop with government, implementers and development partners a social protection policy, strategy and appropriate mechanisms that will form part of national social protection system to allow the government to begin to assume a degree of oversight and responsibility.

There is also a need for more engagement between Government, the private sector, producer groups, trade unions, development partners through improved public private dialogue which can be facilitated through an enhanced form of "tripartism".

Education and skills: There needs to be significant investment in education and skills development. The nature of employment has and will continue to change from that of a rural agricultural to one associated with a urbanized society. This has implications in regard to education and skills that need to be addressed through significant and innovative investment in education, vocational training and skills development.

A national vocational training and skills development plan needs to be developed. This will be the first step in revamping the technical, vocational education, training and skills development system. The involvement of the private sector to ensure that skills development is demand driven and of high quality will be critical to the recovery and resilience process. This needs to commence as soon as possible.

The resilience of Somali primary producers, petty traders, small businesses can be enhanced through support to them to organize into producers associations, cooperatives, etc. It is also a means by which some of the inequitable power dynamics within sectors that maintain the vulnerability of the primary producers and small businesses may be addressed.

Women: Support women in business but avoid the small grant retail kiosk model as a means of economic empowerment. Instead support women to organize, network, and strengthen producer groups, associations, cooperatives etc., so that they can increase productivity improve returns on labor and capital and enhance resilience. Examine other sectors and nontraditional occupations such as renewable energy, communications etc.

Table 43: Summary Needs for Livelihoods and Employment

Summary of Drought Recovery Needs					
Intervention	Level of Activity	Timeframe			Cost (USD)
	(national/ regional)	Short-term (Year 1)	Medium-term (Years 2-3)	Long-term (Years 4+)	
Support to women and youth to engage in key economic sectors	Regional	X	X	X	20,000,000
Support to Govt. Institutions to improve and/or establish Labor Market Information Services	Regional	X	X	X	1,900,000
Support to FGS and Federal State Govts to coordinate the E&L sector	Regional	X	X	X	200,000
Total Livelihoods and Employment Needs					22,100,000

[189] This should be from a specialized agency that is not involved in the implementation of the ongoing cash transfers, cash for work, food distribution initiatives.

Social Protection and Safety Nets

I. Overview and Pre-Drought Conditions

Social protection can be defined in different ways, and there are a variety of approaches taken in different contexts and by different groups. In Somalia, social protection was defined by the government in 2015 by the Social Protection Sub-Working Group under Peace and State Building Goal 5 (PSG5), as *Government-led policies and programs which address predictable needs throughout the life cycle in order to protect all groups, and particularly the poor and vulnerable, against shocks, help them to manage risks, and provide them with opportunities to overcome poverty, vulnerability, and exclusion. By addressing the root causes of poverty, risk, and vulnerability, social protection is expected to contribute to poverty reduction, social cohesion and inclusion, and economic growth as part of a cost-effective, sustainable, and comprehensive national system.*[190] Social Protection definitions can also be found with the World Bank, and other development partners.[191]

There was no formal social protection system operating in Somalia between 2013-2015 prior to the current crisis, including no government-led safety nets. The government of Somalia was committed however to the development of social protection before the current crisis. There was general recognition of the need for social protection in Somalia, supported by the fact that the 2010/2011 famine occurred despite the humanitarian community working for more than 20 years in the country. The scale of the current crisis further supports the strong rationale for establishing long term and predictable social protection that will help address chronic poverty and vulnerability in Somalia, moving away from the recurrent cycles of humanitarian support alone.

The current social protection gap in Somalia has been partially (though inadequately) filled both before and during the crisis by the strong informal systems of support, including the various types of traditional community assistance in Somalia, some based on reciprocal support between neighbors, others on circulation of animals and other assets. Diaspora remittances are central to Somalia's economy, providing a lifeline to large segments of the population. Remittances are estimated at between USD 1.2 and USD 2 billion today, equivalent to 23 to 38 percent of GDP.[192] Remittances as a source of income have been important in cushioning household consumption by creating a buffer against shocks (drought, trade bans, inter-clan warfare). The remittances fund direct consumption, including education and health, and some investment, mostly in residential construction. Informal systems are however stretched in an environment of concurrent shocks and widespread poverty. There are also many vulnerable families that are not reached by them, as this community social assistance tends to be given along kinship and clan lines meaning those new to the area (such as displaced households), minorities and the marginalized often do not receive it.[193]

Humanitarian and development actors have also played a role in filling the space of some safety nets. Resilience programming underway in Somalia has aspects of safety net support, some basic service provision programming includes conditional transfers (both cash and in-kind) as incentives. There is also significant investment in the case of development actors working with and supporting local and federal government in the building up of accessible basic services. This includes: education where infrastructure, governance, curriculum, and incentivized transfers such as school feeding, take home rations, and school grants are utilized; water and sanitation; health, including infrastructure, training, maternal health, and immunization drives; nutrition, with large numbers of community workers trained, and assistance for moderate and severe acute malnutrition (MAM & SAM), among others.[194] In the case of shocks, including seasonal shocks that impact on livelihoods and food consumption, humanitarian assistance has historically stepped in, including during the current crisis.

[190] PSG5 Social Protection SWG "Somalia Social Protection Definition and Concept Note November 2015"
[191] The World Bank definition is "*Policies, projects and programs to reduce social and economic risks and vulnerability caused by conflict, climate, poverty, food insecurity, lack of education and health services, gender inequality, and age, and to promote resilience through appropriate, predictable, and reliable interventions in income and food security for a population that is defined by pastoralism but rapidly urbanizing and mainly young.*"
[192] World Bank estimates, August 2018
[193] UNICEF 2014 Designing Social Protection Frameworks for Three Zones of Somalia
[194] See relevant sector reports for more information on service provision both before and during the drought.

II. DINA Findings and Drought Impact

The speed and scale of the humanitarian response to the drought, improved access across the country and improved institutional capacity has helped prevent famine and the loss of life at the scale that occurred in 2011; however the vulnerability of households to the shock, and subsequent impact shows that longer-term resilience has not been achieved in the years since the last crisis. While emergency short-term interventions activated during acute shocks such as the current drought play an important role in lifesaving, they cannot be considered safety nets. The presence of shock responsive social protection systems, including social transfers to vulnerable families could have reduced or mitigated the negative impact of the current drought and further allowed households to invest in their future and better manage risks.

The humanitarian response does, however, demonstrate that cash transfers to vulnerable households at scale is possible in Somalia. Cash assistance has been used in humanitarian response in Somalia since 2003. During the 2017 drought response, the use of cash as a modality has significantly scaled up, reaching up to three million individuals each month. Somalia has some unique characteristics which make cash-based interventions particularly appropriate. First, Somalia is dependent on food imports to meet its food needs and as such has developed extensive and robust markets to address demand even in the face of local production shortages. Moreover, on-going conflict continues to constrain access in many parts of the country, limiting road transport and the reach of traditional in-kind assistance. Finally, relatively quick to operationalize, cash assistance has not only played important life-saving and livelihood preserving roles, but has also helped to stimulate markets during time times of crisis.

From March 2017, systematic data on cash programs has been collected through the monthly cluster 3Ws.[195] The data shows that between 75-85 percent of the 2017 cash assistance per month is delivered through the food security cluster with the objective of meeting food security needs. The remaining portion of cash assistance is used to meet other needs such as water and sanitation, shelter, education and protection needs. The assistance is delivered as cash or as vouchers, and through various transfer mechanisms, including electronic payment cards, mobile money or cash-in-hand. The data shows that throughout the response, about half of the beneficiaries have been reached with restricted cash (primarily vouchers for food or water purchases) and about half with unrestricted cash (meaning that no restrictions are made on how the transfer is spent). The data furthermore shows that the vast majority of cash delivered during the response has been unconditional, meaning that the transfers are made without any requirements of beneficiaries undertaking work, training or other as a precondition to receive the assistance (more than 90 percent of the beneficiaries in the months of reporting). However, for August 2017, the data shows some increase in conditional cash (up to around 20 percent), primarily through cash-for-work schemes. Some innovative cash approaches have as well been introduced as a response to the drought such as Cash+; combining cash transfers with productive inputs (seeds), thus enhancing the livelihoods and productive capacities of poor and vulnerable households.

Transfer values vary quite substantially and according to the objective of the assistance and to the delivery location, but have tended to average around 100 USD/household.[196] The total amount transferred has been upwards of 40 million USD per month, at the height of the response.

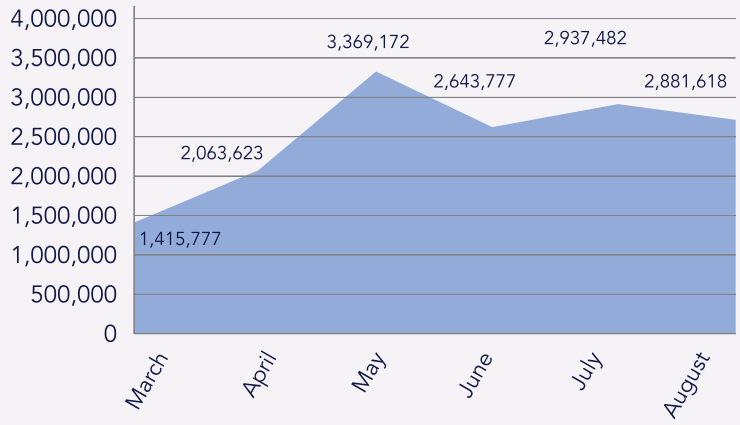
Post distribution monitoring suggests that recipients of cash spend the large share (one large study reports approximately 75 percent) of the money received on food needs, and a smaller portion on other needs including water, paying off short term debt, to buy household items or to access healthcare.[197]

[195] The 3W (who-does-what-where) matrix is filled out on a monthly basis by the sectoral clusters and include information on all interventions reported on by cluster partners. Since March 2017, questions in the 3W matrix include how many beneficiaries were reached with cash, transfer amounts, conditionalities and restriction. OCHA extracts and compiles the data specifically on cash and produces monthly overviews. The data provides a good overview over cash programming across sectors, but will naturally be limited by the accuracy and timeliness of the data shared by partners.

[196] The CWG has been working on harmonization, looking in particular at the Minimum Expenditure Basket (MEB). This is a common method of quantifying basic needs in humanitarian response as per the SPHERE standards. Whilst humanitarian standards for transfer values are not generally the basis for longer-term social transfers, there are lessons that can be learned from the experience of common approaches.

[197] The inter-agency Cash Working Group (CWG), which started meeting in February 2017, provides a forum for agencies engaged in cash assistance to engage, share learning and coordinate activities. The CWG provides guidance on transfer values, produces a monthly markets dashboard, discusses cash-related M&E and risk management, and engages with mobile money providers.

Figure 30: Beneficiaries Reached from the Sectoral 3W Reporting



The total number of beneficiaries reached per month comes from the sectoral 3W reporting. It adds up all recipients of cash transfers across sectors. Beneficiaries benefitting from cash from several sector responses (e.g. both food and water vouchers) may be double-counted; however the potential for this type of double-counting is relatively limited.

Drought Effects

As mentioned, in the absence of reliable and long-term government-led support to the vulnerable in Somalia, social protection as a sector does not exist formally. The bulk of the assistance provided is project based and has been scaled up in the aftermath of the drought through UN agencies and NGOs. The humanitarian response in Somalia filled the role of shock responsive safety nets, with smaller scale conditional transfers designed to build access to basic services, and some resilience programming also contributing here. However, funding for these programs is often short-term in nature, and the absence of reliable response beyond the humanitarian phase with a clear national operating institution for social protection limits gains that can be made beyond short-term assistance.

The biggest impact of the drought on the social protection sector in the absence of formal systems and safety nets, is then the numbers and nature of vulnerability. Vulnerability to shocks and stresses can be both economic (being in poverty/at risk of falling into poverty) and social (lack of autonomy, discrimination and marginalization),[198] and compounding shocks occurring before households have had the ability to recover their capacity to manage them, further increases this vulnerability. Significant segments of the Somali population are economically and/or socially vulnerable to shocks such as the current drought. Specific vulnerabilities are identified and discussed further in section 4.

Effects on Infrastructure and Physical assets

The extensive impact of the drought on agriculture and livestock has impacted overall levels of vulnerability and led to negative coping strategies, including sale of assets. The impact of livestock loss meant that communities lost a source of livelihoods and will thus have limited self-recovery capacities in future. More information on this can be found in the relevant sector chapters.

Effects on Production of Goods and Services and Access to Goods and Services

The impact of the drought in particular on livelihoods and rising prices of staple foods has led to negative coping strategies in the absence of shock responsive social protection. As stated earlier, the humanitarian response looked to assist households where needs were identified; however households did not have access to preventative and protective safety nets that could have seen a significantly smaller number of households in need of life-saving humanitarian support. Families were instead forced to resort to strategies such as reduction of food consumption and food diversity, buying food on credit, selling their livestock and other productive assets, and migration to urban parts of the country. Other more dire coping strategies such as child marriage and child labor have been witnessed in the aftermath of the drought as well.

[198] UNICEF 2014 Designing Social Protection Frameworks for Three Zones of Somalia

Effects on Governance and Decision Making Processes

Due to the humanitarian needs arising from the severe drought that hit Somalia, and the fact that cash was the chosen modality of humanitarian response by many actors, the Cash Working Group resumed in February 2017 after a period of inactivity. The CWG acted as a coordinating body, with the main goal being to provide support to the drought response by using cash based assistance (where appropriate) and to streamline the design, development and implementation of cash based interventions. The group focuses on improving operational efficiency and effectiveness through collaborative planning and coordination.

The CWG is not a government led body, nor does it involve government in its coordination processes. However, there are lessons from this experience that can be taken forward. The government has recently established the Disaster Preparedness, Food Security & Nutrition, and Social Protection Sub-Working Group under the Resilience Pillar Working Group. This will be the official body for coordination with government moving forward. The sub-working group can take many lessons from the success of the CWG in coordination.

Major Challenges for the Sector

Weak government capacity to collect revenue, manage disasters, lack of established financial sector, lack of systems for information collection (registration) and capability to transfer funds to citizens. Private sector regulation (or lack of) including mobile banking.

Understanding what social protection is and what it will look like, as well as prioritizing social protection system development, and securing the long-term predictable funding required to do so with so many competing priorities including security, and justice is and will continue to be a challenge for the sector.

As there is no formal public or private social protection in place in Somalia, damage and loss in these areas cannot be captured.

III. Recovery Needs

The multiple and compounding nature of the shocks in Somalia and their impact on people's livelihoods have required repeated and increasing efforts by the international and national community to respond. Somalia has been in a state of crisis for the past 20 years and has been receiving humanitarian assistance that averages around USD 1 billion per year. However humanitarian assistance is driven by humanitarian prerogatives which vary and cannot provide a consistent means to equitably and ethically identify recipients nor provide consistent forms of assistance. There are also large numbers of very poor who face many of the same problems but require different forms of assistance. This group is classified as a humanitarian caseload and on that basis receive relief, yet they require economic support and technical assistance to establish new forms of income or livelihoods or to re-establish viable forms of farming or livestock keeping.

Somalia must strategically build on the significant humanitarian efforts invested. There is an opportunity to make use of the innovative approaches that are already in place helping the most vulnerable. Cash transfers are one form of social transfer that can be transformed from the current aid narrative to predictable direct transfers to households, other transfers, including in-kind support to those access basic services are also being successfully implemented. The lessons and experience of new and innovative approaches, including CASH+ (productive and social dimensions) approaches that combine cash transfers with other key inputs or services, will be important in the development of and support to government in social protection, and in particular in realizing its potential in alleviating poverty and building resilience.

Translating political will into practical implementation will require the continuous support of UN, World Bank, and other partners to build the foundational systems to adopt a policy framework in order to establish formalized social protection in Somalia. Government and partners are aware on the need to link the largely short-term humanitarian support currently provided, with longer-term developmental aims and approaches. This is an area in which the development of social protection systems can play an important role, particularly considering the significant and successful use of cash transfers in emergency response over recent years. The government in collaboration with partners, is already taking strong steps in this direction which must be supported, including work focusing on developing both policy and institutional frameworks, developing strategies to reach vulnerable populations, and the social protection priorities laid out in the National Development Plan 2017-2019. At the same time the government is aware of the limitations and challenges they face through this process. There will continue to be a need for humanitarian and development partners to assist in filling gaps through the short to medium term in particular with steps taken to build and improve government ownership, leadership, and coordination of social protection measures.

Recovery Needs, Prioritization of Needs and Population Groups

There are a number of population groups that are of priority due to the nature of their vulnerability when considering social protection development in Somalia. Vulnerability can generally be defined as peoples' exposure to risks, and their capacity to manage those risks. Risks can be idiosyncratic or covariate in nature. Idiosyncratic risks are those experienced at the individual or households level relating to family circumstances and lifecycle events, with localized impacts. These correlate very clearly with a person's lifecycle and socio-cultural norms. Covariate risks relate to those experienced on a wider scale, with effects felt by communities or whole populations (though affecting different households and demographic groups in different ways and to greater or lesser degrees). They include weather events, such as the current drought, political events and macroeconomic events such as inflation. A person or households capacity to manage these risks is influenced by their access to (and return on) productive assets (such as Labor and access to credit or inputs), services and social networks.[199]

A number of groups in Somalia are more vulnerable either in their exposure to risk, or their ability to manage it. They are particularly important to identify by vulnerability as it relates to particular and clearly identifiable groups in the population, rather than by poverty since such a large percentage of the community can be considered poor.[200] These groups include:

Table 44: Characteristics of Vulnerability

Vulnerable Group	Characteristics of Vulnerability	Percentages of Population
Children, particularly orphaned or child headed households	Children are disproportionally affected by poverty, and are overrepresented amongst the poor.[201] Children in Somalia are exposed to health risks, malnutrition, abuse and exploitation, child marriage, forced recruitment, and trafficking. Children of vulnerable households are also pulled out of school to help with chores (collection of water, fuelwood, tending livestock) or earning income (working).[202] Children are exposed to further dangers when families are forced to move due to the drought.	Children as % of total population; **(age<14) 34%** % of households with children under 5; **61%**
Elderly, disabled and family members who are ill	Faced with difficult conditions: often traveling to receive health services, earning an income or moving to escape drought or conflict situation exposes them to additional dangers to health and safety. These groups are often limited in their ability to use technology, impeding their access to timely information. Sometimes families are forced to separate leaving these vulnerable members at home.	Elderly as % of total population; **(65+) 5%** Disabled as % of total population; **28%**
Ethnic minorities	Including groups such as the Bantu, Gabooye, Rahanwayne, and Digile Mirfle, ethnic minorities are systematically discriminated against in all stages of assistance. Since many of them are already very poor and very vulnerable during shocks, the lack of social networks to receive charity and relatives to remittances from abroad. Moreover limited or blocked access to resources for farming, water, and grazing lands can further impede these and other minorities to be able to survive during droughts. Other urban groups such as blacksmiths and urban livelihoods, those living in dis-placement may not have the social networks to enable them to borrow or receive charity and could further worsen their situation.[203]	Data not collected

[199] Ibid
[200] Ibid.
[201] World Bank 2016, Somali Poverty Profile
[202] Somalia National Development Plan 2017-2019
[203] Ibid.

Pastoralists	Those that have not diversified their sources of income can be devastated particularly when their animals graze for both water and pasture. Droughts can ravage rangelands and threaten traditional sources of water (water catchments). In this drought, up to 60 percent of herds were destroyed in certain parts of the country (North, Central). Often many livestock die before they are sold at far below market rates, and pastoralists often have few assets besides their livestock. The high rates of mobility among pastoralists also limits their access to schools and other basic services.[204]	
Internally Displaced Persons	IDPs see a breakdown in their social networks when they are displaced and can no longer access informal community based mechanisms of support. In addition, many IDPs are in a situation of protracted displacement with established gatekeepers controlling access to assistance. In IDP settlements, there are often separated families, with an over-representation of women, children, elderly and minorities. There are high numbers of GBV incidents, high rates of child labor, as well as a dependence on assistance to meet basic needs in IDP camps. IDPs are more food insecure and a higher percentage lack access to latrines, vaccination and other health services, education, protection, safe drinking water and permanent shelter.	IDPs as % of total population **34%**
Women	Women face very difficult circumstances and inequality across all areas, from access to justice, representation in government, financing, health and mortality indicators, and have been exposed to sexual assault and domestic violence while being displaced due to the drought and conflict. Women in Somalia have lower levels of literacy, reduced access to assistance, restrictions on movement, and low access to training.	Women as % of total population; **61.3%** Female headed households; **23%**
Youth	Poverty excludes many young people from education, at a time when their future and the country's development requires an educated population and labor force. Young people, many of whom had been excluded from education themselves, are increasingly drawn to urban life but do not have the skill or cannot find the jobs they need. Young men are exclude from informal community based mechanisms.[205]	Youth as percent of total population (age 14-24) **26%**
The extreme poor	While a large percentage of the Somali community can be considered very poor, the extreme poor are further constrained by an access to basic services coverage poorer than for the general population. Basic services are available by private providers which may be too expensive or not available to the very poor. NGOs, whose programs often focus on the poorest, struggle to provide the coverage, continuity or range of services required by the very poor due to security constraints or dependence on short-term, humanitarian funding.	Multidimensional poverty: **(urban households only)** • % of population without access to education; **44%** • % of population with no access to health services; **51.9%** • % of population with no access to clean water **42.9%**

[204] The evaluation of IDP settlements have been conducted by REACH in partnership with OCHA and the ICCG. Reports on various IDP settlements can be found here:www.reachresourcecentre.org, www.humanitarianresponse.info, www.reliefweb.org and data.humdata.org

[205] UNICEF 2014 Designing Social Protection Frameworks for Three Zones of Somalia

Life Cycle Risks in Somalia[206]

Large segments of the population are also vulnerable to particular life cycle risks, as can be seen in the diagram below. Covariate shocks such as the current drought compound upon these, and increase the vulnerability to risk of certain groups (many of which are identified in Table 44).

