



# **Belet-Hawa, Dolow , Elwak and Luuq Integrated Needs Assessment**

**FINAL REPORT**

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## I. Introduction and Background Information

Somalia is emerging from two decades of civil conflict that left in its wake; loss of lives, destruction of property and governance structures. The protracted road to peace has been hampered by various political bottlenecks and occasional return to armed clan conflicts until recently. However, the Federal government with support of the international community and other well-wishers seems to be making headways in the fight against the Al-Shabaab insurgency. The military gains coupled with political commitment have put the country on path to recovery, peace and sustainable stability. Appropriate management of post conflict recovery is critical in building lasting peace and stability in the country.

Gedo region lies on the Somalia borders with Ethiopia and Kenya and has an estimated population of 1,328,378. The region is transit and destination to many IDPs emanating from various camps and their first point of interaction of new political developments in the country. The region has enjoyed relative peace and stability after main urban centres were liberated from the Al-Shabaab militia. The relative peace and stability enjoyed has seen communities stream from various region. The government has underscored stabilization in the new agenda for the country in the post conflict recovery. However, this can only take place in a secure environment with assured service delivery to the citizen and other motivators building on the peace dividends. For a long period, it has not been possible to establish the extent of needs in the target areas of Gedo except through emergency driven rapid assessment whose findings were restricted to limited geographical scope. This needs assessment is an objective way of looking at the needs from a wide perspective to determine how best to address them from evidence stand points. The assessment covers, Belet-Hawa, Dolow, El-Wak and Luuq.

### I. Objectives of the Needs Assessment

The specific objectives of the needs assessment in light of above include

1. Prepare a needs assessment study using appropriate qualitative and quantitative methods for the collection of socio-economic data related to livelihoods, environment and natural resource management, Climate Change environment and governance at the specified areas
2. Establish the current needs of the communities within the specified thematic areas.
3. Identify specific practical interventions to address the current community needs
4. Compile a detailed needs assessment reports

### 2. Needs Assessment Survey Methodology

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<sup>1</sup> UNDP Estimates 2005

To meet the data requirements of the above objectives, the study was designed to use both qualitative and quantitative methods of data collection. The triangulation of the two methods was embraced to generate numerical scale and dimension of the needs in various areas of focus.

## 2.1 Sampling

The study targeted Dolow, Belet-Hawa, Luuq and EL-Wak –district in Gedo region, with a combined population of 232427 people constituting 39000 households. Due to various programmatic and logistical challenges it was not possible to target the whole population. However, statistically representative sample was drawn using Stratified cluster sampling. From four districts the population was classified pastoralists, Agro-pastoralists and riverine livelihood segments. From segments clusters/enumeration areas were selected randomly in respect to population sizes within rural and peri-urban areas. In each of the clusters 10 households were selected for interviews amounting to 21 clusters in total. The sample size was 210 out of which 208 were interviewed representing a 99% response rate.

The respondents of the qualitative data collection including key informant and focus group discussions were conveniently selected in line with the data requirements of the study. Focus group discussions constituted key opinion leaders in the community and included farmers, pastoralists, agro-pastoralists, religious leaders, clan elders, NGO representatives, Youth, businessmen, administrators and other key stakeholders. Key informants interviews targeted individuals with expert knowledge on issues impinging on various focus sectors and included; Farmers , local administration, Pastoralists, Business men , Women leaders, Youth leaders

**Table 1: Sampling Summary**

District	Livelihoods	Village	Sample	Key Informants	FGD
<b>B/Hawa</b>	Riverine	Tulo armin	10	3	1
		Oda	10	3	1
	Agro-Pastoral	Wariryale	10	3	1
		Arabo	10	3	1
<b>Dolo</b>	Peri- Urban	Jiracle	10	3	1
		Warcadey	10	3	1
	Riverine	Gubata	10	3	1
		Barabaray	10	3	1
<b>Luuq</b>	Agro-Pastoral	Lanbuley	10	3	1
		Airport	10	3	1
	Peri- Urban	Dhuma dhumay	10	3	1
		Qansaxley	10	3	1
<b>EL-Wak</b>	Riverine	Aracase/calimataan	10	3	1
		Hiloshid	10	3	1
	Agro-Pastoral	Muradqabe	10	3	1
		Qurac dameer	10	3	1
<b>EL-Wak</b>	Peri- Urban	Suulale	10	3	1
		Taleex	10	3	1
		Dhaba	10	3	1
	Agro-Pastoral	Yadoo	10	3	1
	Garsal	10	3	1	