Climate and Disaster Risk Reduction

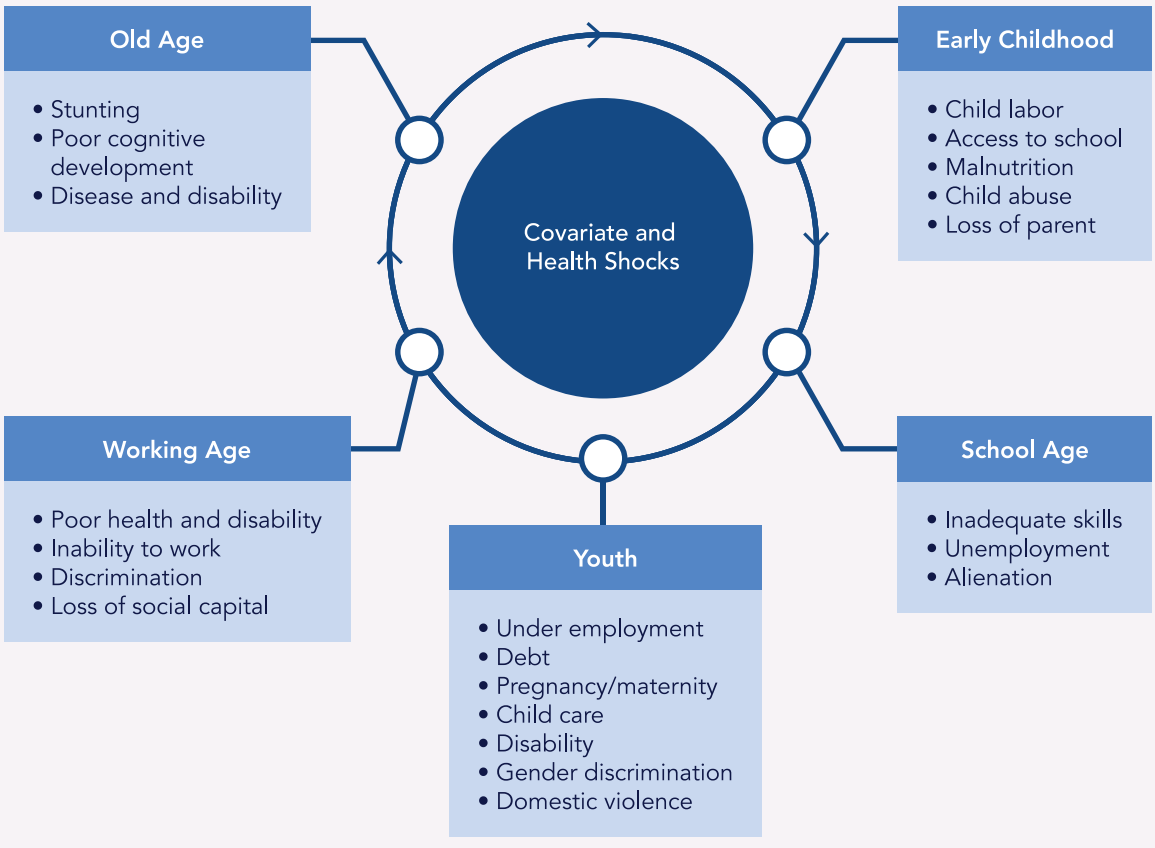
Since Somalia will be experiencing rainfalls lower than the average in the future, the recovery strategy must focus on building resilience in individuals and communities through predictable social protection, enabling them to better manage climate and other shocks. This entails identifying sources of vulnerability and then ensuring that vulnerable populations have access to safety nets – whether traditional or formal – to protect themselves against shocks and risks.

From a Disaster Risk Reduction (DRR) perspective, social protection and safety net programs (including those utilizing cash, cash for work and cash plus) can play a significant role in minimizing negative coping strategies that further exacerbate climate-related shocks, and in mitigating the overall negative economic impacts of shocks.

Needs and Actions

The needs during and following the current drought from a social protection perspective center in the short-term around the transition of vulnerable households from humanitarian assistance to more predictable safety nets where appropriate, and critically the establishment of formalized shock-responsive social protection systems and programs that can lessen the overall impact of future shocks through playing a critical protective and preventative role.

Figure 31: Life Cycle Risks

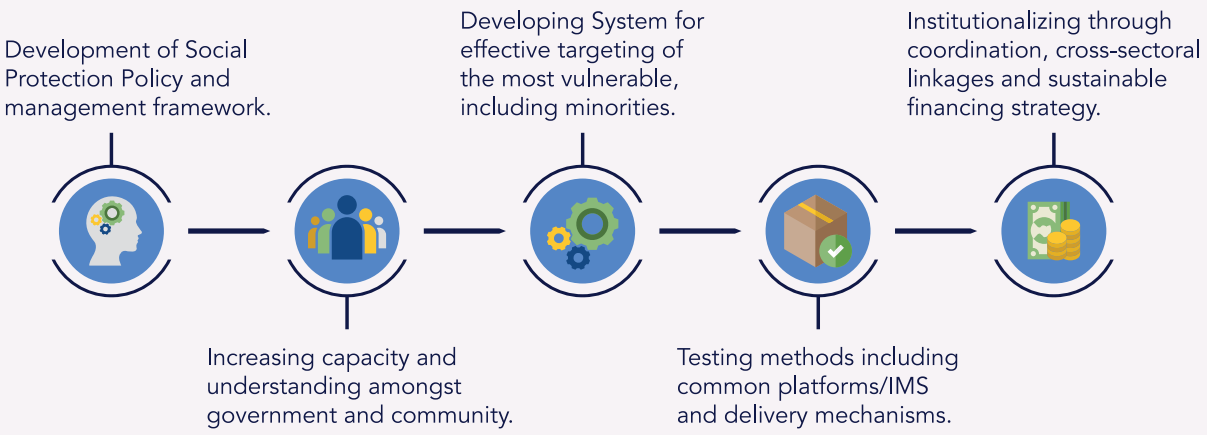


[206] Ibid.

Short-term (2018)

Immediate action in 2018 must focus on the building of capacity within the Government of Somalia to develop and manage social protection. This includes the development of a draft social protection policy and management framework (including management and implementation arrangements), research and analysis for the development of targeting and registration systems, testing of mechanisms for management and delivery, and the building of in-house capacity in particular in the Ministry of Humanitarian Affairs and Disaster Management, and the Ministry of Planning, Investment and Economic Development, who are the leads in social protection and coordination between ministries and regional administrations respectively.

Figure 32: Action Plan[207]



At the same time, conversations and coordination with humanitarian actors must continue on appropriate methods for transition from short-term humanitarian transfers, to predictable transfers that support livelihoods and access to basic services for vulnerable households who require longer-term support.

Medium-term (2019-2020)

The medium-term needs for the social protection sector, include a continuation of the work established in 2018, with the addition of the following key pieces for support. The piloting of potential safety net models with key vulnerable groups should also take place to build an evidence base for investment in larger scale social transfers under a national social protection system.

Key actions

- Development of a single registry and national identification systems
- Engagement with Public Financial Management (PFM), building short to long-term goals for investment into social protection
- Continued capacity development activities for the FGS and FMS to manage and deliver services
- Establishment of government regulations for private sector investment, particularly in key sector such as telecommunications, insurance and risk products and mobile banking
- Identification of priority safety net programs and support to development (including where possible, piloting for proof of concept)

[207] Taken from the presentation of Minister Maryam Qasim to the *Social Protection in Contexts of Fragility and Forced Displacement Conference* on September 28 2017.

Long-term (2021+)

The clearest entry point for the development of social protection in Somalia in meeting the needs of the current drought, and in building the resilience of vulnerable populations to future shocks, is in the design of effective government-led social transfers. This is the focus of the short and medium-term needs identified. However, in order to meet the government's longer-term goal of a comprehensive social protection system in Somalia, action will also be required to develop appropriate social insurance, social legislation, and equitable access to services.[208] Whilst the latter is represented in the plans of social service sectors, social legislation and insurance will also need to be considered.

Table 45: Summary Needs for Social Protection and Safety Nets

Summary of Drought Recovery Needs					
Intervention	Level of Activity	Timeframe			Cost (USD)
	(national/ regional)	Short-term (Year 1)	Medium-term (Years 2-3)	Long-term (Years 4+)	
Injection of minimum capacity in MoHADM and MoPIED	National/State	X	X	168,000	
Social Protection policy and framework, vulnerability analysis, capacity development of Government, communication strategy	National	X		1,515,000	
Database inventory and analysis	National	X		100,000	
Design of pilot incl. registry, targeting methodology, transfer systems, monitoring systems, grievance mechanism, vetting	National	X		5,000,000	
Pilot of system in select geographic areas (incl. urban and rural) targeting 100,000	National/ Regional		X	6,400,000	
Total Social Protection and Safety Nets Needs					13,183,000

[208] UNICEF 2014 Designing Social Protection Frameworks for Three Zones of Somalia

Gender

I. Overview and Pre-Drought Conditions

Somalia's patriarchal society is organized and managed along the clan system with entrenched discriminatory social structures perpetuating gender inequality. Despite the dynamic role women have historically played in Somali society as community mobilizers and peace-builders, the clan system ascribes women with inferior social status and contributes to women's exclusion from political and public decision-making fora. Men are traditionally identified as protectors of family security, as primary breadwinners, and as the central decision-makers in both public and private settings.[209] Gender disparities are stark across socio-economic and human development indicators with a Gender Inequality Index[210] of 0.776, which ranks the country fourth lowest globally.[211] Access to education remains a key gender concern. Health and nutrition indicators are among the worst in the world, with a life expectancy in 2016 of 57 years for women and 54 years for men.[212] The maternal mortality rate is estimated at 732 per 100,000 live births,[213] with one in 12 women dying due to pregnancy-related causes.[214]

GBV is a prevalent challenge throughout Somalia. Key drivers of GBV include pervasive social norms that perpetuate gender inequalities and power imbalances between men and women in both the public and private spaces. These dynamics are exacerbated by insecurity, poverty and displacement—linked both to conflict and climate-related disasters—and deteriorating social and customary structures as a result of 1.1 million people internally displaced prior to the current drought.[215] Early marriage is pervasive throughout the country, with 45 percent of women aged 20 to 24 married before the age of 18.[216] An estimated 98 percent of Somali women have undergone female genital mutilation.[217]

The Somali labor market reveals a large gender gap with labor force participation, in 2016, 76 percent amongst men versus 33 percent amongst women.[218] As land and family assets are controlled by husbands or male relatives, and due to limitations to women's inheritance rights as well as limited access to skills training and markets, widows and female-headed households are particularly vulnerable.

Given that the majority of Somali population relies extensively on the pastoral livestock production system, the drought has had a devastating effect on communities. Women, due to pre-existing inequalities, are particularly affected. In pastoralist and agropastoralist communities women oversee the overall maintenance of the pastoral system and are responsible for smaller livestock and sale for consumption, while men manage larger livestock and sale for export. Women also dominate production of local vegetables, milk and cereals and local marketing. Furthermore, women are responsible for poultry production – both for household consumption and for sale.

While the Provisional Constitution (2012) of the FGS guarantees women's rights and participation in state mechanisms and decision-making processes, women continue to be under-represented in key decision-making structures with only 24 percent of women parliamentarians. A National Gender Policy was adopted in 2014 and Somalia's National Development Plan (NDP 2017 – 2019) lays out key principles for addressing gender disparities and the empowerment of women to enhance overall development efforts. The national mechanism for promoting gender equality and women's empowerment is the Ministry of Women and Human Rights Development (MWHRD).

II. DINA Findings and Drought Impact

Humanitarian aid remains largely driven by anecdote rather than by evidence. The contemporary humanitarian system has significant weaknesses regarding data collection, analysis, and action at all stages of response to natural disaster. The lack of sex and age disaggregated data (SADD), capturing the distinct needs, vulnerabilities and capacities of women, girls, men and boys, continues to impede gender-responsive efforts along the humanitarian, resilience recovery and development continuum.

[209] Rift Valley Institute. 2015. The Impact of War on Somali Men. Logica Study Series.
[210] The Gender Inequality Index (GII) is an index for measurement of gender disparity that was introduced in the 2010 Human Development Report 20th anniversary edition by the United Nations Development Programme. It uses three dimensions to measure opportunity cost – reproductive health, empowerment and labor market participation.
[211] UNDP.2012. Human Development Report 2012
[212] http://datatopics.worldbank.org/gender/country/somalia
[213] WHO. 2015. Trends in Maternal Mortality: 1990 to 2015.
[214] UNICEF. 2016. Situation Analysis of Children in Somalia 2016.
[215] "Somalia: Overview Situation Report" UNHCR 30.04.2016
[216] Federal Government of Somalia. 2016. Somalia National Development Plan (2017-2019)
[217] UNDP – Human Development Report 2012
[218] http://www.theglobaleconomy.com/Somalia/Female_labor_force_participation/

Social Sector

Increase of vulnerabilities and social marginalization: Prolonged exposure to the drought has extended traditional coping strategies, such as migration and family separation, beyond traditional limits and necessitated women to adopt new roles as income earners, particularly in cases where separation has become permanent. Consultations with women at the grassroots indicate that cultural norms restrict women's ability to move freely, which has made it more difficult for them to cope with the drought in comparison to men as women bear disproportionate responsibilities in caring for the family and household duties. This has affected women's resilience. Those women who have become internally displaced because of the drought experience cultural intolerance, which severely heightens their marginalization and vulnerabilities. Such vulnerability means that women become the first victims when families are faced with emergencies and humanitarian crises. Feminization of poverty is thus directly resulting from a discriminatory customary system coupled with the consequences of the drought. To be halted, this downward spiral needs to be specifically targeted in recovery efforts.

Increase of female-headed households: The extended absence of males due to the drought has resulted in a significant number of female-headed households, as well as households in which women have become the primary or contributing breadwinners for the family. Women have stayed behind with children, the disabled, sick and elderly to take care of young and lactating animals while men have migrated with the rest of the animals in search of pastures and water. However, consultation with women groups strongly highlighted the needs of 'stayees', in that the displaced population received humanitarian assistance in camps or in staying with host communities, but the 'stayees' remain marginalized and neglected. At the same time, loss of livestock due to prolonged drought has forced many women and children to migrate to urban areas to access food and basic services. While this separation has created opportunities for women's expanding economic engagement e.g. cash for work activities in camps and access to markets as daily wager/worker etc., available economic opportunities are still quite limited for both men and women, particularly for IDPs, who are among the most vulnerable populations. In the face of drought, they have been facing a large variety of obstacles from harsh malnutrition, limited access to water and few positive coping mechanisms. Women, particularly female IDPs, are still reliant on charity through social protection mechanisms such as zakat,[219] and contributions from the Diaspora in the form of remittances.

Adolescent girls: As the drought worsens, girls are often the first to be withdrawn from school, largely as a result of early and forced marriage, increased household chores like water and firewood collection, and caring for family members suffering from malnutrition or water-borne illnesses. Without the protection offered by an education, girls are exposed to increased vulnerability and risk of sexual exploitation and abuse, early and forced marriage, and other forms of GBV. Lack of education contributes to feminization of poverty due to illiteracy. Drop-out rates have increased due to the drought especially amongst girls, and access to education is harder than ever for girls whose mothers are family breadwinners. Older daughters typically find they are unable to start or continue school because their domestic labor is needed at home to replace their mother's.[220] Illiteracy rates for females and males are 76 and 60 percent respectively in IDP communities, and 59 and 39 percent in host communities.[221]

Productive Sectors

Access to property and asset ownership: Most Somali women are either excluded from asset ownership or operate through a patriarchal filter. Protective traditional and customary laws for women, their social support systems and their access to land and property have been compromised due to conflict, regular exposure to disasters, a breakdown of social order, law and stability. During the drought, vulnerable people, notably women, children, minorities, the disabled, child and female-headed households, are exposed to protection risks such as forced evictions, discrimination based on status and family separations due to lack of support structures and ungoverned settlements, and hence have limited access to protective shelter. Forced evictions in the first half of 2017 caused the displacement of nearly 100,000 people.[222]

Loss of livelihoods: It is estimated that women constitute 60-80 percent of sole traders in the domestic meat trade, milk trade, hides and skins, and petty trade (kiosks).[223] The drought's effect on agricultural outputs and livestock products, coupled with the increase in unpaid

[219] Zakat refers to the obligatory annual contribution required under Islamic law that is used for charitable and religious purposes.
[220] http://www.fsnau.org/sectors/gender
[221] UNHCR. 2016. Internal Displacement Profiling in Mogadishu
[222] UNOCHA. 2017. Humanitarian Needs Overview
[223] Academic Research International. 2012. "Changing Role of Women in Somalia: An Empirical Survey of Social and Economic Contribution of Somali Women Entrepreneurs in Benadir Region; FAO. 2012.Gender in Emergency Food Security, Livelihood and Nutrition in Somalia

care work, has significant consequences on women's economic stability and household income. As women lack ownership and have limited access to productive access, female-headed households experience higher vulnerability to shocks related to livestock losses relative to male-headed households in the same wealth groups. Targeted investment in women should thus be an integral part of the agricultural recovery strategy.

Diversification of income-generating activities: An increasing number of women are active in the formal and non-formal sectors and are further diversifying how they earn income as a result of the drought. Most specifically, women are very active in petty trade and increasingly active as casual workers, leaving less time for their traditional gender roles of parenting. This has an opportunity cost with negative implication for girls who are then pulled out of school.[224] Women's ability to participate in income-generating activities is reduced as they don't have the assurances of safety and security to travel to markets.[225] The recovery plan must thus support women in engaging in sustainable income-generating activities, including skills development for women in entrepreneurship accompanied by market development and safe access to market locations, while focusing on enabling girls to continue their education. Therefore, cash-for-work or any income generating activities modalities need to be designed in a way, where women can participate without girls staying at home to supplement their roles.

Increased time burden: The combination of lack of water and firewood, and loss and absence of men due to drought and conflict, have resulted in women's increased work burden in household and agricultural work. Women and girls, who have the primary responsibility for collecting water for domestic use, are now traveling increased distances in search of water. In the Sanaag region of Somalia, for example, the journey to reach water is reportedly up to 125km roundtrip.[226] In the face of increased drought-related diseases, women's unpaid care work has also grown exponentially. Because of the drought, there is thus increased time poverty amongst women and girls, which further reduces their ability to cope with the crisis by limiting their time to adopt positive coping strategies, such as alternative income-generating activities.

Gender-Based Violence

GBV constitutes another significant protection challenge that, while prevalent throughout Somalia, has been exacerbated by the drought-related crisis as women and girls travel longer distances without protection to find water, food, livelihoods and other resources, particularly IDPs traveling on route to or from IDP settlements.

With large numbers of drought-related IDPs joining the millions of conflict-related IDPs in protracted displacement, many host communities, services, and institutions have reached their absorption capacities. Nomadic women and girls who migrated to towns face increased vulnerability to risks of GBV, including gang rapes.[227] Displaced female IDPs also face unique risks of GBV, including sexual exploitation, due to limited security in the IDP settlements, poor living conditions and limited clan protection. According to Gender-based Violence Information Management System (GBVIMS) data, an increase of 8 percent IDP GBV survivors has been reported (i.e. 76 percent in 2016 to 84 percent in 2017)[228] with 99 percent being female. For example, the lack of safe WASH facilities continues to put displaced women and girls at risk of gender-based violence. Without access to latrines, many women and girls become 'prisoners of daylight', daring to relieve themselves only under the cover of darkness.

The IDP camps are often left in a legal vacuum, with almost no access to legal remedies because the formal justice system is not established in IDP camps, justice is not enforced (as in most areas, not just IDP camps) and traditional clan systems have broken down. Often, the settlements are ungoverned or governed by gatekeepers, which increases the chances of social and economic exploitation and abuse. Due to dramatic increase in the drought-affected IDP population, gender-based violence are increasingly reported in IDP camps, and recourse is limited because of the lack of structures, both formal and informal, to deal with these issues. GBV in Somalia is exacerbated by weak or non-existent law enforcement and judicial infrastructure, which when combined with cultural sensitivity about such violence, results in a climate of impunity that facilitates further violence. Culturally, the Somali society does not openly discuss issues such as domestic violence and rape,

[224] FAO. 2012. Gender in Emergency Food Security, Livelihood and Nutrition in Somalia
[225] InterAction GBV Working Group and Protection Working Group. 2017. "Famine-Affected Countries Gender-Based Violence and Protection Concerns".
[226] UNOCHA. 2017. "Horn of Africa: Impact of Conflict and Drought Crisis on Women and Girls."
[227] http://www.independent.co.uk/news/world/africa/east-africa-drought-horn-somaliland-somalia-refugees-rape-miscarriages-a7586471.html
[228] UNFPA. 2017. Situation Report Sitrep #004. Over half (52 percent) of the reported GBV incidents were physical assault, followed by incidents of rape accounting for 16 percent of reported GBV incidents; 68 percent of GBV cases were categorized as intimate partner violence.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which further hampers women's access to justice. GBV response services for families, children and survivors of GBV violence are critical to be prioritized in the drought response plan.

Health and Nutrition

Malnutrition and water-borne diseases: Malnutrition has reached emergency levels in a number of locations in southern and central Somalia, primarily, though not exclusively among IDPs. Women, who traditionally eat after men are at higher risk of malnutrition. Many have seen their food-consumption reduced to one meager meal a day.[229] The huge migration of livestock due to drought, has left women and children with limited access to protein rich food hence, increasing their chances of malnutrition and poor health. Increase of access to productive assets, including livestock, is thus paramount.

The drought has had a drastic impact on the health sector. Decreased access to or the complete loss of drinkable water has created a dire situation in Somalia, leading to increased use of unprotected water sources, resulting in increasing occurrence of water borne diseases such as cholera. Women's risk to contract illnesses is particularly high due to their care function for the sick, children and elderly, yet their access to basic health services remains particularly limited. Distance to health facilities is not the only impediment to access services. In particular, for the most vulnerable groups, including women and girls, lack of good transport and communication systems, regular supply of drugs, supervision and surveillance activities are limited.

Women's access to basic and reproductive health services: Lack of basic obstetric and reproductive health care is of particular concern given the high maternal mortality ratio, making Somalia one of the most dangerous places in the world to be pregnant.[230] Lack of access to these services is even higher amongst IDPs, where maternal mortality is highest. Many women have also lost access to family planning, exposing them to unwanted pregnancies in perilous conditions. Access to basic hygiene has worsened as a result of internal displacement, leading to increased health risks, particularly for women and girls.

[229] Action Aid. 2017. "Horn of Africa drought threatens women and girls," 22 Feb 2017
[230] "Crisis overview," OCHA Somalia.

III. Recovery Needs

In Somalia, women play a major role in the agricultural and livestock economies, the informal sector and reproductive work. These areas were strongly affected by the drought. Women's voices and contributions are thus essential in recovery efforts so that women's needs are addressed and so that their contributions and potential are leveraged.

The DINA presents a unique opportunity to redress existing inequalities and to ensure gender-responsive allocation of financial and human recovery-related resources. Gender-transformative recovery presents opportunities for new and more progressive gender roles and relationships to emerge. Post-disaster recovery strategies and resources must strive to safeguard, restore, and promote economic engagement of disadvantaged groups, particularly women. These efforts must also seek to redress inequalities by enabling equal access to power and resources. Women's economic recovery under the post-disaster recovery programs must therefore be protected and accorded the same status and importance as that of men.

Major challenges for the sector relate to pervasive social norms and standards, further aggravated by conflict, poverty and recurring droughts, that perpetuate gender inequalities. The lack of sex and age disaggregated data, capturing the distinct needs, vulnerabilities and capacities of women, girls, men and boys, continues to impede gender-responsive efforts along the humanitarian, peace and security, and development continuum. Therefore, adequate mechanisms need to be urgently put in place to ensure the collection and use of SADD and gender analysis. Closely linked to this is the limited capacity of humanitarian actors and government on gender equality and women's empowerment, including capacity on gender mainstreaming and gender analysis. Women are primarily seen as vulnerable victims within the protection cluster, whose leadership role and key contributions, both at community and at national levels, are underleveraged and unsupported assets.

Gender, as a cross-cutting issue, needs to be streamlined across all the sectors included in the recovery plan. This requires collection and use of sex and age disaggregated data (SADD) and strengthening gender-responsive governance in the short, medium and long term. As part of this, national and district level gender profiles need to be developed to inform programming. Furthermore, noting the disproportionate risk exposure of women and girls, targeted action addressing their specific needs is required.

Despite their vulnerabilities and disproportionate risk exposure, Somali women are not simply victims but leaders and agents of change who play key roles as first responders and as maintainers of community resilience. In the absence of the primary breadwinner due to conflict or recurrent natural disasters, women have assumed the responsibility for income generation and provision of care for children and the elderly. The aftermath of an emergency and the early recovery phase can present opportunities for new and more progressive gender roles and relationships to emerge. For example, the changes in the family structures have allowed Somali women to access employment and livelihood sectors traditionally held by men.

Active at grassroots, local women's organizations are often best informed on the distinct needs, capacities and the context-specific vulnerabilities women, girls, men and boys face in the aftermath of drought. Despite progress at the national level with the increase in the number of women in parliament, significant gaps remain in ensuring women's meaningful participation and leadership at different levels. The structural barriers for women's participation, especially for women in marginalized communities such as IDP communities, are manifold and require targeted interventions. Therefore, it is crucial that any drought recovery plan leverages the leadership of women and women's civil society in planning, implementation and monitoring and evaluation, while addressing the gender-specific vulnerabilities and needs of women, girls, men and boys.

The following thematic focus areas – (I) Implementation of sex, age disaggregated data (SADD) and gender analysis tools, (II) Gender-responsive governance and expand women's participation and leadership (III) Promote gender equality in disaster risk reduction (IV) Women sustainable economic and livelihoods development and (V) Gender based Violence (GBV) and targeted responses – stem from the impact analysis presented above. In the below needs matrix the short, medium and long-term recovery needs are identified along the five thematic focus areas, with cost allocations in the Table 46.

Table 46: Detailed Short, Medium, and Long-term Recovery Needs			
Key Themes	Short – Term Activities	Medium – Term Activities	Long – Term Activities
Implementation of sex, age disaggregated data (SADD) and gender analysis tools	• Establish a "Common Information Management Framework (CIMF)" for the collection of sex and age disaggregated data (SADD), made available to government and development partners, including modification of the existing tools and provision of trainings and orientations at national, regional and local level relevant stakeholders. • Design and conduct gender specific rapid assessment to provide updated baseline with concrete findings and recommendations for gender specific needs of affected population to promote social protection and sustainable livelihoods in key sectors such as livelihoods and livestock.	• Design, conduct and regularly update gender profiles at national, regional and district level to be used as a baseline for gender responsive programming. • Conduct gender-relevant safety audits in urban environments, public spaces, and residences in IDP camps, host community and area of return to develop recommendations for disaster risk management.	• Strengthen the "Common Information Management framework (CIMF)" for the collection of sex and age disaggregated data (SADD), made available to government and development partners, including providing trainings and orientations at national, regional and local level to relevant stakeholders. • Promote changes in discriminatory laws and practices by conducting research studies and policy dialogues with relevant stakeholders in the context of disaster risk management and highlight the gaps and develop recommendations for gender responsive disaster risk management. • Conduct study on the impact of Somalia drought on women's livelihood, housing, land and property rights – access and control.
Gender-responsive governance and promote women's participation and leadership	• Strengthen women's networks and organizations to facilitate women's active engagement and participation in sectorial coordination meetings to incorporate gender analysis in the assessment of disaster risks, impacts and needs and to address women's unique needs in disaster reduction and recovery policies, plans and programs. • Technical support and dedicated gender expertise at Ministry of Humanitarian Affairs and Disaster Management and Ministry of Gender and Human Rights Development to provide strategic direction for gender mainstreaming and women's empowerment at the national, regional and district level for the implementation of gender responsive recovery framework in alignment with resilience recovery framework. • Rapid mapping to identify key local women's organizations and CSOs directly involved with affected communities and support their engagement with drought response and mitigation programming and planning.	• Continue to strengthen the existing coordination mechanisms for women's participation in government, UN, civil society (staff and personnel costs, capacity building activities, consultations and dialogue platforms). • Build capacities and promote accountability within government institutions and processes to engage women and men to foster gender-equitable relations within these institutions to ensure gender-sensitive resource mobilization, aid coordination, budgeting and fund allocation in post disaster recovery and reconstruction efforts. • Technical support and capacity development to relevant state ministries and departments on gender responsive resilience recovery framework.	• Promote women's meaningful participation and representation in all levels of decision making related to drought resilience recovery framework. • Provide technical gender expertise to the Ministry of Finance, Ministry of Gender and Human Rights on gender-responsive budgeting for the drought resilience recovery framework implementation.

Promote gender equality in disaster risk reduction	• Establishment of multi-purpose centers in camps, host communities and area of return for women to have access to psychosocial counselling and trauma assistance, awareness raising and information dissemination, • Integration into early recovery and social groups and referral mechanisms.	• Support the Ministry of Humanitarian Affairs and Disaster Management for Gender Responsive National Disaster Risk Management Policy and coordinate with relevant stakeholders to develop and establish "gender sensitive community based disaster risk management structure and early warning systems" with full involvement and participation of women at national, regional and district levels.	
Women sustainable economic and livelihoods development	• Promotion of climate-resilient agriculture and ownership of crops for women farmers. • Strengthen the capacities of displaced and vulnerable women to access livelihoods and income-generating opportunities etc, including cash-for-work, livelihoods and livestock's assets distributions and business skills development.	• Training and skills enhancement for women's economic development (restoration of disrupted and destroyed livelihood economic assets, development, strengthening and diversification of relevant market related skills for self-employment, creation of short term employment opportunities through community infrastructure rehabilitation). • Support and address women's and other vulnerable groups housing, land and property access and ownership issues and dispute resolution mechanisms, including legal aid and documentation. • Targeted approach for vulnerable women and other groups for un-conditional cash transfer support.	• Mainstreaming the excluded and marginalized groups into the long-term skills development and livelihoods support efforts, through designing skill development opportunities with business plan and start up support cost.
Gender based Violence (GBV) and targeted responses	• Provision of hygienically safe and gender-disaggregated latrines. • Response services to SGBV survivors including case management and provision of needed kits. • Special nutrition support for pregnant and lactating women and children under age of 5 years.	• Strengthen/support GBV response service provision for survivors and provide targeted intervention including access to basic health, legal and psycho-social support services, prevention programming targeting affected populations and engaging men, as well as religious and community leaders on GBV.	

Table 47: Summary Needs for Gender					
Summary of Drought Recovery Needs					
Intervention	Level of Activity	Timeframe			Cost (USD)
	(national/ regional)	Short-term (Year 1)	Medium-term (Years 2-3)	Long-term (Years 4+)	
Implementation of sex, age disaggregated data (SADD) and gender analysis tools	National	X	X	X	4,300,000
Gender-responsive governance and promote women's participation and leadership	National	X	X	X	4,400,000
Promote gender equality in disaster risk reduction	National	X	X	X	3,500,000
Women sustainable economic and livelihoods development	National	X	X	X	28,500,000
Gender based Violence (GBV) and targeted responses	National	X	X	X	3,500,000
Total Gender Needs					44,200,000

Governance

I. Overview and Pre-Drought Conditions

Protracted armed conflict and disasters including droughts, famines and floods have been major drivers of fragility in Somalia over the past three decades. Conflict and weak governance have exacerbated existing vulnerability the effects of drought, leading to poverty-conflict traps and to a further weakening of core government capacities to effectively respond to the needs of those affected. Al-Shabaab controls much of the rural areas of southern Somalia that has been hit hardest by the drought and humanitarian access remains extremely limited. Al-Shabaab and other militia groups have been very adept at exploiting local grievances, especially from marginalized social groups in these areas.

While in fragile settings, conflict can increase the humanitarian crisis following drought and other climatic shocks, the effects of drought on local communities tend to vary. It is widely recognized that government capacities and institutional set up matter a great deal in determining this variance. It also determines the capacity of communities to prepare for, respond to, and recover from natural disasters.

Somalia's institution-building agenda has changed throughout most of the baseline period. The ensuing conflict in the country has had a major impact on the ability of public institutions at large to emerge and function effectively. Overall, challenges to ensure horizontal coordination across line-ministries, as well as vertical coordination between all levels of government, coupled with a lack of clarity in the division of roles and responsibilities for almost all government institutions, has led to disjointed, ad-hoc responses that are poorly resourced. Furthermore, on disaster management, the weak capacities to collect and analyze data has prevented the ability to identify needs and provide timely response and early recovery.

During the 2013-2015 baseline period, various entities existed to deal with humanitarian crises, among them the Somalia Disaster Management Authority (SoDMA), the Emergency Response Unit and the Humanitarian Affairs Unit under the Ministry of Interior. SoDMA was created in 2011 by the Office of Prime Minister with the mandate to manage all disaster and develop strategies to prevent, respond to, and manage disasters affecting Somalia. Since its establishment, SoDMA received support from several international agencies to strengthen its capacities. A 2015 capacity assessment however revealed a weak capacity and lack of legitimacy across the country.

Crisis response entities have been set up in all states, in addition to several other smaller disaster response and crises coordination cells. The multiplicity of entities dealing with humanitarian and disaster issues has however often resulted in poor coordination, institutional competition, duplication of effort, inefficient use of resources, and confusion over mandates. The lack of state and local level capacities meant delayed action and poor support to vulnerable and affected communities.

Non-governmental organizations (NGOs) and private sector assumed many of the government's responsibilities, in the absence of a well-functioning state. Consequently, international organizations including NGOs play an important role in service delivery, humanitarian and development management and coordination. It is expected that in the foreseeable future, NGOs and private sector actors remain important mechanisms for delivery of services. This is partly a legacy of the collapse of the government in 1991 which left a vacuum for others to assume the role of government institutions. Moreover, government leadership has had to work under extreme constraints, with a lack of qualified staff, lack of resources and high levels of insecurity.

The state began to re-emerge in the context of a new three-tiered federal system which includes the FGS, FMS and district level government under the Provisional Constitution form 2012. Towards the end of 2016, Somalia issued for the first time in over 30 years a new National Development Plan (NDP), covering the period 2017–2019 that underpins a focus on building sustainable efficient, effective, accountable and inclusive institutions. Recognizing the need to move away from a dependency on humanitarian aid to ensure long-term development objectives, the NDP recommends resilience building as a key pillar for state building and through this pillar's working group offers a structure to coordinate efforts that require between government, humanitarian actors and development actors.

Progress has been achieved on aid coordination in the country since the launch of the Somali Compact in 2013. Somalia's Aid Coordination Architecture emanating from the New Deal and Somali Compact is generally viewed as a successful three-tiered coordination approach. While the aid coordination architecture indeed provides an important structure to further build upon, it should be noted that more effort is required from Government and international partners to ensure that the Aid Coordination Architecture functions properly.

For the past four years, an annual Aid Mapping exercise has been led by the FGS with technical support of the World Bank and UN to provide interim trends and information on aid flows. The 2016 Somalia Humanitarian Response Plan notes that "although there have been more donors looking to increase support to development programs, this has not translated into the channeling of any resources towards the development agenda. This is severely impacting the opportunity to build the capacity of core institutions of the state and Government and basic services". The 2017 Aid Flows analysis, drawing on 2016 data, revealed that the Official Development Assistance (ODA) for Somalia amounted to USD 1.3 billion, which includes humanitarian aid. With an ODA to GDP ratio of 21 percent, Somalia is heavily dependent on aid. This is slightly lower than private remittances from the large and influential Somali Diaspora which made up USD 1.4 billion in 2016 alone. In comparison, domestic revenues only barely sustain operational expenses related to the civil service workforce and do not allow for any capital investments, limiting the government's ability to directly finance drought-related preparedness, response and recovery activities.

II. DINA Findings and Drought Impact

The government set up the Ministry of Humanitarian Affairs and Disaster Management (MoHA&DM) to coordinate all relief efforts at the FGS level and in the federal member states. MoHA&DM is mandated to address crisis prevention/disaster risk reduction, preparedness, response and recovery by facilitating horizontal and vertical coordination between stakeholders. Further, they offer necessary policy guidance, leadership, information sharing and facilitate planning and implementation. The Ministry operates through its network at the federal, state and local levels and ensures pooling of resources of stakeholders including NGOs, private sector, international development and humanitarian agencies and the bilateral and multilateral donors. Although initial efforts to respond to drought were limited to coordination, this newly established entity demonstrates significant potential to increase the government's capacity to prepare for and respond to natural disasters.

The National Drought Response Committee, a federal body composed of nine high-level officials from the FGS and FMS, was established in December 2016. Its mandate is to undertake awareness campaigns, mobilize resources and to coordinate service delivery and data sharing with the Regional Drought Committees (DRC) at the FMS level, among others. At the FMS level, most entities and mechanisms, envisioned to serve as counterparts of the MoHA&DM, still need to be set up. The foundations necessary for an effective humanitarian affairs and disaster risk management system are lacking as key entities, relevant legislation, strategies, and funding is absent.

Functions related to disaster preparedness and response are legally assigned to the local government level. The District Departments of Planning and Department of Social Affairs support the plans of both development and emergency related activities, supported by the committee for social affairs under the district council, where capacity is sufficient. These structures have however largely been left out of the emergency planning coordination at the FGS and FMS level with significant implications on legitimacy.

Puntland and Somaliland, having consolidated their own governance structures and enhancing their capacities to respond to disasters, are notable exceptions. In 2005, the Government of Puntland established the Humanitarian Affairs Disaster Management Agency (HADMA) as an autonomous public institution. HADMA is currently mandated by legislation as the official lead government institution that oversees matters on disaster management and coordination in Puntland. In 2003, the Government of Somaliland established the National Environment Research and Disaster-preparedness (NERAD) as an autonomous entity. NERAD is responsible for disaster preparedness, mitigation, coordination, and recovery activities under the guidance of the Vice-President of Somaliland and with cooperation from the Ministry of Environment and Rural Development. At the local level, the Local Government law of Somaliland provides districts with both development and emergency responsibilities. During emergencies, they are responsible for disaster response such as water and food distribution.

Ongoing monitoring of the alignment of the existing aid coordination architecture with the large -scale drought response is necessary. While the aid architecture provides a forum for linking development and humanitarian efforts, communication and coordination between relevant pillar working groups and the humanitarian cluster system should be strengthened. The SDRF remains the centerpiece for the partnership between the government and international community and it has two core functions (a) coordination framework providing strategic oversight and guidance for NDP implementation (relevant for all actors and sources of financing for the NDP); and (b) act as a common governance structure for three multi-partner trust funds administered by the African Development Bank, the United Nations and the World Bank.

Government operations

The MoHA&DM has a clearly written mandate, a corresponding institutional set up, and well-defined responsibilities of its different Directorates and Teams. Despite challenges for the initial institution building process, a team of ambitious and committed professionals appears to be in place. The ability of the institution to assert its role and place alongside other relevant ministries remains ambiguous. The capable core team of the Ministry remains small. Compounded by the loss of the Director-General during the October 14th bombing, significant external assistance can add substantial value to its operational capability. In the long-term, current staff levels are not commensurate with the Ministry's mandate.

Effectiveness of coordination and response is reduced due to the lack of clarity on roles, responsibilities, functions, and tasks between federal, state, and local governments. In almost all states, decision-making and accountability structures are weak, lines of communication are unclear, and policy, legal and institutional frameworks are largely absent.

HADMA in Puntland and NERAD in Somaliland are widely considered to be a 'best practice' examples for disaster management and response and could serve as a model to be replicated in other states. HADMA's efforts in addressing the drought crisis in Puntland include support to the coordination, oversight and monitoring of responses to the crisis. HADMA has substantially improved its response in these areas during the current drought. However, in order to speed up the coordination and response efforts, consultations conducted by the World Bank highlighted the need for clarity on mandate to avoid duplication of duties between the different institutions operating in Puntland, most notably HADMA and the Ministry of Environment Wildlife and Tourism (MoEWT). That said, HADMA noted that they have taken initial steps to clarify mandates, and roles, and address these confusions through the revision of the Contingency Plan for Drought and Floods. This plan was developed through an inclusive multi-stakeholder process and aims to promote a coordinated approach to preparedness and response to disasters by setting up various coordination and data collection structures such as the Regional Disaster Management Committee. It is tasked to collect and disseminate early warning information and aims to implement the *Puntland Disaster Management Policy (PDMP)*, which will provide the basis for a much needed institutional and legal framework for disaster management. Given the resource constraints, the implementation of the Contingency Plan however relies on external donors for funding. Another initiative being developed by *Puntland's Somalia Water and Land Information Management (SWALIM)* body is the establishment of a Data Centre for Land and Water Information to improve coordination and water management. This new Data Centre will combine, as a central hub, all existing SWALIM established Data Centers currently operating in Puntland under the coordination and oversight of MoEWT. Despite these positive steps, there are notable constraints for HADMA to operate effectively. HADMA has 16 staff members, all of them operating from Garowe, while the organization's mandate covers the entire Puntland. Funding, logistics and transportation and salary issues have been a problem, thereby limiting the agency's ability to recruit staff and operate in all the regions to coordinate humanitarian activities.

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NERAD in Somaliland produces annual DRR/preparedness plans. Yet, the capacity to implement these plans is weakened due to limited technical and human capacity, and lack of financial resources. Besides these challenges, NERAD noted that there has not been a comprehensive and effective resilience strategic planning. Furthermore, capacity building on technical issues is still needed in the areas of collection and synthesis of technical data and information to address the challenges of disasters.

The National Drought Response Committee (DRC), while originally foreseen to be placed under the FGS MoHA&DM, now seems to function as a separate body. Operating without a decree or ToR and without any meeting records available, its effectiveness as a coordination mechanism is disputed. Moreover, mandated to raise emergency aid, the Committee managed in 2017 to collect approximately USD 2 million, showing the limited capacity of the government to improve resource mobilization.

On the FMS level, DRCs have recently been set up in all states but with significant differences in terms of operationalization and effectiveness. In Puntland, the DRC is said to play an essential role in updating the situation of the drought to stakeholders and serves as a platform for advocating for response and fundraising. DRCs in other states are showing a less positive track record. Most DRCs appear to meet on ad-hoc basis, lack capacity to gather and analyze information, and are limited in their ability to respond due to a lack of funding. All DRCs reviewed, however, do appear to engage well with NGOs, private sector, religious leaders and the international community and are coordinating, to various extents, with other community-led committees, thereby offering an entry point to improve coordination with the local level.