	Peri- Urban	Samarole	10	3	1
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## 2.2 Data Collection

In respect to the above methods, three tools were developed for data collection. For quantitative data collection, a household questionnaire was developed and administered to the household heads or their spouses. For qualitative component interview guides for both key informants and focus group discussions were developed and also administered to target groups, 2 in each cluster area. Data was collected from households in the sampled clusters through face to face manner. In total 210 questionnaires were administered at household level. Interviews were conducted among key informants who included; Villager elders, religious leaders' local administrators, agriculture extension professional, local environment staff, local NGO staff and prominent farmers and herders three in total per location. Focus group discussions 1 in each location were conducted constituting; men and women with the representation of various livelihoods and roles in the communities.

## 3.3 Data Analysis

The mix of both continuous and categorical answered for the administered questionnaire necessitated the use of statistical package for Social Sciences SPSS version 17. The software was exclusively used for quantitative analysis. Qualitative data from FGD and Key informant interview was indexed coded and summarized by emerging themes and patterns. The results of the analyses were incorporated in the report. The findings are organized sequentially in line with the numbers of questions and key themes and patterns of the responses. The results are generally in agreement with various findings of quantitative data analysis, but provide further in-depth information in various areas of investigation.

## 3. Results and Discussion

### 4.1 Respondents Background Characteristics

Background factors have implications on the scale of needs in any community. Most of the households in the target locations are male headed. This was reflected in the survey in which males constituted 88% of all the respondents. The average household size is 7.7 persons. Six in every seven respondents have no formal education. Only 0.5 % has completed primary education while 2% have completed secondary school. Rural settings constituted slightly less than 70% of the sample, while peri-urban settings accounted for the remaining part. In terms of livelihoods, the targeted households included; 39.6% riverine, 17.2% pastoralists and 43.2% agro-pastoralists. The proportion of displaced households is significant with the random survey sample constituting up to 6% while 1% constituted returnees. The targeted areas therefore are largely rural with pockets of peri-urban settlements. Overall, the background characteristics show that the local communities are quite vulnerable to various challenges in the context.

**Table 2: Respondents Background Characteristics**

Variable	Frequency	Percent
<b>Respodent District</b>		
Belet- Hawa	47	22.6%
Dolow	60	28.8%
Luuq	62	29.8%
El wak	39	18.8%
<b>Livelihoods</b>		
Riverine	76	39.6%
Pastoralists	33	17.2%
Agro-Pastoralist	83	43.2%
<b>Sex of the respondent</b>		
Male	134	88.2%
Female	16	10.5%
<b>Household Setting</b>		
Rural	123	66.5%
Peri-Urban	62	33.5%
<b>Level of Education</b>		
No formal education	185	89.8%
Primary incomplete	17	8.3%
Primary complete	3	1.5%
Secondary Incomplete	0	.0%
Secondary Complete	1	.5%
<b>Household Status</b>		
Local/ Original resident	165	93.8%
Internally Displaced	10	5.7%
Returnee	1	.6%

## 4.2 Livelihoods and General and Economic Conditions

The main source of livelihoods for most of the households is livestock keeping, (44.4%). Another significant proportion 29% is engaged in crop production while, 16.9% draw their livelihoods from casual labour. Another 10.7% are engaged in small scale businesses. Only 6.3% are engaged in small scale business, with 1% in skills trade. Only 1.9% is in gainful employment. With this, the residents face difficult conditions in the context of prolonged droughts. Apart for the main sources of livelihoods, 37.1% have no other alternative sources. Other alternate sources of livelihood include; casual labour 14.1%, small scale business 7.3% and 11.2% pastoralism. This shows that residents of the four districts lack the diversity of livelihood sources and remain vulnerable to shocks instigated by security conditions and climate change effect. This implies that most households struggle to provide for the number considering that sizeable proportion relies on relief food in many occasions.

**Table3: Summary of Socio-Economic Conditions**

Variable	Frequency	Percent
<b>Main Sources of Livelihoods</b>		
Pastoralism	92	44.4%
Relief	1	.5%
Crop Production	60	29.0%
Employment	4	1.9%
Casual Labour	35	16.9%
Skills	2	1.0%
Small Scale Business	13	6.3%
<b>Alternative Sources Livelihoods</b>		
None	76	37.1%
Pastoralism	23	11.2%
Relief	13	6.3%
Crop Production/ Farming	39	19.0%
Employment	3	1.5%
Casual labour	29	14.1%
Skills (Blacksmith , tailoring , carpentry)	5	2.4%
Small scale business	15	7.3%

### 4.3 General Living Conditions

The general living conditions of the household in the target locations are poor. The vast majority of households 92.1% live in Somali Hooris (rafters and thatch) 7% sizeable live in mud walled houses with either grass or iron-sheet roofing, less than 1% live in concrete and tin roofed houses. This once again confirms the poor socio-economic conditions and associated vulnerability to security and climate change especially at the times of heavy down pour.

**Table 4: Type of Housing**

Type of Housing	Frequency	Percent
Shrub/cloth roofed Somali Hoori	186	92.1%
Mud walled and thatched	9	4.5%
Mud Walled and Iron Sheet	5	2.5%
Brick and Thatched	1	.5%
Brick and Iron Sheet	0	.0%
Concrete and Iron Sheet	1	.5%

Household food sufficiency was perceived to be fair in 69.3% of households. One in every three households 30.4% indicated poor food sufficiency, no single household reported good food sufficiency. One every even households indicated having received relief food within last year, however considering



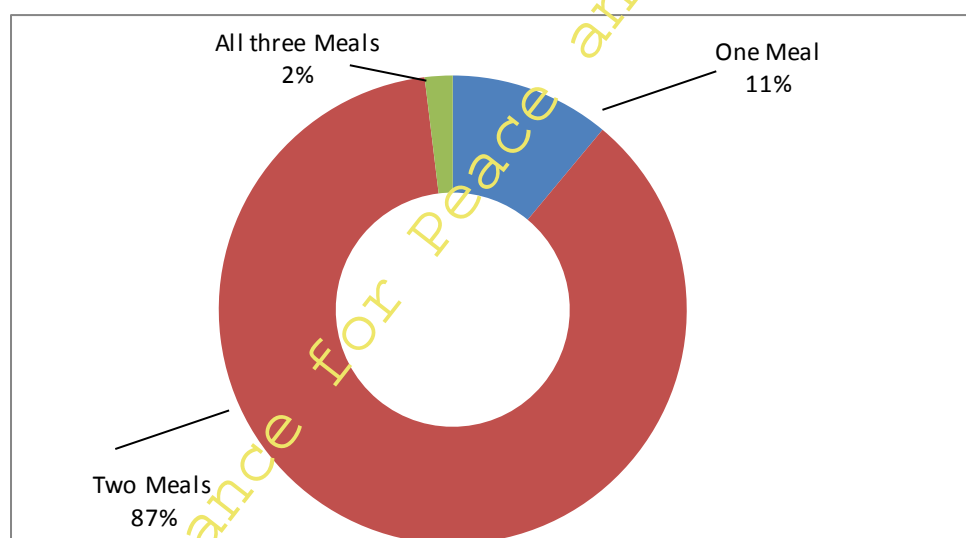
perceived food sufficiency this is lower than expected. This is explained by significant participation in food and cash for work programmes.

**Table 5: Perceived Food Sufficiency**

Food Sufficiency	Frequency	Percent
Poor	63	30.4
Fair	144	69.6
<b>Total</b>	<b>207</b>	<b>100.0</b>

Only 1.9% can afford three meals including breakfast, lunch and dinner in the whole region. The vast majority 87.1% have two meals per day while the rest 11.1% take one meal. This concurs with the fair perception of the household food security reported by the households.

**Figure 1: Daily Access to Meals**



El-wak households are more likely to have one meal compared to Luuq, Dolow and Belet-Hawa. Almost half of households in the district access only a meal per day. In other districts households have two meals on average with only a few affording three. This reflects differential food security in the district.

**Table 6: Distribution of Household Meals by Districts**

District	Meals	Frequencies	Percent
Belet- Hawa	One Meal	2	4.3%
	Two Meals	44	93.6%
	Three Meals	1	2.1%
Dolow	One Meal	2	3.3%

	Two Meals	58	96.7%
	Three Meals	0	.0%
Luuq	One Meal	1	1.6%
	Two Meals	60	96.8%
	Three Meals	1	1.6%
El wak	One Meal	18	46.2%
	Two Meals	19	46.7%
	Three Meals	2	5.1%
	<b>Total</b>	<b>208</b>	<b>100</b>