Responses to drought and emergencies are organized by local governments in parallel to the interventions of national/state response agencies. Resistance to include local government in the coordination and prevention has a negative impact on the effectiveness and efficiency of the response. Local governments in Somalia are struggling to raise their own finances, but have mobilization potential directly from local taxes and from diaspora. In the North, a number of districts have shown significant increases in revenue collection for basic service delivery during disasters. However, in the South there are only a few functioning district level governance structures to date – in Benadir and Adado. Elsewhere, the local government is represented by a handful of appointed administrators in each district,

none of whom have meaningful resources with which to provide services. Furthermore, most states coordination and decision-making efforts are undermined by a lack of legislative framework defining the mandates and inter-relationships of various organizations across sectors and administrative levels.

The civil society and the private sector have key roles to play in fostering economic recovery and resilience required to build back better. Both actors have shown remarkable resilience over the past few decades and continue to function. Numerous NGOs have been set up, and increasingly, they implement activities with regards to service delivery, advocacy and accountability. During the current drought response, they played an important role to be built on. The underlying approach towards unlocking economic recovery and improving resilience hinges on establishing productive collaboration among the government, the private sector and the not-for-profit or NGOs. Each of these actors have important roles to play and if one of them fails, the overall approach will be at risk. The government sector is emerging, but with strong regional differences. The absence of overall legal and regulatory arrangements combined with limited capacity, makes improvements in the legal, regulatory, policy and oversight arrangements key priorities.

The private sector is vibrant, but faces obstacles to further growth, including weak business regulations for SMEs, poor access to finance, and limited access to non-traditional overseas markets. With strong support from the diaspora, the private sector is exploring innovative financing approaches, e.g. crowdfunding. Building on these innovative approaches is to be further encouraged as part of the response management to a climate or man-made crisis. It is critical to build the resilience of Somalia to strengthen economic recovery and development. The recent drought response largely failed to capitalize on private sector initiatives due to the weak coordination and data management. The NDP offers perspectives and opportunities for aid coordination, as well as unlocking economic recovery, improve resilience and reduce abject poverty.

III. Cross-cutting Considerations

Integrating a Conflict Sensitive Approach

Ultimately, only by addressing Somalia's chronic conflicts can the recurring threat of food insecurity and famine be tackled in a sustainable manner. This will require at a minimum that the federal and state governments, supported by donors, combat large-scale corruption and begin to deliver public services, particularly security, at all levels. It furthermore requires the finalization of constitutional negotiations regarding the allocation of power and authority between the central government and federal member states; and restart the stalled national reconciliation process among Somali clans, focusing from the bottom up. A transparent and inclusive process in establishing the new administrations will avoid disruptive clan power relations to come into play. To achieve this, a process-oriented, flexible and risk-informed approach through continuous conflict analysis and integration of other conflict sensitive measures, is necessary.

IV. Recovery Needs

The recent drought crisis put functionality of the Somali Governance under severe stress. To avoid that the cracks turn into critical bursts, the following three-pronged approach is recommended: (I) Supporting the state-building process (II) Building national capacity for Climate Hazard Management to avoid climate hazards turn into humanitarian crisis; and (III) Governance framework fostering economic recovery and resilience - and bridging the aid's funding divide.

Support the state-building process

Drought management mechanism will only be sustained along a successful state building process. Humanitarian assistance can have impact beyond immediate life-saving activities if the enabling institutional framework is effective. Strengthening the FGS to implement the federal process, including the discussions around roles and responsibilities of the FGS (horizontal level) as well as the engagement of FMS (vertical level) is critical. Restoring core functions of the Somali government involves ensuring that efforts are government-led and -owned and build on existing structures.

Critical priorities:

Ensure that all the federal ministries implementing drought recovery programs have adequate capacity to implement recovery interventions. Drought recovery includes several sectors: agriculture, livestock, water & sanitation, health, education, urban, housing, energy, etc. Recovery needs in each of these sectors need to be led through the government efforts. So, all the ministries would require capacity-building assistance. Such capacities could be developed through additional staff, training, and strengthening of office systems. From a 'whole of government' perspective, these capacity-building efforts are critical to enable a multi-sector approach to drought risk management.

Equitable capacity-building support for FMS civil service is needed. The support is necessary for the FMS to partner with the FGS and implement recovery programs. An assessment of their recovery programs and drought

management capacity needs can identify components for support. Greater clarity on the distribution of roles and responsibilities between FGS and FMS can improve effectiveness to combat disasters. Clarity ion this would make it easier to channel resources and implement the program at the appropriate and capacitated level.

Local governments are expected to play a vital role in drought management. By enhancing the presence and capacity of local governments, and by clarifying their roles in drought management, local governments can become important actors to manage the impacts of droughts. The formation of efficient, functional, and inclusive district authorities as part of the Wadajir National Framework (WNF) and Federal Government's broader stabilization framework can support recovery capacity at the local level. For those civil servants directly involved in emergency response, skills development keeps the respective ministries effective at delivering on their mandate. Where required, capacity assessments can be conducted to map existing capacity and define gaps and needs.

NGOs, community leaders and traditional authorities, local academic institutions, and private sector have a pivotal role in disaster response. Capacity development programs targeted at these actors can address some of the major obstacles to fast and effective drought response. The potential for community based Disaster Risk Management should be assessed and where feasible, a framework for this can be developed. The effort to build capacities at the federal, state and local levels is an essential part of the state building process.

The NDP outlines a broader civil service reform agenda, based on the principles of the use of country system agenda and includes the design and implementation of a new Human Resource Development Framework. This will allow the government to manage its public workforce in a cost-effective way, integrated with its other management systems. As a long-term agenda, it should be supported through governance support for drought management.

Building National Capacity in Coordination, Public Finance Management, and Accountability in Drought Management

Federal capacity to coordinate drought management activities across multiple sectors, ministries and agencies improves effectiveness of response. The FGS needs to decide on the appropriate line ministry to lead such a coordination structure (i.e. MoPIED, MoHA&DM). This drought management coordination needs to be nationally owned and led and requires an inclusive approach including international agencies, NGOs, and private sector.

More specific recommendations are:

Strengthen multi-sector coordination on drought response management. Existing, government structure needs to be identified for strengthening inter-ministerial coordination, as additional mechanisms strain further limited capacity in government. The Resilience Pillar Working Group, chaired by the MoHA&DM, could present a possible suitable structure at the national level. High-level government leadership, providing a platform for FGS and FMS engagement, and the support of donors and international partners are important pre-conditions for effectiveness. Similarly, at the state level, where coordination structures are often largely absent, the establishment of inter-ministerial coordination mechanisms supported by a Secretariat and that meetings on a regular basis are needed.

An entry point to set up these coordination structures is to start by building the capacity within the Ministries of Planning to facilitate coordination at the state level and respond to local needs. However, flexibility needs to be provided for FMS to identify the appropriate set up and design. Entities such as HADMA and NERAD can serve as examples and could be replicated in new federal states, taking contextual differences into account.

Improving Public Finance Management (PFM) arrangements for drought management in Somalia builds capacity across the government and builds systems for government-led responses. The national budget should be used for making allocations to different ministries/ departments. Appropriate budget allocations need to be directed towards drought preparedness and response. The line ministries need to receive allocation for drought management activities related to their sectors. A common budget line which ministries / agencies can access as per appropriation should be established. This budget would be disbursed following the program guidelines and priorities and would include the following components: - federal and regional management budget, administrative budget, capital budget, capacity building budget, contingency budget.

Increasing contingency budget for drought management improves responsiveness to natural disasters. Somalia has a contingency budget, with an allocation of USD 2.3 million in the revised 2017 budget, which can be used for emergency expenditures on the authority of the Minister. The contingency budget needs to be increased further.

Foster the SDRF as governance structure to secure funding and capacity to support response over a longer timeframe. The SDRF provides the mechanism for channeling external aid and assistance through different funds. It needs to be strengthened further. The SDRF could be used to develop and implement

drought policies and crisis response in a collaborative manner with partners like private sector and NGOs. This fits within the implementation of the Grand Bargaining and the NWOW in further improving existing aid coordination mechanisms in Somalia enabling to refine the implementation of the humanitarian-development nexus.

Enhancing integrity and accountability can project important confidence to external partners to increase the use of country systems for drought response. There is a need to ensure leadership within the Somali Government on budget transparency, oversight and delivery against an accountability framework. These measures would entail setting up administrative systems for continuous oversight, enhancing services of auditors and financial management experts, and increasing communications to the public through media campaigns.

Provide Technical and Systems Development Assistance for Implementation of DINA

Developing a system-wide drought recovery strategy provides a platform for all the stakeholders to come together and implement recovery interventions towards collective outcomes. Providing technical assistance to stakeholders where needed and addressing underlying drivers of drought and conflict through national dialogue, and promote reconciliation through drought management are important objectives for the short and medium term.

Setting up an Information Management (IM) & Monitoring system for the recovery program and improve transparency and coordination. The IM & monitoring system should provide information on all recovery interventions including sector, cost, time-frame, area of implementation, and impact. Puntland's initiative to establish SWALIM should be supported and the potential for replication of this model in other FMSs can be assessed.

Strengthen the DRR system with a greater focus on recovery with recurrent crisis increasing in frequency. The DRR system in Somalia should be strongly oriented towards supporting recovery on a continuous basis. A recovery preparedness would require a capacity to assess recovery needs, organize recovery interventions involving multiple stakeholders, seek external assistance where required, and monitor implementation. Gradually transfer social protection services to the government which should develop these services further as outlined in the chapter on Social Protection.

Table 48: Summary Needs for Governance					
Summary of Drought Recovery Needs					
Intervention	Level of Activity	Timeframe			Cost (USD)
	(national/ regional)	Short-term (Year 1)	Medium-term (Years 2-3)	Long-term (Years 4+)	
Expert Personnel (+/- 250 staff for 24 months)	National		X		41,000,000
Office equipment	National		X		2,200,000
Capacity building activities specific to recovery and resilience	National		X		3,200,000
Development of legislative framework & related consultations	National		X		1,900,000
Building leadership capacity within the Somali Government on oversight and delivery against an accountability framework	National		X		800,000
Establishing Database Center and strengthening statistical capacity & information management	National		X		2,700,000
Building recovery program management capacity within Federal and State Min of Planning (2 years)	National		X		6,000,000
Access to finance for social entrepreneurs and innovators	National		X		560,000
Total Governance Needs					58,360,000

Conflict

I. Overview and Pre-Drought Conditions

The impacts of drought on Somali society are mediated through complex environmental, governance, political, and social factors. Most critically: drought itself drives conflict; the impacts of drought are exacerbated by conflict; and conflict and drought have together been the major drivers of waves of displacement over a period of decades. Through violence and socio-political marginalization, the impacts of drought and conflict – including violence, deprivation and displacement – fall disproportionately on groups that are already the most vulnerable. The conflict context also places constraints on responses to drought. This chapter briefly elaborates the most pertinent elements of this causal nexus, examining some of the ways in which conflict and social factors condition the human impact of drought. It goes on to draw out the main operational implications of the analysis.

Somali society has become increasingly fragmented. Lineage (or clan) has been a major principle of social organisation and solidarity, structuring collaboration and competition in a traditionally mainly pastoralist society. However, in its evolution over the decades since the 1990s, clan allegiance has all too often been manipulated as a vector for violent conflict and zero-sum political competition. In a society where authority had been distributed widely and social relations managed by debate and consensus, contestation over the building of state institutions has itself also been a major driver of conflict.[231] The political system that has emerged in contemporary Somalia, characterized by complex negotiations and trade-offs between stakeholders with a wide range of both formal and informal power-bases and interlocking interests, is appropriately termed 'hybrid governance'.

Social, economic, and external factors have also played their role. Although Somali people are sometimes portrayed as relatively homogenous, there are major imbalances between the power of clans, and also significant minority groups that have suffered extreme marginalization, having minimal political representation and limited access to education, government employment, remittances, or humanitarian relief. At the economic level, in the absence of effective regulatory processes, economic dynamism has often been channeled into opportunistic, rent seeking and destructive activities driving elite competition and corruption, rather than longer-term investments that could form the basis for stable and peaceful collaboration.[232] External influences – military, political and economic – have also exacerbated conflict.

To these drivers may be added other factors that have perpetuated conflict: Somalia's fragile ecosystem is subject to degradation and periodic drought. Natural resource scarcity intensifies the potential for conflict (over livestock, pasture, water, agricultural land, forest etc.), while traditional modes of managing livestock through transhumance are constrained by insecurity and international borders. Formal natural resource management mechanisms are largely absent or ineffective. While customary law (xeer) administered by elders, or mediation by religious leaders and other third parties continues to be effective at local level it has been unable to contain the scale of conflict of recent decades.[233] Conflict and drought (together with floods, evictions, and other causes) have together uprooted large sections of the population, particularly groups already marginalized, creating a whole new set of human impacts and social tensions. In addition, Somalia is characterized by a predominantly young population (80% below the age of 35); high unemployment (75% of youth are unemployed, among the highest rates in the world);[234] the extensive proliferation of arms; and the emergence of violent jihadist ideology and organization. Decades of violent conflict, along with effective impunity, have resulted in a society with accumulated, unaddressed grievances, along with widespread psycho-social trauma. This legacy breeds further violence. As the National Development Plan states: 'Many young Somali are trapped in an environment of violence, fear, unemployment and poverty.'[235]

Together the above factors drive violent conflict at several inter-related levels. *First*, conflict has at times been exacerbated by the involvement of Somalia's neighbors and broader regional and global interests. *Second*, civil war, which erupted in 1991 after the overthrow of the Barre regime and resultant collapse of central government, pitted armed factions often recruited along lineage lines. *Third*, violent jihadism was added to this scenario in the form of the Islamic Courts Union (ICU) from which al-Shabaab subsequently arose. Al-Shabaab, which has international as well as national and local aspirations and support, continues to hold tenaciously to significant territory, mainly in south-central Somalia, despite having suffered losses in recent years. *Fourth*, local communal conflicts, typically over natural resources such as land, pasture, water rights, or economic rents, may result in violence, often at the sub-clan level. *Fifth*, the incidence of criminal, interpersonal violence and gender-based violence are high. These levels are inter-related: local conflicts implicate wider tensions, alliances and grievances at other levels, drawing on a repertoire of injustices going back to the colonial period, land grabbing under the Barre regime and 'clan cleansing' during the chaos of the civil war. Together, these factors continue to make Somali the most conflict-affected country in Africa in 2017, with 3,287 recorded fatalities and 1,537 violent events as at September 22nd.[236] October's three deadly bomb

[231] See Governance section.
[232] World Bank. 2013. A Background Literature Review on the Drivers of Conflict, Fragility and Resilience in Somalia. Prepared by Bernard Harborne and Matthias Mayr. Social Development Department, World Bank, March 2013.
[233] Gundel, Joakim, Louise-Alexandre Berg, and Yahya Ibrahim. 2016. Political Economy of Justice in Somalia. World Bank Working Paper, Justice Security and Development Series. April.
[234] FGS. 2016 National Development Plan 2017-2019. Final, October 2016. Federal Government of Somalia.
[235] Ibid.
[236] ACLED. 2017a. 'Somalia: 2017 update.' Armed Conflict Location and Event Data Base. September 22, 2017. http://www.crisis.acleddata.com/somalia-september-2017-update/

attacks in Mogadishu – including the country's deadliest attack that killed over 300 people – show that the threat remains significant.

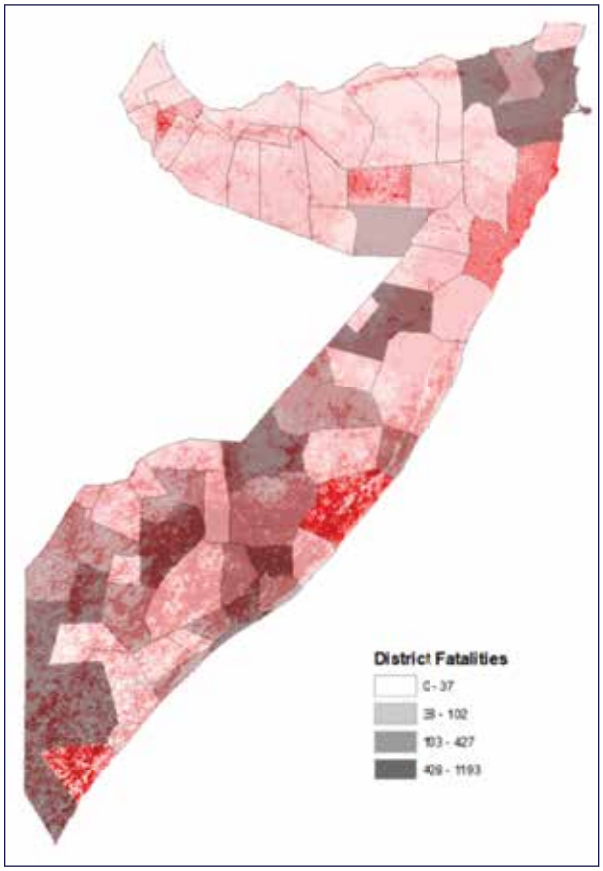
While many of the underlying drivers are common, the prevailing patterns of conflict and violence in Somalia differ between the country's regions according to their specific histories, institutions and governance. While decentralization is intended to lead in the longer term to improvements in governance and accountability, the process of creation of Federal Member States has added to the complex dynamic as new claims of influence and territory are tested. There is also violently contested territory in the frontiers between areas (for example between Somaliland and Puntland and between Puntland and Galmadug FMS).

II. Interactions between Conflict and Drought

There is a growing body of evidence showing a causal relationship between extreme weather events and the incidence of civil conflict at the global level.[237] [238] Maystadt and Ecker[239] demonstrate this causality for droughts and local violent conflicts for Somalia between 1997 and 2009: one standard deviation increase in drought intensity and length is estimated as raising the likelihood of conflict by 62 percent. The authors also found that the impact of drought on local conflict was mediated through livestock price shocks, which increased the incentives for conflict. The drought in Somalis has likewise exacerbated conflicts over pasturelands and natural resources. 'Conflict or violence' was significantly the most frequently cited of the difficulties or shocks in the survey undertaken for this Assessment in October 2017, with almost one in four households having experienced in the past month.[240] Map 1 provides a visual representation of the relationship between drought and conflict.

Somali culture recognizes the association between war and drought *(col iyo abaar)* in a saying: *Ilaahow Col Iyo Abaarba Naga Hay / Oh God, Spare us from both war and drought!* The antithesis is captured in another traditional saying, *'nabaad iyo caano'* ('peace and milk'), recognizing the association of prosperity with security.

Figure 33: Somalia: Facilities by District and Drought Intensity[241]



In addition to drought's exacerbating conflict, drought and conflict, both independently and in combination, cause displacement. The two are so closely entwined as drivers of displacement that it is not always possible or meaningful to distinguish between them. As Lindley observes of the 2011 drought: 'severe structural violence and years of ongoing armed conflict strongly shaped the experience of drought by different groups in society, and whether they were forced to migrate

[237] Hsiang, S., K. Meng, and M. Cane. 2011. Civil Conflicts are Associated with the Global Climate. Nature 476 (7361): 438–441.
[238] Burke, M., E. Miguel, S. Satyanath, J. Dykema, and D. Lobell. 2009. Warming Increases the Risk of Civil War in Africa. Proceedings of the National Academy of Sciences 106 (49): 20670–20674.
[239] Maystadt, Jean-Francois and Olivier Ecker. 2014. 'Extreme Weather and Civil War in Somalia. 'Does Drought Fuel Conflict through Livestock Price Shocks?' American Journal of Agricultural Economics. 96(4): 1157–1182; doi: 10.1093/ajae/aau010. Published online March 25, 2014
[240] IPSOS. 2017. '2017 Somalia Drought Impact and Needs Assessment (DINA): Report for The World Bank October 27'. IPSOS.
[241] Ibid.

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or not'.[242] Of 1,334,000 internally displaced between January 2016 and September 2017, 339,000 (25 percent) were classified in UNHCR statistics as 'conflict/security' related, and 950,000 (71 percent) as 'drought related'. 'Conflict-driven' displacement was more geographically focused, with 71 percent being displaced from just one of Somalia's 18 regions, Lower Shabelle (South West State). Displacement classified as drought-driven was more evenly spread across the country.[243] [244]

The situation in Lower Shabelle itself illustrates two of the characteristics of conflict and violence in Somalia: their locally specific and shifting dynamics; and the brutal toll that they exact on local populations. Lower Shabelle, Somalia's second most populous region, is home to a multitude of clans and minorities, and regarded as the country's breadbasket. With a history of land expropriation and other injustices, the region has more recently seen urbanization, migration, and displacement that have resulted in shifts in demographic dominance between clans, stoking tensions that have led to armed conflict between clan militias. The SNAF (Somali National Armed Forces), AMISOM (UPDF) and al-Shabaab, have all been drawn into these conflicts in various ways, often through temporary and opportunistic alliances. As a result of the violence, civilian communities have been the victims of IEDs, gender-based violence, recruitment of child soldiers, financial extortion at check points, inaccessibility to humanitarian aid, and the destruction of houses, livestock, harvests and businesses. The limits formerly set on violence by customary law, according to which children, women and the aged were to be protected, have increasingly been disregarded – as has occurred in other conflicts in Somalia.[245]

The very large number of armed groups active in Somalia – 128[246] – underlines the complex and multi-polar nature of violent conflict. The most significant of these groups is certainly the violent jihadist organization al-Shabaab, which, despite a gradual reduction in the territory that it controls, has been responsible for increasing asymmetric attacks, especially in urban areas.[247] Al-Shabaab was involved in 911 violent events in 2016, more than any other group in Africa. These events resulted in a total of 4,282 reported fatalities (an increase by one third over the previous year).[248] The rate of civilian targeting by al-Shabaab, however, at 11 percent, is significantly lower than that of comparable groups, and also of clan militias within Somalia itself.[249] This is related to the organization's wide strategic repertoire for consolidating power and resources. In addition to armed conflict, al-Shabaab pursues its interest through the exploitation of local grievances (including those of minor clans and minorities); active negotiation between local groups; trade and contraband; extortion; and taxing the local population through demands for *'zakaat'* (literally alms intended for the poor). The organization also has international networks of finance and recruitment.