**Table 7: Assessment of Household Food Security (All Components)**

Variable	Categories	Frequency	Percent
Frequency of food insufficiency	Rarely	96	46.4%
	Sometimes	92	44.4%
	Often	18	8.7%
Member household Involvement in food for work		61	29.9%
Member household involved in cash for work		77	37.7%
Worried that there isnt enough food in past four weeks	Rarely	69	33.2%
	Sometimes	96	46.2%
	Often	30	14.4%
	Always	12	5.8%
Household had no resources to acquire dietary diversity	Rarely	61	29.5%
	Sometimes	113	54.6%
	Often	17	8.2%
	Always	16	7.7%
Household went the whole day hungry due to lack of food	Rarely	117	61.6%
	Sometimes	65	34.2%
	Often	1	.5%
	Always	7	3.7%
Household members slept hungry due to lack of food	Rarely	108	55.1%
	Sometimes	66	33.7%
	Often	10	5.1%
	Always	12	6.1%
Household had no food to eat because there were no resources to purchase food	Rarely	100	50.0%
	Sometimes	89	44.5%
	Often	2	1.0%
	Always	9	4.5%
Household member ate less	Rarely	81	40.1%

meals due to lack of enough food	Sometimes	98	48.5%
	Often	13	6.4%
	Always	10	5.0%

#### 4.4 Education

Household have an average of 3 school going children between 6- 13 years. On average 1.3 children out of the three attend school. The estimated children not attending school is up to 50% considering the household average. This points to low enrolment in schools. A number of obstacles have been associated with skewed education outcomes in the region. The vast majority of the respondents reported that lack of fees is the most common problem facing schools in three districts. Poor coverage of schools, lack of adequate teachers, shortages of equipment and space were also commonly reported as the main barriers. Majority of pupils who dropped from school did so to support families in herding and other chores, others due to lack of fees and inconsistency in lessons in the schools

**Table 8: Average School Attendance**

	N	Range	Minimum	Maximum	Mean
Number of members in the household	203	32	0	32	7.7
Number of Children 6-13 years	206	7	0	7	2.9
Number of the children who attend school	174	6	0	6	1.37

#### 4.5 Obstacles to Household Well-Being

To gauge the factors associated with households vulnerability, respondents were asked to highlight the obstacles to their well -being. 86% identified food security as their main concern, followed by poverty/ lack of cash at 65.9%, drought 17.8%, human and livestock diseases were found to be an obstacle to 14.9% and 12.5 \_household respectively. Surprisingly, insecurity (1.4%) was not reported as a concern to the communities despite the held belief that it could be an obstacle and priority in the setting. However, there are potential linkages between drought, food security and poverty. This may worsen with potential impact from climate change.

**Table 9: Obstacles to Household Well-Being**

Obstacle	Frequency	Percent
Food Security	143	68.8
Lack of cash/ Poverty	96	65.9
Drought	37	17.8
Human Diseases	31	14.9
Livestock Diseases	26	12.5
Insecurity	3	1.4
Floods	4	1.9

Despite the many challenges experienced above, there seems to be minimal support from the local authorities. There is also scanty support emanating from programmes, whose impact may not have reached the households.

#### 4.6. Water, Sanitation and Hygiene

Recurrent droughts and displacement had implications on access rates to water and sanitation in regions in the country. This is manifest in various needs the sector faces within the context. For purpose of needs assessment, availability, accessibility and various other parameters of water and sanitation were assessed. The trends in water volumes were accessed for any linkages with climate change.

**Table 10: Water, Sanitation and Hygiene Summary**

<b>Variables</b>	<b>Frequency</b>	<b>Percent</b>
<b>Main source of Drinking water</b>		
Piped Water	18	8.7%
Shallow wells	14	6.7%
Bore Hole	13	6.2%
River/Stream	106	51.0%
Natural Ground water/spring	1	.5%
Dam/Pan	4	1.9%
Bekard	52	25.0%
Water trucks / kiosks	0	.0%
<b>Length it takes to fetch water during the dry season</b>		
Less than five minutes	41	20.0%
5-30min	31	15.1%
30-60 min	44	21.5%
2-3 hours	82	40.0%
3-6 hours	6	2.9%
<b>Length it takes to fetch water during the wet Season</b>		
Less than 5 minutes	41	19.8%
5-30 Minutes	32	15.5%
30-60 Minutes	40	19.3%
2-3 Hours	83	40.1%
3-6 Hours	5	2.4%
More than 6 Hours	6	2.9%
<b>Who mainly fetches water for domestic use</b>		

Boys Only	18	8.7%
Girls only	3	1.5%
Girls and Boys	108	52.4%
Girls and Women	35	17.0%
Boys and Men	9	4.4%
Women Only	26	12.6%
Men only	6	2.9%
<b>Whether have 20 litres a day for domestic use</b>		
Yes	168	82.4%
No	36	17.6%
<b>Whether water from source is paid for?</b>		
Domestic water paid for	63	35.0%
Yes	69	75.0%
No	23	25.0%
<b>Mode of Solid Waste Disposal</b>		
Ventilated Improved Pit Latrine	11	5.4%
Compost pit latrine	50	24.6%
Open Defecation	142	70.0%
<b>Use and Ownership Status</b>		
Individual/ Personal	6	6.1%
Shared family Toilet	36	36.7%
Communal Shared	56	57.1%
<b>Household disposal of Child Faeces</b>		
Throw outside the house	147	71.0%
Bury	14	6.8%
Throw in the pit latrine	45	21.7%
Wash Away	1	.5%
<b>Appropriate hand washing</b>	<b>104</b>	<b>51.7%</b>

#### 4.6.1 Main Sources of Drinking Water

The main source of drinking water used by half of the resident is river. Other common sources of drinking water include; Bekard 25%, shallow wells 6.7% and boreholes 6.2%. Therefore, the main sources of water are largely unprotected. Although water is available from the rivers, it may not necessarily be potable as it is largely unprotected.

#### 4.6.2 Water Access

It takes slightly longer to fetch water during the wet season compared to the dry season. On average almost half of the household take between 2-3 hours to fetch water in both dry and wet seasons. The length of time taken to fetch water is significant to household production and due to limited access.

Girls and boys are engaged in fetching water in over 60 percent of households. Women are also significantly engaged in water fetching in up to 13 percent of households. The painstaking role of boys

and girls in fetching water and the distance covered has implications on their access to education and future skeletal problems. Secondly, women and girls are exposed to sexual and gender based violence as their vulnerability within the riverine context and distances that they cover in their pursuit of water.

#### 4.6.3 Trends in Water Volumes

Majority of respondents (56.8%) are of the view that water volumes have decreased, 30.6% reported an increase while 12.1% indicated that no change was observed. The perceived reasons for decline in water volumes include; limited rainfall 77.3%, increased population associated with displacement 75%, technical problems and prolonged droughts 47.2% and 41.5% respectively. Therefore, the reduction in water volumes is mainly the result of climate change and population dynamics of the context.

**Table 11: Trends in Water Volumes**

Variable	Frequency	Percent
<b>Trends in water volumes</b>		
Increased	63	30.6%
Remained the same	25	12.1%
Decreased	117	56.8%
<b>Reasons for Decrease in Water Volumes</b>		
Technical Problems	25	47.2%
Limited Rainfall	85	77.3%
Increased Population	69	75.0%
Prolonged Droughts	22	41.5%
<b>Total</b>	<b>208</b>	

#### 4.6.3 Modes of Solid Waste Disposal

80% of households practice open defecation as their mode of solid waste disposal. One in every five household use compost pit latrine, while only 5% use ventilated improved latrines. Among those that have access to latrines, 56% are communally shared, 36% family shared while only 6% are individual owned. This indicates that access rates to available latrines are prone to significant congestion.

#### 4.6.4 Hygiene and Training

Slightly over half wash their hands after visiting latrine or handling of human waste. The handling of baby waste is inappropriate, as 70% throw the waste outside the house, 24.6% dispose in the pit latrine, and while 6.8 percent bury. So far 22.9% of respondents have a member of household trained on Community Led Total Sanitation and PHAST. This implies that elimination of open defecation is far-fetched considering that majority are yet to be trained.

### 4.7 Farming Livelihoods

Farming livelihoods constitute 39.6% riverine and 43.2% agro-pastoralists livelihoods targeted in the survey. This implies that mixed livelihoods are largely common in target areas of Gedo region. Most of

the farmers 67% are engaged in irrigation farming while 33% practice rain-fed farming. The main source of irrigation water 93% is from the rivers, while the rest 7% depend on shallow wells for irrigation water.