Social Impacts of Conflict, Drought and Displacement

In situations of conflict and natural disaster, social groups that are already vulnerable are likely to suffer most. In the Somalia context, this has been especially true of minority clans and other minority ethnic groups. While data on the population of minorities in Somalia is sparse and contested, UNOCHA in 2002 estimated that they comprised one third of the population.[250] In many cases, these groups, generally unarmed, had previously been deprived of their access to land and lack the necessary networks to access other resources, including physical and political protection. Marginal groups also lack access to international remittances, a critical coping mechanism for better-placed social groups.

Data on the social composition of those affected by the recent drought is limited. However, evidence from the 2011 and 1991 droughts indicates that those dependent on agricultural labor were particularly hard hit, and that the famine-affected population was predominantly drawn from two 'minority' ethnic groups, the *Reewin* (a minority clan) and the *Bantu* (descendants of former slaves and indigenous farmers concentrated in the inter-riverine regions of Southern Somalia). These groups had been subject to years of marginalization and predation. Crop production is particularly vulnerable to both environmental hazards and conflict conditions, while irrigation systems have been degraded since the 1990s.[251]

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[242] Lindley Anna. 2014 'Questioning "drought displacement": environment, politics and migration in Somalia' Forced Migration Review 45, 39-43. February.
[243] UNHCR. 2017. Somalia – Internal Displacement: Displacements Monitored by UNHCR Protection and Return Monitoring Network (PRMN). https://unhcr.github.io/dataviz-somalia-prmn/index.html
[244] See also Displacement section.
[245] Somalia Protection Cluster. 2016. Conflict and Protection Analysis – Lower Shabelle, June 2016.
[246] ACLED. 2017b. 'Al Shabaab and Boko Haram: Patterns of Violence.' Armed Conflict Location and Event Data Base. October 9, 2017. http://www.crisis.acleddata.com/al-shabaab-and-boko-haram-patterns-of-violence/
[247] World Bank. 2017. Somalia Security and Justice Sector Public Expenditure Review. United Nations Mission in Somalia and World Bank, Led by Paul Zacchia and Bernard Harborne. January.
[248] Ibid.
[249] Ibid.
[250] Hill, Martin. 2010. No Redress: Somalia's Forgotten Minorities. Minority Rights Group International. http://minorityrights.org/publications/no-redress-somalias-forgotten-minorities-november-2010/
[251] Majid, Nisar and Stephen McDowell. 2012. 'Hidden dimensions of the Somalia famine'. Global Food Security 1(1): 36-42. December 2012.

Displacement inevitably induces further marginalization and conflict. The growing population of urban IDPs adds to the contestation around key resources and services in urban areas and increases the vulnerability of already marginalised groups. Minority groups are less able than others to establish rights to land for residence and livelihoods in the areas to which they have become displaced. Contestation over land is a source of conflict and violence in both urban and rural areas. The tenure system is complex, combining multiple normative systems, a history of dispossession of weaker groups, and contestation at all levels.[252]

Women and children, especially where households are female-headed or have become displaced or divided, are vulnerable to violence and deprivation.[253] Other vulnerable groups include those lacking livelihood or employment opportunities, and those traumatized through exposure to violence. Conflict diminishes resilience and options for recovery by households and individuals. An insecure environment restricts trade and freedom of movement and thus potential livelihood strategies.

Violent conflict has an especially corrosive impact on social relations and social cohesion. By definition, violence represents a breakdown of social relations between the conflicting parties. In addition, those who are its victims suffer social and psycho-social disruption, often loosing family and local support networks as households and communities are split, increasing vulnerability (to deprivation, violence, extortion, forced eviction etc.) and further eroding their resilience.

Conflict and Drought Response

The conflict and security situation exerts a very direct impact on drought response, as well as their effectiveness. Insecurity places severe restrictions on access by humanitarian aid and development assistance, as well on trade and freedom of movement. In the first ten months of 2017, humanitarian organizations were subjected to 130 violent incidents, with 15 persons killed, 32 injured and 30 abducted.[254] Security challenges mean that the distribution of humanitarian and development aid is unavoidably mediated through existing power structures. Intermediaries may limit the distribution of assistance to groups not allied to them or lacking in political capital, reinforcing the dependency of vulnerable groups on the politically better placed and aggravating existing tensions, grievances and inequalities.

As is now well documented, the intended beneficiaries of humanitarian and development assistance, especially in camps, are vulnerable to extortion in the 'hostile and abusive environment' created by criminals, camp gatekeepers, and other intermediaries.[255] Al-Shabaab has at times expelled or excluded aid agencies from the territory which it controls, though more often has sought to use them to its advantage through a combination of regulation, taxation and surveillance.[256]

Somalia's security situation also has fiscal consequences relevant to the funding of drought response and development services. International partners spend some USD 1.5 billion a year on peacekeeping, counterinsurgency and support to the Somali security sector (much more if anti-piracy measures are included), while the FGS in 2014 and 2015 spent 45 percent and 33 percent of the national budget respectively (USD 68m and USD 44m) on security. Numerous informal armed groups and militias also extort millions of dollars annually in predatory 'taxes' on citizens.[257]

III. Recovery Needs

The What?

The National Consultation Conference on a Framework for Reconciliation, which met in Mogadishu in mid-2017, attested that 'twenty-seven years of widespread and sustained armed conflict has left Somali communities wounded, fractured, trust-deficit and deeply divided'.[258] The present analysis has traced some of the roots of this degradation of social capital and underlines the importance of re-establishing social cohesion in situations of conflict and drastic social change (due to drought, violence, displacement, etc.). The process of

[252] NRC. n.d. Land, Property and Housing in Somalia. Norwegian Refugee Council, UNHABITAT and UNHCR.
[253] See Gender and Displacement sections.
[254] UNOCHA. 2017. Sarah Otuku. Personal Communication.
[255] Human Rights Watch. 2013. Hostages of the Gatekeepers: Abuses against Internally Displaced in Mogadishu, Somalia; Bryld, Erik, Christine Kamau and Dina Siniglia. 2013. 'Gatekeepers in Mogadishu: Using informal governance resources in Mogadishu'. Research byTana and IDC for the Somalia Cash Consortium; Bryld, Erik, Christine Kamau, Soren Knudsen Moller and Mohamed A Mohamoud. 2017. 'Engaging the Gatekeepers in Mogadishu'. Tana for IAAAP Somalia Accountability Programme.
[256] Jackson, Ashley and Abdi Aynte. 2013. 'Al-Shabaab engagement with aid agencies'. Overseas Development Institute Humanitarian Policy Group Briefing paper no. 53.
[257] World Bank. 2017. Somalia Security and Justice Sector Public Expenditure Review.
[258] Federal Government of Somalia. 2016. National Development Plan (2017-2019).

successfully implementing well designed and conflict sensitive drought response activities will itself contribute to the rebuilding of relationships within and between communities, and between government and citizens, the more so if these are formulated through local consultations and built upon community strengths.

Disputes over land are a driver of conflict, as are past expropriations. In a context of rapid urbanization, insecurity of land tenure is also a major factor impeding the capability of the urban poor and displaced persons from establishing stable residence and livelihoods, and is thus a driver of future conflict, crime and violence, and a factor in potential recruitment to violent jihadi groups. Somalia's National Development Plan recognizes the need to develop national land and urban policies, specifically with a focus on climate change mitigation and natural disaster planning. Stable and equitable policies are needed for both development and the settling or resettling of the displaced. The issues are very complex, and Somalia's partners should consider supporting a participatory deliberative process aimed at developing consensus on a way forward on land tenure and management.[259]

The conflict analysis outlined here supports the priority given in other sections of this assessment (including those on urban and displacement) to a focus on urban development so as to address urban poverty and marginalization, including that of the displaced. In addition to land policy, this would entail a focus on infrastructure, shelter, services and livelihoods, and the development of smaller urban centers.[260] Construction could itself be a major opportunity for developing skills and employment opportunities.

Youth unemployment has been identified as a driver of conflict. Support for establishing productive livelihoods would accordingly help to establish the conditions for a more peaceful and stable Somalia. As recognized in the National Development Plan, sustainable rural livelihoods require sound environmental and natural resources management policies along with rural services. The employability of urban youth is limited by their very low educational status, especially among minorities and IDPs. Along with education, technical and vocational training, credit, and employment schemes will also have their place. These are addressed in more detail in other sections of the report.[261]

The How?

The drivers and impacts of conflict are both complex and interconnected. They will therefore be best addressed through an integrated approach that brings together humanitarian, recovery and developmental approaches in order to address long-term poverty and marginalization. Two elements in particular will build resilience against both future drought and conflict. These are: first, restored economic growth, employment and reduced inequality; and second, increased legitimacy of government and public institutions through transparency and improved performance.

Drought response interventions must be designed so as to contribute to the reduction rather than the exacerbation of conflict. This conflict analysis has demonstrated the ways in which social and political factors have determined the differential human impacts of drought. The design of drought response must equally take account of this context if intervention is to be effective. Understanding of social and conflict factors can be achieved through tools such as political economy analysis and conflict sensitivity, and provision needs to be made explicitly for such analysis in response design.

Political economy analysis considers the interaction of economic and political processes, and the distribution of power and resources within society. Since all conflict is ultimately conflict over resources (material, political or symbolic), understanding the current 'rules of the game' regarding resource distribution is essential to providing effective responses. This is especially important when institutions function in ways and towards ends that are at variance with those that are formally or publicly stated, as is very often the case in Somalia. These rules of the game will follow general patterns for the society, yet must be understood specifically for each implementation context.

[259] See Environment, Clean Energy and Natural Resources, Agriculture – Livestock, and Urban Development and Municipal Services sections.
[260] See Urban Development and Municipal Services section.
[261] See Livelihoods and Employment section.

Conflict sensitivity could be seen as a more operational and circumscribed version of political economy analysis that can be tailored to the design of drought responses. A guiding principle of the approach is to 'do no harm', either inadvertently through intervention, or by not providing support where this is needed. Conflict sensitivity involves considering both the effects of conflict on drought response activities *and* the effects of drought response activities on conflict. In taking account of conflict dynamics and security constraints, planning and implementation should be informed by an overall vision of how each intervention will contribute to peace and stability in the medium- to long- term. Distribution and targeting will be important concerns here, though by no means the only ones. The implications of intervention will vary considerably by context, depending on the region and social/demographic group concerned, even down to community level. Proposed interventions must therefore take account of Somalia's marked regional and local variations in ecology, livelihoods systems, social systems, political power and governance, as well as rapidly shifting patterns of conflict.

Given the ways in which conflict and drought have in the past amplified existing social divisions and inequalities, design should give particular attention to the circumstances and needs of marginalized and vulnerable groups (e.g. minority clans and ethnic groups, the displaced, female-headed households, the elderly). This should include an understanding of relevant differences within these groups (for example between those displaced by the recent drought, the longer-term displaced, and other marginalised urban dwellers; between young women and young men). These understandings should be developed through diagnostic work linked to specific interventions. Mechanisms and resources should also be included not only for this analysis, but for the effective inclusion and communication with affected groups, especially the most vulnerable, during implementation.

Design and implementation need also to be alert to the potential negative consequences of intervention in exacerbating violent conflict. If not carefully targeted, resources (including funds, goods, and employment opportunities) may exacerbate existing inequality and exclusion and – if some groups are perceived as more favored than others – increase tensions. The allocation of resources may likewise strengthen the legitimacy of some actors while sidelining others. Assets may be captured or otherwise misdirected. External resources may substitute for local products or distort local markets. In navigating these potential hazards, and developing a sound delivery and targeting strategy, the selection of

partners and the building of institutional capacity will be critical. Once again, this will draw upon the kind of close understanding of the underlying pattern of stakeholder power and influence – both at formal and informal levels – that comes from political economy and conflict sensitivity analysis.

In summary, in the design of drought response, resource allocation, needs assessment and selection criteria should all be evidence-based, transparent, and rooted in an understanding of the social and conflict context. Monitoring and evaluation should also address social and conflict issues, so that lessons can be learned about what works in particular circumstances. In the medium and longer term, these considerations apply to the development of policy frameworks (e.g. for service delivery) as much as to specific responses. Such knowledge is an indispensable foundation to action, as ill-considered intervention is not only wasteful but causes real harm. The fate of many earlier attempts to build institutions or implement programs in Somali ought to be sufficient lesson in this regard.

Displacement

I. Overview and Pre-Drought Conditions

Current drought conditions compound pronounced development deficits and humanitarian challenges in Somalia, including existing rates of acute and protracted displacement. The recent drought has caused the internal displacement of 926,000 persons between November 2016 and September 2017, with 171,000 recorded as displaced by conflict in the same period.[262] These displacements represent only the latest wave of forced displacement in Somalia, adding to a pre-existing caseload of 1.1 million people, who already accounted for almost 9 percent of the total population.[263] Prior to the drought, nearly one million Somalis also fled the country and reside as refugees in other countries, including in particular Kenya, Yemen and Ethiopia.[264] Taken together, these displacements constitute massive humanitarian and developmental challenges for Somalia.

While the immediate causes of most displacements in Somalia are climatic disaster and violent conflict, the underlying drivers are multiple and complex. They stem from decades of internal multi-layered conflict, insecurity, political uncertainty, land expropriations, human rights violations and governance failures. These factors are compounded by cyclical environmental challenges, including periods of acute drought and famine, and floods. IDPs surveyed in Mogadishu (which, with 369,000 IDPs hosts the largest number of displaced in the country) cited the primary reasons for initial displacement, including armed conflict (75 percent), natural disasters (49 percent), and loss of livelihoods (19 percent).[265]

The persistent and recurrent nature of these drivers means that displacement is often protracted and may take complex and cyclic forms. Communities may suffer multiple displacements through forced evictions, new cycles of violence in the locations in which they have sought shelter, or renewed violence and climatic disaster on return. The profiling survey conducted in Mogadishu indicates, for example, that forty-six percent of IDPs in Mogadishu had moved multiple times before arriving at their current residence. Thirty-one percent faced evection over the previous six months, and 37 percent feared eviction in the coming six months.[266]

Forced displacement often affects groups that are already socially and politically marginalized, and for the communities and households affected, it compounds catastrophe. Evidence from previous droughts shows that marginal groups and minorities are most likely to be displaced. Displacement generally follows violence, the collapse of livelihoods, or another catastrophe. This contributes to the break-up of communities, often the division of households, and the loss of remaining assets. Added to this, the displaced face a hazardous journey to liminal, often insecure environments.

Forced displacement, which typically takes place from rural to urban areas, is contributing to the increasing urbanization of Somalia and the creation of a disenfranchised urban underclass in formal and informal urban settlements. High rates of rural-urban migration due to insecu¬rity, livelihoods failure, climatic shocks, including through conflict-related restricted movements of pastoralists, and the absence of basic services, has resulted in rapid urban growth; rates of ur¬banization within Somalia currently rank amongst the highest in the world. The recently displaced join those displaced by earlier crises, the urban poor and economic migrants in formal settlements or in unplanned informal settlements with slum-like conditions, placing further pressure on meager resources, and contributing to social tensions. While some urban infrastructure exists (such as water supply, sanitation and paved road networks), much

[262] UNHCR. 2017. Somalia – Internal Displacement: Displacements Monitored by UNHCR Protection and Return Monitoring Network (PRMN). https://unhcr.github.io/dataviz-somalia-prmn/index.html
[263] FGS. 2016 National Development Plan 2017-2019. Final, October 2016. Federal Government of Somalia.
[264] UNHCR. 2016a. "Refugees in the Horn of Africa: Somali Displacement Crisis" http://data.unhcr.org/horn-of-africa/regional.php (as of 24.06.2016)
[265] Joint IDP Profiling Service (JIPS). 2016. Internal Displacement Profiling in Mogadishu. April.
[266] Joint IDP Profiling Service (JIPS). 2016. Internal Displacement Profiling in Mogadishu. April.

is weak; for example the primary source of urban power remains fossil fuel generators and solid waste management is stretched. The particular development challenges extending from the intersection between rapid urbanization and forced displacement and migration are provided in greater detail in the Urban Sector Assessment.

Urbanization challenges linked to displacement are heightened in light of Somali refugees returning from neighboring countries, particularly from Dadaab Refugee Camp in Kenya. In May 2016, the Government of Kenya announced intentions to close Dadaab Refugee Camp and has identified return of refugees to Somalia as part of the phase-out strategy for the camp. While the majority of refugees (75 percent) have expressed a desire to remain, voluntary and spontaneous returns are underway; nearly 40,000 returnees from Dadaab returned to Somalia by end 2016, particularly to urban areas in and around Kismayo, as well as Baidoa and Mogadishu.[267] Refugee returns from Dadaab and neighboring countries are anticipated to worsen development deficits by increasing stress on fragile and limited basic services; many administrations have already reached or exceeded their absorption capacity to manage these arrivals. In the absence of comprehensive socio-economic integration and development support, returnees are likely to become IDPs themselves.

Addressing the humanitarian and development needs of this complex mix of displacement affected populations—including IDPs, returnees and the caseload of refugees seeking asylum within Somalia—is a significant challenge particularly in light of existing development deficits and vulnerabilities in host communities. IDPs are consistently more vulnerable and have a lower standard of living than host communities, though all face poverty and deprivation. Nine out of ten IDPs living in camps live in poverty, and the internally displaced account for more than two-thirds (68 per cent) of those in crisis and emergency. Rates of malnutrition are particularly high among IDPs, with nearly 215,000 children aged under five acutely malnourished, of whom almost 40,000 are severely malnourished and face a high risk of disease and death.[268] Other development indicators, while very poor for Somalia as a whole, are even worse for IDPs. IDPs have higher rates of illiteracy for as compared to host counterparts—the IDP profiling survey in Mogadishu indicates that 72 percent of surveyed IDPs are illiterate compared to 50 percent of host communities and 57 percent of economic migrants; illiteracy rates for are even higher for displaced women and girls. In addition, the attendance gap is large, with 42 percent of host community youth aged 5+ attending school as compared to 28 percent in IDP communities.[269] The survey also indicates that IDPs present the poorest health situation, with 44 percent having one member sick in the last three months, compared to 34 percent of economic migrants. IDPs live in often temporary housing built from inferior materials compared to the host community, and may have to rely upon small-scale vendors for water of low quality at high price.[270] [271]

Housing, land and property is also an ongoing challenge for IDPs in Somalia. Due to growth in demand, IDPs lack access to affordable housing and do not have secure housing and land tenure, which leaves them vulnerable to evictions and drives IDPs to the margins of urban areas. These issues are exacerbated by the absence of up to date legal and legislative processes and the fact that IDPs have not been considered in urban development policy and planning. In 2016, for example Mogadishu hosted the largest number of IDPs at 369,000[272] of which 46 percent had moved multiple times before arriving at their current residence. In addition, 31 percent of IDPs surveyed in Mogadishu faced eviction over the course of six months while 37 percent feared eviction in the next six months.[273]

Access to livelihood and economic opportunities for IDPs are limited. Unemployment and absence of livelihoods are persistent challenges in Somalia, particularly affecting youth populations – around 65 percent of youth between the age of 15 and 35 are unemployed, one of the highest youth unemployment rates in the world.[274] While IDPs employ a range of coping mechanisms to support household needs, including seeking income and employment in urban centers, opportunities are limited and unemployment rates are highest among IDPs. IDPs who do work are most likely to be engaged in menial or casual labor, often only on a daily basis. Begging and child labor, and other forms of labor exploitation are common. Despite the importance of remittances as an important source of income and social protection for many Somali households, only a small share of IDPs rely on remittances; evidence indicates that remittance flows only reach 7 percent of IDPs rely on remittances.[275] IDPs also often face exclusion,

[267] UNHCR. 2016b. Refugee Population Verification Exercise.
[268] FGS. 2016 National Development Plan 2017-2019. Final, October 2016. Federal Government of Somalia.
[269] Joint IDP Profiling Service (JIPS). 2016. Internal Displacement Profiling in Mogadishu. April.
[270] Joint IDP Profiling Service (JIPS). 2016. Internal Displacement Profiling in Mogadishu. April.
[271] FGS. 2016 National Development Plan 2017-2019. Final, October 2016. Federal Government of Somalia.
[272] UNHCR. 2016a. "Refugees in the Horn of Africa: Somali Displacement Crisis" http://data.unhcr.org/horn-of-africa/regional.php (as of 24.06.2016)
[273] Joint IDP Profiling Service (JIPS). 2016. Internal Displacement Profiling in Mogadishu. April.
[274] UNFPA, 2014.
[275] World Bank. 2017. Somalia Poverty Profile 2016. World Bank, Washington, DC.

exploitation and abuse, including the denial of payment for work they have done. Absence of viable livelihood or employment opportunities for displaced youth or young returning refuges increases feelings of marginalization, frustration and dislocation, which can in turn increase engagement in illicit or criminal activities or vulnerability to recruitment to armed groups.