**Table 12: Type of Farming Practised**

Variable	Frequency	Percent
<b>Type of Farming Practiced</b>		
Rain Fed	34	33.3%
Irrigation	68	66.7%
Both	0	.0%
<b>Source of Irrigation Water</b>		
Shallow Well	2	6.8%
River	69	93.2%

#### 4.7.1 Availability of Irrigation Water

Half of the farmers indicated that they had sufficient water for irrigation during the dry season. However, the remaining half reported that they were faced with water deficiency for various reasons. The main reported reason was drought 88.1%, limitations in infrastructure pipes and pumps, 21.4% and few shallow well sources away from the riverine.

**Table 13: Irrigation Water Summary**

Variable	Frequency	Percent
Has Sufficient Irrigation water	42	50.6%
<b>Limitations to Sufficient water</b>		
Drought	37	88.1
Lack of Infrastructure, Pipes, pumps ,technical issues	9	21.4%

#### 4.7.2 Cultivated Land Size and Ownership

The cultivated land size ranges from 0 -150 acres, 5 acres on average. A bigger proportion of land is under pasture/ fodder implying that farming and livestock keeping are interconnected. On average 7 acres are under pasture with highest at 250 acres.

**Table 14: Summary of Cultivated land**

Variable	Range	Minimum	Maximum	Mean	Std. Deviation
Size of land under cultivation	150	0	150	5.6	22
Size of the land under pasture / Fodder	250.000	0	250	7.4	30.7

**Table 15: Cultivation Land its Limitations**

Variable	Frequency	Percent
Cultivated land size meets household food and subsistence	17	20.7%
<b>Trends of land under cultivation</b>		
Increased	7	7.0%
Decreased	64	64.0%
The same	29	29.0%

#### 4.7.3 Performance and Challenges of Farming Livelihoods

There are varied perceptions on the overall trend on cultivated land size over the last five years. Majority of the households 64% were of the view that the cultivated land has been decreasing. Only 7% indicated that cultivated land has been on an upward trend. Only 20.7% of farmers indicated that the cultivated size of land is able to meet food and other subsistence needs. The vast majority expressed interests in expanding the cultivated plots but were faced with various obstacles. Some of the reasons cited for this included lack of farm inputs, 53.1%, limitations of labour 56.8% , water limitations 24.7% and limitations of land for expansion.

**Table 16: Yields and Farming Sustainability**

Variable	Frequency	Percent
<b>Trends in harvest</b>		
Increased	11	10.7%
Decreased	72	69.9%
Remained the same	19	18.4%
Experience of crop failure in last five years	101	95.3%
<b>Causes of crop failure</b>		
Diseases	46	45.8%
Drought	37	36.5%
Flooding	41	40.7%
Destruction by animals	13	12.2%
<b>Still Interested in farming - Continuity</b>	<b>99</b>	<b>94.3%</b>

Only 10.7% reported increase yields while 69.9% saw decreased production while 18.4% found no significant difference of over the last five years. The causes of crop failure are variable. Majority 45.8% are associated with diseases, 40.7% flooding, and 36.5% drought while 12.2% reported destruction by animals. Despite the set-backs almost all farmers, 94.3% expressed commitment to continue with farming. Farming is therefore a key source of livelihood that needs to be supported as a priority.



#### 4.7.4 Farming Capacity Building; Training Received on Appropriate Farming Practices

The coverage of training either by extension or in-house is limited to only 7.6%. Farmers therefore largely apply traditional farming methods in absence of mentorship from farmers who have been trained. Looking at the focus areas of training; soil and water conservation were mostly covered, followed by fertilizer and manure application, while early planting came last as shown above.

**Table 17: Farmer Capacity Building**

Variables	Frequency	Percent
Farmers received training on Agriculture	8	7.6%
<b>Type of training received</b>		
Soil and water conservation	4	3.8%
Early Planting	1	1%
Fertilizer/ Manure application)	3	2.9%

### 4.8. Livestock Livelihoods

#### 4.8.1 Household Livestock production

Combining pastoralists and agro-pastoralists, the livestock sector accounts for up to 61% of the livelihoods in the targeted districts. As indicated goats, are the most common livestock with average household keeping 26, followed by sheep 18, cows 8, 8 camels and 2 donkeys. On average fewer households keep camels, while over 30% keep goats. Apart from the mainstream livestock, fewer households are engaged in bee keeping and poultry farming. This shows that the communities have tangible livestock asset but are not keen on alternatives such as bee –keeping and poultry farming which could be more resilient to recurrent cycles of drought.