Displacement frequently creates or deepens social exclusion. Poverty and deprivation caused by loss of assets and livelihoods are sustained and reinforced by political, social and cultural processes. As noted, IDPs frequently come from minority groups and clans, who suffer discrimination based on presumed identity, appearance, livelihood group, place of origin, etc. Others may have lost the links of clanship and patronage networks that provide political protection and security. Political disenfranchisement extends from the absence of opportunities for IDPs and returnees to participate meaningfully in civic life, whether through traditional decision-making structures or through more formal positions in public office. The physical isolation of IDPs who are increasingly located in more liminal, peri-urban areas may add to their marginalization. The result is increasing exclusion, whereby individuals or groups are prevented from full participation in social, economic and political life and from asserting their rights. Social exclusion derives from exclusionary power relationships resulting from social identity (e.g. age, gender, ethnicity, clan/tribe or religion) and/or social location (areas that are remote, stigmatised or suffering from war/conflict) or a combination of those.[276] As a result of their social exclusion, IDPs are less able to restore viable livelihoods and living conditions, and less in a position to integrate with the society of the host community. They are also more vulnerable to predation, exploitation, coercion, acts of violence and wider deprivation.

Many displacement camps institutionalize and exploit social exclusion through the well-documented abuses of 'gatekeepers', the managers of IDP camps who use the displaced to attract and divert humanitarian assistance.[277] [278] [279] These gatekeepers are generally linked with local power structures and interests. In addition to extortion, camp residents are subject to numerous protections challenges and other forms of abuse, including gender-based violence (GBV).

Displaced women and girls are among the most vulnerable populations—to extreme poverty, marginalization, conflict and climate-related shocks such as drought. Displaced women face multiple constraints including lack of adequate shelter, limited economic opportunities and lack of control over critical resources, including access to land, finance and other inputs. Female IDPs also face unique risks of GBV and sexual exploitation due to limited security in the IDP settlements, poor living conditions and limited clan protection. While rates varying across time periods, the GBV Information Management System reveals that between Jan 2015 to June 2016, 73-78 percent of survivors of GBV were female IDPs. The attendant separation of many women and girls from community and familial support structures, as well as from traditional livelihoods activities, also contributes to an increased reliance particularly of women on marginal, inconsistent and hazardous livelihood strategies, which often increases exposure to violence.

Access to land is critical to several dimensions of displacement in Somalia. First, conflicts over land themselves drive violence and displacement. Second, for the displaced, security of housing and land tenure are amongst the uppermost concerns: IDPs in urban areas are constantly at risk of evictions as powerful interests assert claim to land of increasing commercial value, making livelihoods and shelter precarious. Third, in many cases, the land and property of the displaced in their home areas has been appropriated. A sustainable return will depend upon its ownership being resolved.[280] Access to justice and redress for IDPs in cases of abuse, harassment, eviction and other violations is limited, however. Such protection is traditionally offered through clan affiliation. Displaced populations, however, are often unable to access mechanisms for redress either due to power imbalances between majority and minority clans (from which IDPs often extend), or due to lost clan connections and mechanisms for protection.

II. DINA Findings and Drought Impact

The current drought, combined with increasing incidence of conflict, has rapidly accelerated rates of internal displacement in Somalia. Between November 2016 and September 2017, 926,000 persons were displaced due

[276] DG-ECHO. 2016. Improving protection outcomes to reduce risks for people in humanitarian crisis. European Commission Directorate-General for Humanitarian Aid and Civil Protection (DG ECHO) Humanitarian Aid and Civil Protection Thematic Policy Documents no 8. May 2016
[277] Human Rights Watch. 2013. Hostages of the Gatekeepers: Abuses against Internally Displaced in Mogadishu, Somalia.
[278] Bryld, Erik, Christine Kamau and Dina Sinigllia. 2013. 'Gatekeepers in Mogadishu: Using informal governance resources in Mogadishu'. Research byTana and IDC for the Somalia Cash Consortium. January.
[279] Bryld, Erik, Christine Kamau, Soren Knudsen Moller and Mohamed A Mohamoud. 2017. 'Engaging the Gatekeepers in Mogadishu'. Tana for IAAAP Somalia Accountability Programme. Updated March 2017.
[280] UNHCR. 2016a. "Refugees in the Horn of Africa: Somali Displacement Crisis" http://data.unhcr.org/horn-of-africa/regional.php (as of 24.06.2016); NRC. n.d. Land, Property and Housing in Somalia. Norwegian Refugee Council, UNHABITAT and UNHCR; Rift Valley Institute. 2017. Land Matters in Mogadishu: Settlement, ownership and displacement in a contested city. Rift Valley Institute and Heritage Institute for Policy Studies.

to drought, while 171,000 others reported as displaced by conflict in the same period, particularly from Lower Shabelle.[281] Drought contributed to the displacement of 540,000 people in the three months from February to April 2017 alone.[282] Since then, recent rates of displacement where drought was given as the primary driver appear to have slowed to 27,000 in August and 30,000 in September 2017.[283]

Recent displacements extend primarily from rural to urban and peri-urban areas. Displaced populations are moving from villages in Lower Shabelle, Bay, and Mudug and even parts of Ethiopia to urban centers in Baidoa, Banadir, Gedo, Lower Juba and Togdheer regions. Mogadishu (Banadir region) alone has received 234,000 IDPs since November 2016, with 175,000 of these deemed drought-related as a primary driver of displacement. This brings the total number of IDPs in the city to 545,000, living in 840 sites. Bay region, also in the southwest, and including Baidoa, received 248,000 IDPs in the same period in, almost all classified as drought-related. According to the Camp Coordination and Camp Management (CCCM) Cluster, there are now 234 confirmed IDP sites in Baidoa. Further north, huge losses of livestock in Puntland and Somaliland have resulted in pastoral dropouts and displacement. Sool and Sanang regions have registered 128,00 drought-related displacements, as well as 3,000 conflict-related displacements, while in Togdheer and Woqoooyi Galbeed region, Somaliland, drought-related displacements are estimated to be 80,000. As of June 2017, approximately 36 percent of sites in Garowe were established within the past six months and the majority of sites in both Garowe and Eyl are within the host community.[284] Recent displacements further combine with continuing returns from Kenya, which amount to nearly 28,000 between January – June 2017.[285]

Women and children account for the highest rates of those newly displaced. Multiple data sources indicate a relatively even split between female- and male-headed households, with a weighted average across sources of 50.1 percent and 49.9 percent respectively. Fifty-nine percent fall under the age of 18.[286] Women and children under the age of 18 therefore account for more than

Figure 34: Evidence of New IDP Shelters in the Vicinity of Baidoa

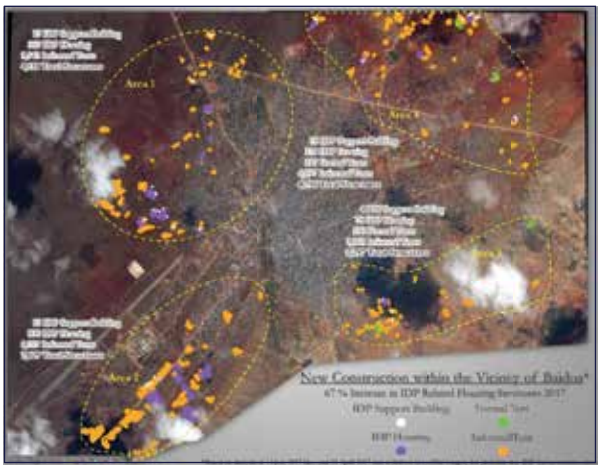
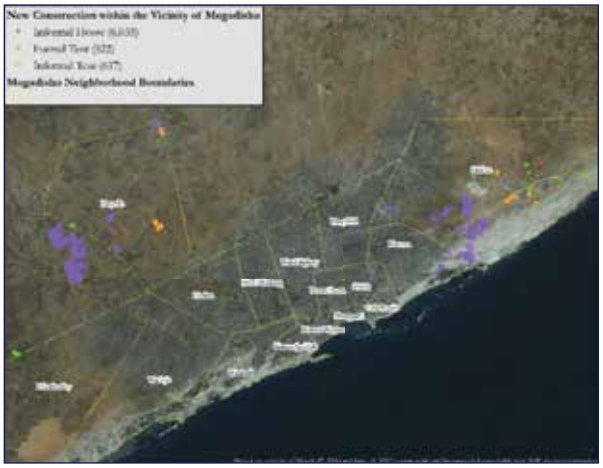


Figure 35: Evidence of New IDP Shelters in the Vicinity of Mogadishu



[281] Caution is needed when interpreting this data, however, as displacement generally extends from multiple causes. While drought may be identified as a primary driver, displacements in Somalia reflect strong protection drivers and challenges linked to wider social marginalization.
[282] PRMN, 2017.
[283] UNHCR, 2017.
[284] IOM. 2017. Displacement Situation Report, Nugaal Region, June 2017.
[285] Regional Durable Solutions Secretariat. 2017. Self-Reliance and Resilience for Displacement-Affected Communities in Somalia. ReDSS/Somali NGO Consortium Brief. http://www.regionaldss.org/highlights/redss-somali-ngo-consortium-brief-self-reliance-and-resilience-displacement-affected
[286] Weighted data provided by the UN Protection Cluster aggregating data across multiple sources.

three-quarters (76 percent) of those displaced. In some cases, families separate and children and women move to towns, while men stay behind with the remaining livestock. In other cases, preemptive movement may be undertaken by the strongest family members, leaving behind young children, women and the elderly, a coping strategy informed in part by availability and positioning of assistance by humanitarian actors.

The influx of displaced to urban areas reinforces earlier patterns of vulnerability and deprivation, compounding pressure on services, land, and other resources. New arrivals frequently join existing, congested settlements, or establish temporary sites. It is foreseen that with the continuation of localized conflict, people from rural areas will continue to move to urban centers in increasing numbers and join settlements for internally displaced if the climatic situation and security environment continues to remain unfavorable in these areas. It can be anticipated that at least some of the more recently displaced will wish to return to their home areas, though the feasibility of return will be highly dependent on the re-establishment of security and other conditions for viable livelihoods.

Figure 34, which is based on remote sensing imagery from 21 April 2017 and 13 July 2017 (a period after the peak of drought-related arrivals), highlights the establishment of new IDP shelters in the vicinity of Baidoa. Analysis of the images shows an increase of 67 percent in shelters in less than three months. Area 2 is the most densely populated and indicates the 7,000 new shelters, reflecting the growing population of displaced that have settled around the city.

Figure 35 analyses new shelters within the vicinity of Mogadishu based on remote sensing imagery from between March 2016 and June 2017. It indicates an increase of 6,000 informal households during the period, likely due to the influx displaced households. These include over 600 informal tents around and approximately 522 formal tents. The most significant increases have been in the areas around Daynile and within Heliwa and Karaan.

While more granular demographic profile information is still needed, a significant share of drought-related displacements likely extend from minority clans, who have lost assets including their homes, livestock, and livelihoods. Displacement further reinforces drivers of social exclusion and marginalization; new IDPs are perceived as outsiders due to their minority status, and are therefore unable to become "permanent residents" but may have "temporary sanctuary" according to local authorities. They are also rendered vulnerable to "gatekeepers" who extract a percentage of assistance resources for themselves.[287]

New IDPs face severe nutritional and food security challenges. Assessment of nutritional status of the displaced 12 main urban locations hosting IDPs in Somalia indicates that Global Acute Malnutrition (GAM) is at 'critical' level (classified as between 15 and 30 percent) in 9 of the locations, and 'very critical' (above 30 percent) in one location (Dhusamareb). There was continued deterioration of nutritional status and increased mortality among particular groups, including IDPs in Baidoa and Mogadishu. Among Baidoa IDPs, GAM more than doubled from 14 to 29 percent between December 2016 (*post-Deyr*) June 2017 (*post-Gu*). In the same six months in Baidoa, Severe Acute Malnutrition (SAM) cases rose from 3 per cent to over 10 per cent. Morbidity rates (an important contributing factor to nutrition status) were also high (FSNAU 2017 *Post-Gu* assessment Preliminary Survey Presentation).

IDPs further confront serious access constraints to basic services that impede resilience to drought. A recent survey conducted to assess the impact of the current drought reveals that IDPs are 2.4 times more likely than host community members to report dissatisfaction with the quality of water they access and 2.5 times more likely to experience problems with water points, including overcrowding. IDPs were also 2.3 times more likely to have to walk more than 30 minutes to access water. This survey also found that IDPs were also 2.5 times more likely to have no access to medical health services and nearly 4 times more likely to report having limited (poor/fair) ability to access care services. They were also substantially more likely to report having poor/fair health status.[288] Increasing rates of displacement are also likely to disrupt the education cycle of many. An increasing number of displaced school children are not attending schools or are attempting to access already overcrowded facilities. Lessons from the 2011 drought indicate that a good number of children never returned to school after the long recess.

[287] Jubbaland Refugee and Internally Displaced Person's Agency (JRIA). 2016. A report on the profiles of Internally Displaced Persons living in camps of Kismayo. Jubbaland, Somalia https://reliefweb.int/sites/reliefweb.int/files/resources/final_-_kismanyu_idps_assessment_report_final_version.pdf
[288] Ipsos estimations, 2017.

Drought is also pushing groups to flee the country. Nearly 7,000 people have crossed into neighboring Ethiopia and Kenya since November 2016.[289] Since the start of the year, more than 3,770 Somali new arrivals have been recorded at Melkadida in Ethiopia, and acute malnutrition has been reported in around 75 per cent of arriving child refugees. As the situation further deteriorates, population movements to Ethiopia continue, with reported 1,182 exits to Ethiopia reported in June alone.[290] It remains a possibility that some of the most vulnerable in Jubbaland and beyond will choose to cross to Kenya, however no substantial movement into Kenya has been reported so far.[291]

Forced evictions also present a significant challenge both to those confronting protracted and recent displacement. Recent displacements align with increasing rates of forced evictions, particularly among IDPs settling on private land[292] thereby increasing the likelihood of experiencing displacement on multiple occasions. Between January-February alone, over 26,000 individuals from Southern and Central Somalia were evicted, while nearly 110,000 IDPs have been evicted in 2017 in total. In September 2017, nearly 9,000 people were evicted in Mogadishu and Baidoa alone (UNOCHA 2017 –bull Oct). In Mogadishu, those evicted often move to liminal environments on the city's periphery, with limited security or access to basic services or needed resources. There is speculation that increasing rates of eviction may reflect increased rent-seeking behavior from gatekeepers and landowners seeking to profit off humanitarian assistance targeting those newly displaced.[293]

Increasing rates of displacement also compound protection challenges, particularly affecting displaced women and children. Between April and June 2017, the Gender-Based Violence Information Management System (GBVIMS) reported a 9 percent increase in reported rates of GBV—including physical and sexual assault, as well as child sexual abuse—between the first and second quarter of 2017. Of these cases, over three-quarters of survivors are IDPs. The report noted that most incidents occur at night indicating that darkness in settlements enables incidence, as does distance between shelter and WASH facilities and congestion in settlements. Critically, the GBVIMS indicates that community or camp leaders are a first point of contact for survivors seeking care, while the majority of services sought included psychosocial care (47 percent) and medical/health services (33 percent). While early and forced marriage are prevalent features in Somali society, a recent assessment conducted by the Protection Cluster further revealed that 59 per cent of respondents indicated early marriage is more likely in the context of the current drought due to monetary incentives and the assumption that the husband will care for the child bride.[294]

Additional protection risks for children include family separation and child recruitment, arbitrary arrest, drop out from or lack of access to education, hazardous child labor, and elevated exposure to forms of GBV including assault, trafficking, and psychosocial distress. A recent analysis of these risks highlights incidence of grave violations between January- August 2017 affecting nearly 3,500 people, with nearly 3,000 incidents affecting children (463 girls and 2,502 boys). Just over 1,200 of these cases involved child recruitment by armed forces and groups, the majority of which (78 percent) are attributed to Al-Shabaab.[295] Security constraints and lack of capacity impede provision of care for affected children; only 12 percent of children affected by grave violations during this time received support services (e.g. community engagement, psychosocial care and medical support).

III. Recovery Needs

Addressing the accumulated caseload of displaced will be a central challenge both to drought recovery and to the longer-term stability and development of Somalia. Drought recovery programming should lay the foundation for the achievement of durable solutions for displaced populations, refugee returns and affected communities. The rapid expansion of displaced populations, combined with challenges confronting existing rates of displacement, return and wider poverty and vulnerability, highlights the need to move beyond care and maintenance to a holistic, longer-term approach advancing self-reliance, resilience and socio-economic integration through partnerships with government, humanitarian and development actors at all levels.

The FGS has a central role to play in leading this process. The Government has committed to the development of a comprehensive approach to addressing displacement in Somalia. Inclusion of reference to durable solutions in the NDP reflects the broader, ongoing evolution of the issue from a humanitarian priority to a government-

[289] OCHA. 2017b. Humanitarian Dashboard: SOMALIA: April 2017.
[290] IOM DTM. 2017. Border points flow monitoring (June 2017). http://www.globaldtm.info/somalia-border-points-flow-monitoring-june-2017/
[291] OCHA. 2017a. Operational Plan for Famine Prevention, January-June 2017. February 2017.
[292] OCHA. 2017b. Humanitarian Dashboard: SOMALIA: April 2017.
[293] Ibid.
[294] (United Nations Protection Cluster 2017, draft).
[295] Ibid.

led development responsibility. The Government, through the National Commission on Refugees and IDPs, has also formulated a National Policy on Refugees and IDPs that is framed along the commitments made by the FGS within the framework of the IGAD Nairobi Plan of Action.[296] Any drought-related recovery strategy should seek to build on the framework outlined by the Government within such initiatives.

Response to drought- and conflict-related displacement challenges should further seek to build on existing initiatives to address displacement, including ongoing policy dialogue and analysis under the Somalia Solutions Unit of the Regional Durable Solutions Secretariat (REDSS) and Durable Solutions Initiative, which proposes an operational framework and set of operating principles for durable solutions interventions in Somalia,[297] [298] as well as align with humanitarian priorities articulated under the emerging Humanitarian Response Plan.

In the context of the current drought and in light of enduring instability and conflict conditions, three categories of interventions should be distinguished to advance durable solutions and longer-term recovery for displacement-affected communities:

- Where conflict or drought has ended, and under conditions in which displacement-affected communities demonstrate agency and ability for safe, dignified and voluntary return, recovery interventions ideally should be sought in communities of origin
- Where return is not possible for the time being due to persistent effects of conflict, drought or other protection challenges:
    - For those unwilling to return, opportunities for local integration should be sought early on;
    - For those willing to return, measures to enhance early recovery, resilience and degree of self-sufficiency should be sought pending return.
- For those displaced within areas affected by ongoing conflict or drought, measures to enhance their safety and resilience should be taken to the extent possible.

While some returns to rural communities are possible, presently the majority of Somali IDPs as well as many returnees fall within the second and the third categories. Safe and voluntary return may not be feasible, due to ongoing insecurity and absence of basic services, or desirable for those unwilling to return. Precedents in Somalia and evidence from other contexts show that once people have 'burnt out' their safety nets in the rural areas and a situation is protracted, they are likely to stay in urban areas.[299] There is a demonstrated positive correlation between the duration of displacement in an urban context and the likelihood for IDPs to permanently remain.

Further, there a tendency to underestimate of the number of IDPs who stay in urban areas. This is partly due to the widespread assumption that these IDPs would return to their rural place of origin once situations are 'normalized'. The reality is, even in contexts where drought conditions may improve, prolonged conflict and violence may deter return of the displaced due to safety concerns, while some also continue to stay on for economic reasons. The Internal Displacement Profiling survey conducted in Mogadishu in 2016 found, for example, that only 37 percent of those surveyed indicated an interest in return.[300] In this context, it is crucial to highlight that the loss of housing, land and property assets in the place of origin and potential return is one of the most conspicuous consequences of displacement that bears substantially on livelihood restoration and physical security.

Given the context of rapid urbanization within which displacement and return takes place, recovery interventions fostering self-resilience and local integration in urban centers and secondary towns therefore remain a priority. At the same time investing in rural solutions to support return and reintegration of displaced populations, as well as wider recovery of drought-affected communities, should be pursued as well. Key populations of concern include:

- Populations in peri-urban and urban areas (including existing and new IDPs that intend on staying in urban areas/are unable to return, host communities, various vulnerable and minority groups), and

[296] https://igad.int/communique/1519-communique-special-summit-of-the-igad-assembly-of-heads-of-state-and-government-on-durable-solutions-for-somali-refugees

[297] These include i) leadership and primary responsibility of the State for providing solutions; ii) alignment of durable solutions interventions with national frameworks including the NDP; iii) collective responsibility between different state and none state actors; iv) integrating humanitarian, development, peace and state building approaches and multi-sectoral interventions; v) combining rights and needs based approaches; vi) addressing the needs and vulnerabilities of protracted and drought induced IDPs, Refuges and host communities simultaneously and in a comprehensive manner, considering the respective specificities; vii) ensuring inclusive participation through community based approaches; viii) ensuring context specific solutions through area based approach; ix) mainstreaming protection, through conflict sensitive and gender/age sensitive approaches.

[298] Durable Solutions Initiative (DSI). 2016. Partner Engagement Framework, September 2016.

[299] OCHA. 2017b. Humanitarian Dashboard: SOMALIA: April 2017.

[300] Joint IDP Profiling Service (JIPS). 2016. Internal Displacement Profiling in Mogadishu. April.

- Populations in rural/remote areas (including IDPs that intend on returning to these areas/places of origin, 'stayees'/host communities, and various vulnerable and minority groups).

Recovery interventions should align with the five developmental priorities to enable durable solutions highlighted in the National Development Plan, including: i) rule of law and governance; ii) access to land and tenure security and inclusive development; iii) individual documentation, social inclusion and participation; iv) access to services and labor markets; and v) rural reintegration capacity. In addition, it should build on existing initiative to address displacement, including the Durable Solutions Initiative which proposes a set of operating principles for durable solutions interventions in Somalia.[301]

Urban solutions, including sustainable local integration in urban and peri-urban areas

Support displacement affected populations with the intention of remaining in urban areas.