**Table 18: Household Annual Livestock Estimates**

Livestock	N	Range	Minimum	Maximum	Mean	Std. Deviation
Number of cattle 2014	97	60	0	60	12.58	12.486
Number of cattle 2015	97	42	0	42	8.57	8.288
Number of camels 2014	54	100	0	100	8.81	14.508
Number of camels 2015	57	96	0	96	10.02	15.088
Number of sheep 2014	103	150	0	150	17.98	19.503
Number of sheep 2015	103	120	0	120	15.00	19.004
Number of goats 2014	165	200	0	200	37.15	29.816
Number of goats 2015	166	126	0	126	26.19	23.104
Number of Donkeys 2014	99	19	0	19	1.72	1.975
Number of Donkeys 2015	95	4	0	4	1.60	.721

Number Bee Hives 2014	19	5	0	5	.68	1.250
Number Bee Hives 2015	18	5	0	5	.61	1.243
Number of Poultry 2014	26	100	0	100	9.46	20.631
Number of Poultry 2015	27	90	0	90	10.78	18.732

Men and women provide labour for livestock in 69% of households in the target areas. In the remaining 30% of households, boys and girls combined or individually provide the needed labour for the livestock. The engagement of boys and girl in this sector has potential detrimental effects on their schooling, social participation and overall development.

**Table 19: Livestock Labour sources**

Variable	Frequency	Percent
<b>Engaged in Livestock Production</b>		
Women only	19	11.2%
Both Men and Women	97	57.4%
Boys only	5	3.0%
Girls only	6	3.6%
Both boys and girls	42	24.9%
Hired labour	0	.0%

#### 4.8.2. Annual Livestock Trends and Associated Challenges

Between 2014 and 2015 there are observed variations in household livestock averages. Apart from camel averages which increased over the period, other livestock had varied decreases over the last one year. The increase in camels was attributed to breeding. The decrease in other categories 86% was largely attributed to prolonged droughts, diseases while household uses such as consumption and sale, were also reported. The main challenges impinging on the livestock sector includes; droughts, limitations in foliage and pastures, diseases and parasites, recurrent attacks by wild animals and flooding. This indicates that the key challenges facing the livestock livelihood are linked to climate and the external environment.

**Table 20: Animal Health Services**

Variable	Frequency	Percent
<b>Last time animal was sick</b>		
Within last week	21	12.5%
Within last Month	126	75.0%
More than three Months	21	12.5%
Treatment Sought	160	95.2%
<b>Source of treatment</b>		
Purchased drugs from agrovet shop)	110	65.5%
Community animal health worker)	22	13.1%
Veterinary worker)	15	8.9%
Traditional herbalist)	12	7.1%

### 4.8.3 Challenges Faced in Livestock Keeping

Gedo region livestock keepers are faced with a variety of challenges. The most challenge cited by livestock keepers is diseases and parasites by 75.3% of the respondents. Drought and water limitations were reported by 37.3%, 30.4% lack of reliable markets, while shortages of pasture and lack of markets were report by 30.4% and 20.3% respectively.

**Table 21: Challenges Faced in Livestock Livelihoods**

	Frequency	Percent
Diseases and parasites	119	75.3%
Lack of reliable markets	48	30.4%
Shortages of pastures / grazing land	32	20.3%
Drought and lack of water	59	37.3%
Lack of veterinary services	10	6.3%
Limited knowledge of animal husbandry	5	3.2%
Insecurity	1	0.6%

## 4.9. Environment, Natural Resources and Climate Change

### 4.9.1. Fuel Sources and Use in Households

Lighting in over half of households 57.7% is made possible by use of torches. In addition 39.3% used kerosene, while less than 1% use solar. Other means of lighting such as electricity are largely absent. The vast majority of households 94.1% use firewood as cooking fuel. Another 5.9% use charcoal while none was found to be using other alternatives. Majority of households fetch fire wood from the local woodlands while, while up to 12% buy. Conservation of wood and charcoal is limited, as the vast majority of households 98 % do not have improve stoves for saving energy.