While humanitarian support will focus on addressing basic needs (food, water and sanitation, and emergency shelter); access to basic services (education and health), and support for early recovery, including basic livelihoods and psycho-social support, the recovery strategy (medium and longer-term development responses) should advance longer-term multi-sectoral/ multi stakeholder response in key urban areas to improve self-reliance, resilience and socio-economic integration of respective vulnerable populations.

Recovery interventions should include efforts to:

- Address key data gaps: It is critical to enable improved data collection and analysis to understand better the profile and perspective of displacement affected populations to inform resilience and recovery programming. This includes addressing persistent information and analytical gaps linked to gender, age, skills and opportunities.
- Improve infrastructure and service delivery: The focus will be to ensure urban infrastructure and services are developed as part of sound urban planning and development processes lead by central and local authorities, to absorb the current and foreseen caseload and address service provision needs. Detailed delineation of urban infrastructure investments to respond to displacement-related challenges and to enable wider resilience and recovery—including housing and shelter, water and sanitation, as well as health and education access—are outlined in the Urban Sector Assessment, as well as in the Education Sector and Health Sector Assessments.
- Strengthen protection and social cohesion: Attention should be directed to addressing particular vulnerabilities of IDPs and host communities, including reunification/protection of unaccompanied children, widows, the elderly and support for survivors of GBV. Specific targeting should focus not only on the displaced but also host communities to support and sustain community cohesion. Interventions should further aim to promote cohesion through community-based participatory processes. Enabling improved delivery of response services for survivors of GBV is also addressed in the Gender Assessment.
- Strengthen land tenure security: Recovery efforts should support the development of national frameworks, laws and policies related to land, land use planning, housing (and particularly housing solutions for IDPs). At local levels, capacity of local district councils and regional decision-making bodies should include strengthening in areas of land, land use planning and construction sectors, as well as administrative and judiciary land dispute resolution mechanisms.
- At the community level, interventions should concentrate on awareness-raising of displacement affected populations regarding housing, land and property rights and support to community-led upgrading of settlements or rehabilitation of neighborhood.
- Promote livelihood opportunities: Recovery interventions should focus on improving the employability of displacement population through skills and vocational training, putting in place pro-employment policies, supporting an enabling business environment, providing public works schemes, as well as supporting the rejuvenation of small industrial sector. Creating new jobs and addressing unemployment would not only contribute to generate incomes for the displaced

[301] This principles include: i) leadership and primary responsibility of the State for providing durable solutions; ii) alignment of durable solutions interventions with national frameworks including the NDP; iii) collective responsibility between different state and none state actors; iv) requiring a combination of humanitarian, development, peace and state building approaches and multi-sectoral interventions; v) combining right and need base approaches; vi) addressing the needs and vulnerabilities of protracted and drought-induced IDPs, refuges and host communities simultaneously and in a comprehensive manner, considering the respective specificities; vii) ensuring inclusive participation through community based approaches, viii) ensuring context specific solutions through area based approach; and ix) mainstreaming protection, through conflict sensitive and gender/age sensitive approaches. Durable Solutions Initiative, Partner Engagement Framework, September 2016.

populations, as well as host communities it would also be critical for stimulating local economic development, making cities work, and providing youth with alternatives to violence.

- Strengthen government leadership and accountability, as well as wider public participation: Recovery interventions should aim to support Government institutions at local and central levels to advance solutions and respond to displacement challenges in Somalia, to be more accountable and transparent, and better able to respond to the various needs of the displaced populations at all levels of government. Recovery interventions should align with existing efforts to build institutional capacity to lead development responses to displacement and to support government-led policy dialogue at the regional level, e.g through IGAD. Interventions should further support establishment of legal frameworks and policies that support durable solutions for displacement affected communities, including development of a formal policy on internal displacement and reintegration of returnees.
- Strengthen opportunities for improved consultation, participation and wider civic engagement: Recovery initiatives should enable engagement of displacement affected populations in participatory systems to ensure their voice and interests are included and represented in local decision-making bodies and dispute resolution mechanisms. Interventions should further support processes seeking to improve agency and realizations of rights of displaced populations, including through envisaged processes linked to personal identity documentation and civil registration.

Critically, all interventions should adopt a differentiated, needs-based lens, recognizing the heterogeneity of status, needs and constraints affecting IDP populations.

More specific interventions and monitoring can be temporally addressed in this manner:

Short term interventions:

- Strengthen data collection activities to improve understanding of profile and needs of displacement affected communities (including improved collection of sex- and age-disaggregated data)
- Graduated approach to a continued cash transfers program, along with livelihood training;
- Strengthen service delivery and response systems that offer protection to the displaced, with particular sensitivity and emphasis on women and girls affected by GBV;
- Undertake rapid and sustained investments to alleviate pressures on services and infrastructure for displaced, returning and host communities (e.g. access to health facilities and schools).
- Strengthen monitoring:
    - Monitor if cash targeting is working effectively to enable the most vulnerable to receive the benefits;
    - Maintain robust tracking systems that enable mapping of displacement movements and potential new arrivals;
    - Monitor social tensions triggered by displacement (including grievances over forms of assistance);
    - Monitor the pressures of IDP presence on services and infrastructure of host communities, and
    - Monitor impact on displaced on livelihood opportunities of hosts.

Medium-term interventions:

- Where possible, support solutions for IDPs to settle outside settlements and avoid a default into IDP settlement by identifying alternative land tenure arrangement with the government or private land owner;
- Support improved IDP personal identify documentation and civil registration;
- Provide complementary assistance and invest in alternative livelihood options for IDPs and host communities;
- Support basic service delivery and construction of small scale infrastructure, in collaboration with the government and through sound urban planning processes. Endeavour, as much as possible to decentralize services in secondary towns;
- Support social cohesion through participatory planning processes;

- Wider/host community support in terms of provision of services, infrastructure building and maintenance, protection for livelihoods that might be affected by presence of displaced/jobs trainings.

Long-term interventions:

- Support capacities/legitimacy of state and local authorities to promote recovery and resilience of IDP populations and to lead longer-term durable solutions (DRM, HLP, Urban planning, Community based participatory planning, etc.).
- Promote land tenure security through improved policies and frameworks, including improved land use planning
- Piloting of government-led social protection safety net programming;

Rural Solutions, including return and reintegration in places of origin:

Supporting rural resilience and recovery to enable return and reintegration of displacement affected populations.

- Assessment of conditions for return through area-based analysis: Recovery activities aimed to promote return will only be feasible if there are viable conditions for families to (re)settle safely in areas of origin/return. Central to this consideration is the need to conduct sufficient analysis and data collection at the places of return/origin about security, access to basic services and livelihood, etc. to make informed decision about the sustainability and safety of the return and to develop an operational framework that provides guidance on how return and resettlement should take place in a safe, dignified and voluntary manner. Continuation collection and analysis of population profile data both of returning populations and communities of return are necessary to ensure appropriate targeting and inform effective and appropriate programming.

- Restoring/enabling livelihoods, market access and strengthened value chains: Early to medium-recovery initiatives should include a basic package of startup assistance to to restore livelihoods—through cash transfers, skills development and livelihood support—reactivate local markets, re-establish access to social services and facilitate the reintegration of IDPs into local communities. This may include the provision of food support and agricultural/ productive inputs and support for the initiation of new livelihood activities in areas of resettlement.
- Alleviate pressure on basic services such as water and sanitation, health and nutrition, and education: Investment in needed socio-economic infrastructure will be critical to incentivize return, improve access to basic services and managing increasing demand extending from returning populations.
- Support social cohesion across displacement affected communities, including returnee populations and host communities/those who stayed: It will be important to establish mechanisms for managing tensions that are likely to emerge from reintegration/return processes, including through communications and sensitization process, as well as management of land and property disputes, whether through traditional or formal justice structures.
- Strengthen capacity of local authorities: Recovery interventions should aim to support local authorities to respond displacement and reintegration challenges in rural/remote communities, to be more accountable and transparent, and better able to respond to the various local level needs of the returning and host populations.

Interventions and monitoring can be temporally addressed in this manner:

Short-term monitoring:

- Where possible, maintain population profile data of the displaced including key assets lost (e.g. land and livestock), to enable a baseline for eventual recovery;
- Assess conditions in for safe return through area-based solutions analysis;
- Monitor social tensions that may arise between stayees/hosts and returnees, particularly in early stages of return and support social cohesion interventions to minimize tensions; and
- Where possible and feasible due to access issues, deliver immediate assistance as close to the rural population as possible based on monitoring of access and availability of water and food

Medium-term interventions:

- Support sustainable return processes through (i) systems for compensation/recovery of lost assets (including housing, land, property, livestock etc.) (ii) ensuring return areas are generally safe and have re-integration support systems (iii) establishment of land/property dispute resolution mechanisms
- Provision of cash transfers (6 months)—startup funding for initial basic consumption and lost assets
- Support restoration or repair of housing, rehabilitation of damaged infrastructure (e.g. water systems)
- Support re-establishment of social services (e.g. health, education)
- Support restoration of livelihoods:
    - Agriculturalists – 'start-up' package to provide inputs for production, restoration/replacement of production equipment etc.
    - Pastoralists – restocking of livestock, provision of veterinary services.
- Support for improved market access and strengthened value chains for partial returns (including those with family members in urban areas)
- Support for communications and sensitization initiatives, and dispute resolution mechanisms to facilitate improved social cohesion.
- Strengthening capacity of local authorities to deliver basic services and respond to wider needs of displacement affected communities.

Longer-term interventions:

- Development investments in places of return, with an emphasis on building on existing projects and a prioritization of the use/capacity-building of local systems to ensure sustainability.

Table 49: Summary Needs for Displacement					
Summary of Drought Recovery Needs					
Intervention	Level of Activity	Timeframe			Cost (USD)
	(national/ regional)	Short-term (Year 1)	Medium-term (Years 2-3)	Long-term (Years 4+)	
Urban and Peri-Urban Areas					
Collection of sex- and age-disaggregated profile data of displaced and returning populations	National		X	X	2,000,000
Monitoring costs (social cohesion, displacement movements, etc.)	National		X		500,000
IDP personal identity documentation and civil registration	National			X	1,000,000
Capacity building of state and local authorities to promote recovery and resilience of IDP populations	National		X		1,000,000
Community-based participatory planning processes	National		X	X	2,000,000
Support for the participation in civic life, dispute resolution and peaceful co-existence in displacement affected areas	National		X	X	1,000,000
Promoting land tenure security through improved policies and frameworks, including improved land use planning	National			X	500,000
Development and adoption of federal and state level policy on internal displacement and reintegration of returnees	National			X	500,000
Rural and Remote Areas					
Assessment of conditions for safe return through area-based solutions analysis	National		X		500,000
Collect population profile data on remote/rural	National		X		1,000,000
Skills development and livelihoods restoration	National	X	X	X	12,000,000
Support for market access and strengthened value chains for partial returns (including those with family member remaining in urban areas)	National		X	X	1,000,000
Support strengthening of local authorities	National	X			1,000,000
Communication and sensitization to support re/integration of IDPs and to enable participation in civic life, dispute resolution and peaceful co-existence	National	X			1,000,000
Establish/strengthen transparent dispute resolution mechanism to manage land disputes	National		X		1,000,000
Total Displacement Needs					26,000,000

Disaster Risk Reduction, Risk Financing and Drought Resilience

I. DRR Risk and Profile Background

The humanitarian crisis in Somalia is among the most complex protracted emergencies in the world.[302] Somalia is highly vulnerable to disasters; the country ranks 15th on the list of the developing countries at highest disaster risk.[303] Drought and inconsistent *Gu* and *Deyr* rainfalls are a relentless, underlying threat. Somalia has endured multiple, severe droughts, with historical trends showing droughts occur regularly at intervals of 2-3 years in the *Deyr* and 8-10 years in consecutive *Deyr* and *Gu* seasons.

In addition to drought, Somalia is exposed to the risks of floods and other hazards, as describe below:

Floods

Floods are an annual phenomenon with the most severe occurrence during the months of March-May and September-November in the riverine areas along the two rivers, Jubba and Shabelle. Riverine and flash floods occur in areas around the Juba and Shabelle river valleys every year between April to June and October to December. Limited infrastructure, including flood-bank retaining walls and water catchment or redirection systems, expose the communities to the effects of floods annually, often with disastrous results on smallholder farmers and rural economies.[304] The regions of Lower Shabelle & Middle Shabelle are most affected, with croplands, houses and infrastructure like feeder roads periodically destroyed, besides affecting the livelihood of pastoralist population.

Other hazards:

Somalia is prone to other hazards as well. These include cyclones and storm surges with the 2013 cyclone killed nearly 300 people, ranking as the being the second deadliest tropical cyclone worldwide in 2013 as well as the deadliest in Somalia's history. As part of the East African rift system, Somalia is prone to moderate earthquakes, of magnitude varying between 4 and 5.5. The Indian Ocean tsunami of 2004 had its ripples in Somali as well, with most of the damage centered in the coastal parts of the Puntland State in northeastern Somalia. Drought and floods-related water borne diseases are common. During the current drought the spread of diseases such as acute watery diarrhoea, cholera and measles has increased. In the first seven weeks of 2017, over 6000 cases and 65 deaths by acute watery diarrhoea/ cholera were reported.[305] Middle Juba and Bakool regions reported alarming fatality rates, far above the emergency threshold of 1 per cent, according to World Health Organization (WHO).

II. DRM Legal, Policy and Institutional Arrangements in Somalia

After the breakout of armed conflict in the early 1990s, state institutions collapsed. There has since been a vacuum in terms of comprehensive and coordinated disaster management policy and institutions. As a result, hundreds of non-governmental organizations (NGOs), both national and international, United Nations (UN) agencies, religious groups and donor assistance have provided humanitarian aid in response as a lifeline for communities to survive during and after disasters. Some of the regions within the country, namely Somaliland and Puntland, have developed autonomous institutions as regional governments in these areas took control. In the rest of the country, the absence of any unified governance structure meant that uncoordinated and ad hoc mechanisms to deal with disasters have become the norm. While these may have constituted the only humanitarian assistance for affected people, a comprehensive approach to dealing with disaster risk management, risk reduction, mitigation, response and recovery has not received due attention until recently. Summarized below are the institutions/policy frameworks that have informed disaster management in Somalia so far:

Somalia Disaster Management Agency (SODMA)

In 2011, during the large scale humanitarian crisis provoked by drought, the FGS announced that the Cabinet had approved draft legislation based on the Prime Minister's Decree, on a new Somali Disaster Management Agency (SoDMA), which had originally been proposed by the Ministry of Interior. SoDMA has since been mandated to lead and coordinate the government's response to various natural disasters in the country. The institution has been entrusted with formulation and enforcement of national disaster policies and regulations at regional and federal levels as well as close collaboration with various government ministries, governmental agencies and other bilateral partners.

[302] United Nations Development Programme (2015): Somalia PROJECT DOCUMENT - Project Title: Enhancing Climate Resilience of the Vulnerable Communities and Ecosystems in Somalia. p13
[303] UNOCHA. 2015. Humanitarian Response Plan - Somalia, 2016. November 2015.
[304] Ibid
[305] WHO (2017). WHO scales up response in Somalia as drought-affected population face difficult situation, 27 February 2017

The SoDMA-led disaster management road map is now included in the National Development Plan (NDP) and its resilience pillar with well elaborated implementation phases over the next 3 years' period (2017-2020).

Ministry of Humanitarian Affairs & Disaster Management (MHADM)

Formedin 2017, the Ministry of Humanitarian Affairs and Disaster Management (MoHADM) is the principal institution at the federal level with the mandate to manage and coordinate all humanitarian affairs as well as all aspects of disaster mitigation. Key among the ministry's responsibilities will be to finalize and push through the enactment of the National Disaster Management Policy. SoDMA has now been coopted within the ministry as a major department that coordinates disaster response and risk management. As it is new, the ministry has a number of challenges to grapple with, the most important of which is understaffing, lack of technically skilled personnel to execute its agenda and inadequate funding to roll out its programs across the country.

National Environment Research and Disaster Preparedness (NERAD) Agency and Humanitarian Affairs and Disaster Management Authority (HADMA)

In 2006 Somaliland set up the National Environment Research and Disaster Preparedness (NERAD) Agency, which reports to the President of Somaliland at the regional level. The NERAD has a fully developed legal framework defining its mandate, functions and accountability.[306] The Humanitarian Affairs and Disaster Management Authority (HADMA) was set up by the Puntland government in 2005, with mandate for managing disasters within the region.[307]

Although the Ministry and these agencies coordinate with humanitarian organizations in their regions, they are under-resourced both financially and in human resource terms, with inadequate capacity to implement contingency plans and disaster risk management functions for their respective regions. Their structures and presence quickly fade away further down the line at the districts and community level. However, it is hoped that with the creation of the new FGS structures, the FGS and FMS will be better placed and capacitated to undertake the humanitarian and disaster recovery and resilience related needs in the country.

Somalia National Development Plan (NDP)

The NDP affirms responsibility towards building and mainstreaming effective disaster preparedness and response to disasters. The NDP emphasizes an approach to resilience through inclusive development and integration of the displaced and returnees based on issues of poverty and exclusion, and vulnerability to disasters. The NDP outlines the following key intervention strategies:

- Develop a national disaster management policy;
- Systematically map hazard risks and vulnerability to disasters and food insecurity is mapped systematically, then update and share across all levels of government;
- Develop preparedness activities at regional and federal levels as well as early warning/food security systems;
- Establish local disaster response mechanisms to work together with Government, private and local interests to ensure the safety of the local population from disaster;
- Establish SoDMA information and Coordination Centre at national and regional levels;
- Working with relevant ministries at federal state and federal level, repair or construct key infrastructure that can reduce the impacts of flood, drought or conflict;
- Establish national supply hubs in 10 disaster prone districts.[308]

[306] Final Draft National Disaster Management Policy, Somalia 2017
[307] Final Draft National Disaster Management Policy, Somalia 2017
[308] The Somalia National Development Plan (SNDP) – Towards Recovery, Democracy and Prosperity 2017 – 2019

The Draft National Disaster Management Policy

As part of the DRR investment strategy recommended in the NDP, the FGS is developing the National Disaster Management Policy. The specific objectives of the policy are to:

- Guide and clearly identify responsibilities for various aspects of disaster management at all levels of government;
- Facilitate mainstreaming of disaster risk management into planning and delivery processes within the FGS at all levels;
- Promote measures and establish mechanisms to prevent or reduce natural or man-made disasters in the country;
- Develop an effective system for mapping hazard risks, vulnerability to disasters and conducting comprehensive disaster risk assessments and monitoring at all levels;
- Develop an integrated and effective early warning system that is comprehensive and effective;
- Promote a culture of safety and resilience amongst disaster risk management stakeholders, including communities; assess and address underlying risk factors;
- Strengthen the disaster preparedness system for effective response and recovery at all levels;
- Provide a framework for coordination and management of all natural or man-made disasters in the country.

III. Disaster Risk Financing in Somalia

The objective of national disaster risk financing is to improve a government's ability to clarify and meet obligations arising from shocks while minimizing threats to development and fiscal stability. In the case of drought, key benefits that can be drawn from a functioning risk financing mechanism include: (i) securing advance funding to support post-disaster response; and (ii) supporting a rule-based food procurement strategy that provides the policy certainty that a commercial response complements humanitarian responses. Risk financing strategies for drought may help cushion the risk of food price increases, reduce the risk of supply shocks exacerbated by poor planning and bottlenecks in the supply pipeline, and ensure the continuity of humanitarian interventions.

Recent practice and current state of risk financing in Somalia

Donors play a significant role in financing development as well as humanitarian relief in Somalia. In 2016, official development assistance (ODA) for Somalia amounted to USD 1.3 billion, equivalent to 21 percent of Somalia's 2016 GDP. Of that amount, 48 percent was humanitarian aid and 52 percent development aid. From 2007 - 2016, the average proportion of humanitarian ODA out of total ODA has been 58 percent, with development ODA accounting for the remainder. Only a small fraction of ODA is channeled through government systems, with only 8 percent of development aid being "on treasury" in 2016. Actual budget expenditure in that year amounted to USD 171 million, which is only 13 percent of ODA.

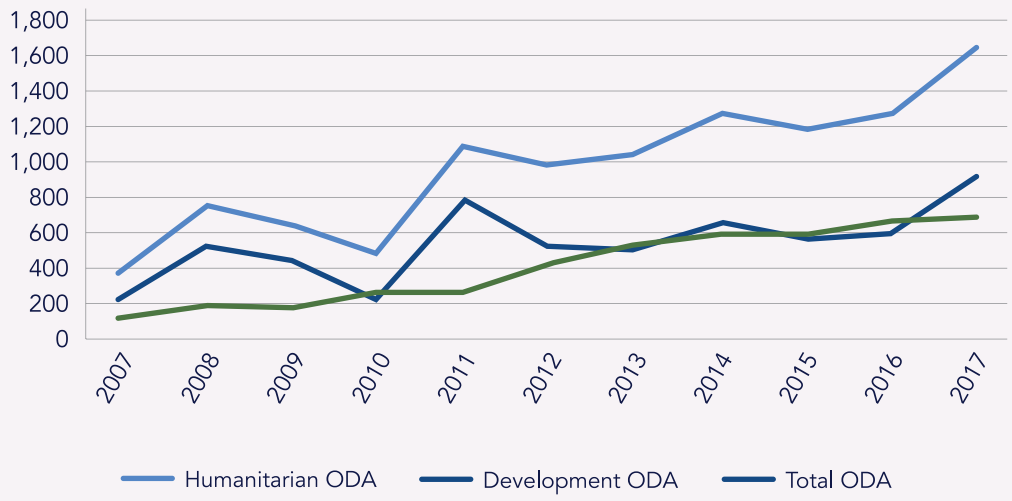
Both humanitarian aid and development aid flows have been volatile in the past. Between 2017 and 2016 year-on-year changes in humanitarian aid flows ranged from a reduction of 46 percent to growth of 221 percent. Development aid flows are steadier, but annual changes still ranged from negative 24 percent to 94 percent.

Remittances are another key source of external financing for Somalia, while foreign direct investment flows were equivalent to 12 percent of GDP. Compared to external financing, domestic resource mobilization is very limited, with government revenues amounting to only 2 percent of GDP in 2016. Somalia has a contingency budget, with an allocation of USD 2.3 million in the revised 2017 budget, which can be used for emergency expenditures on the authority of the Minister.

Overall, Somalia is very dependent on external aid for disaster response. This is evidenced by the significant spike (of 221 percent) of humanitarian ODA flows in response to the 2011 drought. Available data for 2017 also suggest a significant spike in response to the ongoing drought, with reported humanitarian flows already 52 percent higher than in 2016, when flows were already above the average of the past 10 years.

While both the 2011 and 2017 spikes occurred in response to drought-related crises, there is a big difference in the speed of delivery and the trigger point. In 2011, the flow of extra funding was not triggered until a famine had already been declared in Somalia. In 2017, donors were rapid in frontloading planned humanitarian assistance and increasing their overall envelopes from what had been planned in response to drought, even no famine has been declared to date.

Figure 36: Official Development Assistance (ODA) for Somalia, 2007-17[309]



[309] 2014-18 data drawn from Somalia Aid Flow Mapping Exercise (annual exercise led by government supported by the World Bank and UN); 2007-2013 data drawn from OECD dataset - Dataset: Aid (ODA) disbursements to countries and regions [DAC2a]: http://stats.oecd.org/OECDStat_Metadata/ShowMetadata.ashx?Dataset=TABLE2A&ShowOnWeb=true&Lang=en - Data extracted on 24 Aug 2017 14:37 UTC (GMT) from OECD.Stat / *2017 data as of October, 2017.

Addressing Drought Risk

In the case of droughts, risk financing strategies need to be closely integrated with policies and investment decisions related to agriculture and food security. Drought risk needs to be addressed through a combination of policy and financial measures which include national contingency / emergency reserve, the need to finance augmented supplies of food grains, support subsidies or social safety nets for vulnerable populations, and in acute situations, ensure the continuity of humanitarian responses.

Given capacity challenges, technically sophisticated instruments, such as sovereign level insurance, are unlikely to be practical in Somalia for the near future. Also, conflict exacerbates both the impact and response to natural disasters, in ways that could potentially affect the ability of insurance companies to underwrite the risk of natural disaster shocks in Somalia.

Contingency funds and/or contingent grants are more likely to be feasible financial solutions in the case of Somalia. Somalia has a contingency budget, with an allocation of USD 2.3 million in the revised 2017 budget, which can be used for emergency expenditures on the authority of the Minister. The contingency budget needs to be increased further.[310]

Given the volatility of ODA flows and past experience with delayed response, initial DRF efforts could focus on ensuring that external sources of financing are in place ex-ante to respond quickly to future disasters at sufficient scale. Such funds could then be disbursed based on stages of drought in question. The success of such instruments will depend on donor/partner interest in shifting their own operational modalities to support collective, pre-planned, rules-based financing.

International Humanitarian Assistance

In the absence of organized government mechanisms, the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) has mobilized and coordinated humanitarian efforts in Somalia since 1999. It aims to ensure a well-coordinated, effective and principled inter-agency humanitarian response. By providing a coherent approach to humanitarian action in Somalia, OCHA helps to avoid duplication of aid response and maximize resources. OCHA has an office in Nairobi and Mogadishu and sub-offices in Baidoa, Bossaso, Dhobley, Doolow, Gaalkacyo, Garowe and Hargeysa. It is also present in Belet Weyne and Kismayo.

OCHA is the part of the United Nations Secretariat and is responsible for bringing together humanitarian actors to ensure a coherent response to emergencies. OCHA's mission is to:

- Mobilize and coordinate effective and principled humanitarian action in partnership with national and international actors in order to alleviate human suffering in disasters and emergencies.
- Advocate for the rights of people in need.
- Promote preparedness and prevention.
- Facilitate sustainable solutions.

The Humanitarian Response Plan

In line with the purpose of the Grand Bargain from the World Humanitarian Summit to anticipate and prepare for crises, deliver protection and assistance better to the most vulnerable and to restore opportunity and dignity to them, donors have moved quickly to commit or pledge more than USD 672 million towards the response efforts, as of 7 May 2017. This unprecedented level of early support in the Somalia context has enabled operational agencies to rapidly reach millions of Somalis with safe water, food and medical assistance. Cash and voucher programs have also been scaled-up with more than 1.4 million vulnerable people in 'Crisis' and 'Emergency' (IPC Phases 3 and 4) reached in March alone. A significant scale-up of nutrition services has also taken place, with 332,000 children and women treated in March, of whom 69,000 are severely malnourished children under the age of five.

To curb the large-scale outbreak of AWD/Cholera, joint rapid response teams have been deployed to some of the most hard-to-reach areas, supporting local responders in treating the sick and preventing further spreading of the disease. Livestock treatment has been significantly ramped up with 8.4 million animals reached since March, helping to prevent further destitution. These services are increasingly integrated across Water, Sanitation and Hygiene (WASH), Health, Nutrition, Food Security

[310] Federal Republic of Somalia, Appropriation Act for 2017, Revised Budget, Act No. 00011

and other sectors to gain maximum impact. However, scale-up for some sectors like Protection, Emergency Shelter/ Non-Food Items (NFI), has not been achieved due to consistently low levels of funding. Humanitarian partners are utilizing a number of innovative and joined up approaches, including cash transfers, rapid response teams, and strong risk management and coordination units enabling more effective "real time management". There is also focus on linking lifesaving actions with resilience efforts, to enable early recovery of livelihoods and longer term solutions.

The massive humanitarian scale-up has been instrumental in averting famine thus far, but the situation continues to deteriorate and the risk of famine is on the increase in worst affected areas.

Somalia Humanitarian Fund (SHF)

The Somalia Humanitarian Fund (SHF) is a multi-donor country-based pooled fund established in 2010 to support the timely allocation and disbursement of donor resources to the address the most urgent humanitarian needs in Somalia. Almost USD 400 million was allocated by SHF for humanitarian response in Somalia since 2011. The SHF has been essential for enabling timely, coordinated and effective humanitarian action due to its distinct comparative advantages – the unearmarked nature of the Fund; the established and functioning accountability systems; integration within the existing coordination systems; and flexibility. The SHF has two allocation modalities:

- The standard allocation modality, used for large and medium-size strategic allocation rounds, typically once or twice a year. The standard allocation strategy is approved by the HC and endorsed by the SHF Advisory Board and is the basis for project submissions.
- The reserve allocation modality is primarily intended for the rapid and flexible allocation of funds for individual allocations in the event of sudden emergencies or rapidly deteriorating situations, or to address the quickly emerging strategic needs.

The Humanitarian Coordinator (HC) for Somalia oversees the fund and decides on SHF funding allocations. In its role, the HC is supported by the UN Office for the Coordination of Humanitarian Affairs (OCHA) that manages the Fund on a day-to-day basis, the SHF Advisory Board and the Somalia cluster coordination structure.

In 2017, the following principles are guiding SHF allocations:

- Continued focus on famine prevention life-saving humanitarian response.
- Prioritization of direct implementation through international and national non-governmental partners, accounting for at least 70% of available annual SHF funding;
- Support for local partners by striving to reach the global target of at least 25% of available funding to be channeled directly through national partners (if, when and where feasible);
- Support funding for pipelines, enabling programs and other support services provided by UN agencies, funds and programs, but also NGOs, up to a maximum of 30% of annually available funds;
- Seek integration and complementarity with other funding sources, such as Central Emergency Response Fund (CERF), to ensure timely and efficient prioritization in support of a stronger collective response and maximum impact of limited resources.

The World Bank Response

The World Bank in May 2017 approved a USD 50 million emergency project - Somalia Emergency Drought Response and Recovery Project (SEDRP, the Project) - to scale up the drought response and recovery effort in Somalia. This is being implemented through FAO and ICRC. This is in addition to the on-going "Strengthening Capacity for Disaster and Climate-Risk Management in Somalia", a project funded to the tune of USD 450,000. It aims to improve the capacity of the governments of Somaliland and Puntland to respond to El Nino and future climate events. It is framed around three components:

- developing an immediate El Nino response strategy;
- developing a response strategy for future climate events; and
- building networks for longer-term development.

The project runs from 06/2016 with the expected completion date being 11/2017

IV. Effects and Impact of the Drought

The back to back drought episodes have had the devastating effect of diminishing any possibilities of the affected communities to bounce back. Their livestock, which is their main source of livelihood has not been able to regenerate and recover in numbers. This has resulted in a vicious cycle of poverty. The droughts have had a devastating effect on most of the preexisting water sources, leading to their progressive and then definitive drying-up. For instance, due to poor rainfall experienced in the upper parts of the Shabelle basin during the previous rainy season, coupled with over utilization of the river water in Somalia and Ethiopia, a significant reduction in the water levels in Shabelle River has been witnessed, according to the Somalia Water and Land Information Management (SWALIM).

The country is witnessing a near total crop failure, rising livestock deaths, epidemic outbreaks and reduced rural employment opportunities. Poor households, including those displaced, face rapidly diminishing food access, as staple food prices continue to rise sharply and livestock prices decrease. In Mogadishu, prices of coarse grains increased up to 35 percent. In most markets of key maize producing region of lower Shabelle, maize prices surged in January by 32-41 percent. Overall, prices of coarse grains in January in key markets of central and southern Somalia were up to twice their levels of 12 months earlier (FAO). The impact of war and civil strife especially in south central Somalia has only aggravated an already dire situation. It has curtailed access to and growth of the much-needed markets both for crop and livestock products. No meaningful service delivery and infrastructure development takes place with most government structures having failed. This has had a negative impact on health in view of the already prevailing water-bone and sanitation related diseases and also on job creation and human development given the week education systems.

The current humanitarian situation in Somalia continues to deteriorate and an elevated risk of famine persists in some parts of the country. At its peak, over 6.7 million people were estimated to be in need of protection and humanitarian assistance, more than half of the population of Somalia.[311] Major disease outbreaks are spreading, with an increase in cases of Acute Watery Diarrhea (AWD)/Cholera and measles.

In the absence of effective DRM institutions, the combination of climatic shocks such as drought and floods, compounded by conflict have resulted in full-scale humanitarian crises. The inheritance of conflict in Somalia has weakened the capacity of government institutions to address consequences of disasters such as El Niño or other climate-related challenges and natural hazards. Disaster risk management actors and associated response strategies are fragmented and do not necessarily reflect current theory or best practice in disaster risk management. International donors support climate change adaptation or resilience building programs. However due to the lack of overarching regional strategies these are generally undertaken as standalone projects in specific areas that are unaligned to more cohesive or comprehensive government policies. DRM preparedness and response is predominantly the domain of international actors, minimizing efforts to build capacity of local institutions to manage or respond to disasters or climate-related shocks. This undermines government responsibility, and sustains the capacity challenges and dependency on non-state actors which prevails in Somalia.

Somalia faces *lack of technical and operational disaster risk reduction capacities* in all zones of Somalia. The Government has little capacity to conduct hazard assessments and multi-sectorial assessments are usually conducted by different clusters led by Development Partners and other stakeholders. Access to many districts is still restricted due to conflicts and responses don't reach all affected communities. Somalia's unpreparedness to disasters is exacerbated by the nonexistence of an early warning system and poor dissemination of EW information. For the past 5 years, the Food and Agriculture Organisation's (FAO) Somalia Water and Land Information Monitoring (SWALIM), Intergovernmental Authority on Development's (IGAD) Climate Prediction and Application Centre (ICPAC) and USAID's Famine and Early Warning Systems Network (FEWS NET) initiatives have focused on improving regional forecasting for Somalia, making use of the rehabilitated network of monitoring stations in addition to stations abroad (Kenya, Djibouti).

[311] UNOCHA. 2017. Somali: Humanitarian Dashboard – July 2017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V. Recovery Needs

Institutional Strengthening and Capacity Development

A. Training and capacity-building support for DRR institutions

The newly created Ministry of Humanitarian Affairs and Disaster Management (MoHADM) needs to be supported to recruit qualified personnel to run its agenda both at the national and subnational level. Beyond recruitment, personnel from this ministry need to undergo urgent tailor made short training courses to equip them with humanitarian coordination skills. They also need to be trained on rapid and post disaster needs assessment techniques. In country agencies like FAO have the technical capacity to provide some of these tailor-made courses and advantage should be taken of the opportunity. This will be the first step towards entrenching the role of response coordination into the hands of the ministry unlike the current situation where this role is largely played by the international community and non-state actors.

Providing the necessary financial resources will be critical towards the effective implementation of the disaster recovery strategy. The ministry needs to secure annual budgetary allocations from the central government to achieve its role. However, initially this funding responsibility needs to be taken up by the international community and partners.

Disaster mainstreaming and creation of mechanisms for risk-informed development across different sectors, states and social segments through multidisciplinary coordination, risk analysis and effective early warning is a critical responsibility for the ministry for which capacity development is also urgently required.

B. Disaster Risk Management Policy

The role of a comprehensive disaster risk management policy in coordination and provision of direction to drought and disaster management cannot be over emphasized in any country. There is need for the MoHADM to move with speed and as one of its foremost responsibilities to finalize and push for the enactment of the draft comprehensive Disaster Risk Management Policy. As a medium-term plan, efforts need to be made to harmonize this policy with those of other states/ regions that may already have their own existing policies. This will ensure harmonization of the functions of the various institutions regional or otherwise that exist and are involved in disaster risk management across the country.

C. Setting up a DRR Financing Mechanism;

Contingency funding for disaster response and mitigation needs to be entrenched within the central government financial system. As part of the efforts to build resilience capacity for Somalia as enshrined in the National Development Plan, the draft National Disaster Management Policy proposes the establishment of a National Disaster Management Fund (NDMF), with contributions from the FGS, local organizations, businesses and international donors. The Fund will be managed by the MHADM with oversight from the NDMC, and as per the regulation of National Audit office. The policy proposes that the fund be applied to finance the following:

- Implementation of disaster preparedness;
- Emergency response;
- Short-term rehabilitation measures and planning of recovery/reconstruction activities.

Post-disaster budget re-allocation which involves re-assigning funds that have been programmed for other purposes to meet more immediate needs can be an initial fall-back position towards raising contingency funding. While opportunity costs can be high, particularly if funds are not replaced and re-programmed, this is a fairly standard way of accessing the immediate liquidity needed to finance early response.

Initial steps have already been taken by government to mainstream disaster risk reduction and financing thereof within the National Development Planning process. This effort needs to be stepped up and supported both technically and financially to ensure that drought and other disaster risks are detected, assessed, monitored and mitigated against within the various sectoral development planning processes.

Contingent loans have been used by Multilateral Development Banks such as IBRD, and the Inter-American Development Bank (IDB), to give countries access to liquidity immediately following exogenous shocks such as natural disasters. This instrument provides a source of immediate liquidity, which can be used for budget support and/ or to finance early responses. It has a "soft" trigger, as opposed to "parametric" triggers, and funds become available for disbursement after the declaration of a state of emergency due to a natural disaster and can be accessed within days. Contingent grants can be structured in similar ways, and can sit alongside contingent loans (for example as a way to have pre-planned financing for humanitarian response complement pre-planned financing for a development response).

Additionally, regional risk pools are providing countries access to market-based insurance through pools, thereby helping to lower the cost of insurance for individual countries. Examples include the Caribbean Catastrophe Risk Insurance Facility (CCRIF), the Pacific Catastrophe Risk Insurance Facility (PCRAFI), and much closer home the African Risk Capacity (ARC). Regional risk pools are able to leverage insurance coverage from the market and these existing opportunities need to be explored.

Livestock insurance as a risk transfer mechanism

Livestock farming and pastoralism is the mainstay of the economy of Somalia. It is at the same time the most adversely affected sector whenever drought strikes. This is therefore the one sector that needs to be protected through a risk transfer mechanism.

Somalia can borrow lessons from this livestock insurance concept that is already beginning to take root among the neighboring countries to Somalia like Kenya and Ethiopia. As a starting point, knowledge transfer/ exchange and capacity development in this field can planned for between the government/ MoHADM and the International Livestock Research Institute (ILRI) in Kenya that has piloted a similar scheme with technical and financial support from the World Bank. A few private sector insurance companies that have pioneered this process in Kenya are establishing themselves in Somalia and so can already be approached for initial information/ knowledge exchange. Opportunities that exist in Somalia like the Diaspora sector can be looped into supporting a livestock insurance scheme that is key to the survival of the people of Somalia.

Early Warning, Preparedness and response:

A. Met Agency - Setting up a Network of Weather Stations

Drought early detection and early action can go a long way in mitigating against most of the devastating effects at peak times. An effective early warning system that consists of a Monitoring and Forecasting mechanism; Synthesis/ Analysis of data used to "trigger" set response actions within a drought plan; Efficient dissemination/ communication (media (social), extension, education, etc.) and Drought risk planning.

A starting point to achieving this is to have a coordinating national drought monitoring and forecasting system that is currently non-existent in Somalia. Somalia urgently requires a home-based Meteorology department that can relay interactive climate (drought) information products and services based on which early warning

and early actions including drought risk planning can be undertaken. There are some local leading universities which can house and be co-opted into managing a network of weather stations that can supply a central Met Department with day to day weather information. These capacities need to be explored and developed. Meanwhile, initial efforts should focus on strengthening linkages between national institutions and the Horn of Africa Regional Climate Monitoring and EW bodies for information sharing.

B. Drought Management Strategy - the Drought Cycle Management Approach

Droughts occur regularly and should not be seen as one-off occurrences – rather they should be planned for in order to reduce negative effects. Drought management means all concerted efforts by the local communities, government, donors, NGOs and other actors to prepare for, respond to and help recover from drought. Drought Cycle Management (DCM) generally entails ways of reducing vulnerability (& increasing resilience) of populations to drought through proper planning along the drought cycle. The aim is also to use funds more effectively. Making existing systems more resilient during the normal and alert stages means that less money should have to be spent during the emergency phase. Oxfam for example found that in drought-prone ASAL areas, development work is increasingly disrupted and/or undermined by the shift to emergency response. This resonates very well with the situation in Somalia. Adoption and/ or strengthening this approach in Somalia will go a long way in systematically mitigating or addressing the effects of drought as it evolves. Capacity building around the four main stages of the drought cycle is recommended to ensure a holistic approach to drought management. These are:

- Preparedness for drought during the normal period.
- Mitigation against potential negative effects during the alert/ alarm phase,
- Relief provision in emergency phase and;
- Recovery and reconstruction.

C. Drought Coordination and Planning

Establishment of a drought management authority, a specialized coordinating body possibly under MoHADM with the sole mandate to exercise overall coordination over all matters relating to drought risk management and to establish mechanisms, either on its own or with stakeholders, that will greatly diminish the impacts of drought in Somalia as is the case in some of the neighboring countries is an option worth considering and supporting. This will ensure undivided attention to addressing the challenges and needs at every phase of the drought cycle as discussed above.

D. Other Hazards – Preparedness and Response

There is need to set up and equip a national but also regional Emergency Coordination and communication centres/rooms for purposes of coordination in response to other hazards that from time to time affect Somalia. National and Regional Emergency Response Teams need to be set up and trained to coordinate response at these levels. As a long term measure, regional emergency ware houses should be set up alongside each of these coordination centres to house contingency stock to lessen the burden of transporting such stock during emergencies.

Table 50: Summary Needs for Disaster Risk Reduction and Drought Resilience					
Summary of Drought Recovery Needs					
Intervention	Level of Activity	Timeframe			Cost (USD)
	(national/ regional)	Short-term (Year 1)	Medium-term (Years 2-3)	Long-term (Years 4+)	
DRM Policy and legislation Harmonization of existing institutional, legislative and policy frameworks – including finalization of the current DRM Policy					425,000
Harmonization of Existing Policies and Institutions	National	X	X		200,000
Finalization of draft National DRM Policy	National	X	X		125,000
Enactment of DRM Laws	National		X		100,000
Capacity building of National DRM institutions					1,575,000
DRM Preparedness, Contingency Planning and Risk Financing (Fund)	National		X	X	950,000
Personnel and Training at National and Subnational Level and Mainstreaming of DRM in Development Sectors	National	X	X	X	275,000
Capacity Building of National DRM Institutions - Equipment and Facilities	National	X	X	X	350,000
Early warning and information management system (Met services, Information channeling)					2,125,000
Basic National Met Services Station Connected to Regional Met Agencies	National		X	X	1,475,000
Emergency Communication and Control Rooms	National		X	X	450,000
EW Information Management and Channeling	National	X	X	X	200,000
Drought Management system					875,000
Drought Cycle Management Training	National	X			175,000
Drought Coordination Mechanism	National	X	X		150,000
Drought Vulnerability Assessment and Risk Reduction Planning	National	X	X		250,000
Livestock Risk Insurance Pilot Capacity Development	National	X	X	X	300,000
Total Disaster Risk Reduction, Risk Financing and Drought Resilience Needs					5,000,000

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