**Table 22: Energy Sources and Use**

Variable	Frequency	Percent
<b>Main Source of Lighting</b>		
Kerosene	77	39.3
Solar	1	.5
Torch	113	57.7
Firewood	5	2.6
<b>Main Source of cooking Fuel</b>		
Firewood	191	94.1%
Charcoal	12	5.9%
Gas	0	.0%
Biogas	0	.0%
<b>Access to Cooking Fuel</b>		
Bought	25	12.6%
Within the household farm	31	15.7%
From the local woodlands	141	71.2%

From riverine	1	.5%
<b>Kind of Stove Used</b>		
Normal stove/ Fire place	166	98.8%
Improved Energy saving Jiko	2	1.2%
<b>Amount of Fuel Available</b>		
Insufficient	15	7.5%
Average	115	57.5%
Sufficient	70	35.0%
Surplus	0	.0%
<b>Preferred Source of Energy</b>		
Solar	143	78.1%
Electricity	35	19.2%
Kerosene	5	2.7%
<b>Last time planted a tree</b>		
Never	141	70.9%
Within 1 year	22	11.1%
2-5 years	29	14.6%
More than 5 years	7	3.5%

#### 4.9.2 Fuel Conservation and Preferences

Slightly over a third 35% of households indicated having sufficient fuel for their cooking needs. Considering that majority of households do not have energy saving stoves, the sustainability of sources in focus. The sustainability of wood source is further threatened by the fact that 70.9% of respondents have never planted a tree despite the high reliance on wood fuel. Additionally those that have ever planted trees, 11.1% did so with in one year, 14.6 2-5 years while 3.5% did so in the last five years.

Solar is the most preferred source of energy by up to 78.1%. Electricity follows with 19.2% while kerosene comes last at 2.7%. The bias towards green energy is commendable and can easily be adopted if made available.

**Table 23: Energy Preferences and Conservation of Wood Fuel**

Preferred Source of Energy	Frequency	Percent
Solar	143	78.1%
Electricity	35	19.2%
Kerosene	5	2.7%
<b>Last time planted a tree</b>		
Never	141	70.9%
Within 1 year	22	11.1%
2-5 years	29	14.6%
More than 5 years	7	3.5%

#### 4.9.3 Soil and Environmental conservation

Respondents generally reported that their land is of reasonable fertility. Only few had a different view indicating that their land was infertile. Soil fertility is threatened by erosion as close to 70% indicated having had experienced it in their farms. Gully erosion is common 88.4% followed by stream bank. Slightly less than half, 48.4% of households are not able to control soil erosion. Despite this, majority of respondents 78% indicated that vegetation cover and trees have been declining. The decline in the number of trees has largely been attributed to deforestation without replacement while vegetation reduction has been associated with prolonged droughts. Apart from effects on soil erosion, this trend is not good for the local environment and could magnify the impact of climate change in the region through increased droughts and other manifestations. Despite this, only 1.9% of respondents have been trained on environmental conservation.

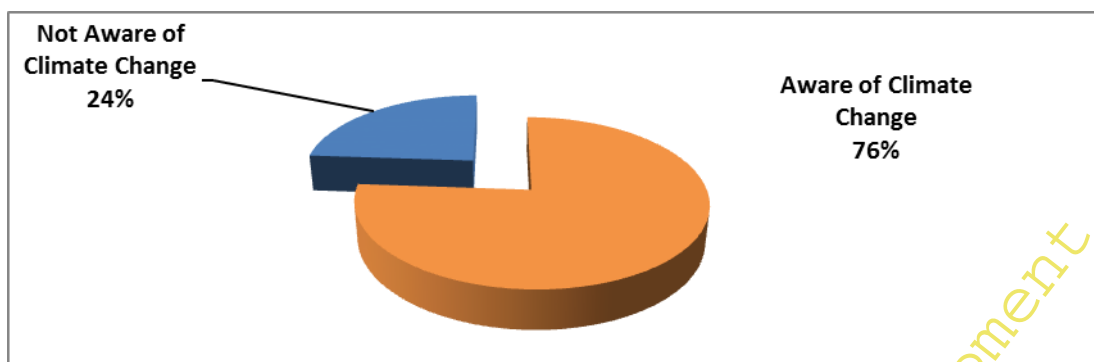
**Table 24: Soil Conservation**

Variable	Frequency	Percent
<b>Perceptions of Land Fertility</b>		
Fallow/Untilled	0	.0%
Poor Fertility	5	3.9%
Average Fertility	52	40.9%
Very Fertile	70	55.1%
<b>Soil Erosion Experienced</b>		
	85	69.1%
<b>Type of Soil Erosion</b>		
Gully	76	88.4%
Rill	3	3.5%
Stream Bank	7	8.1%
<b>Reported Causes of Soil Erosion</b>		
Wind	44	50%
Water	44	50%
<b>Trends in Vegetation Cover</b>		
Increasing	6	4.5%
Remains the same	23	17.4%
Decreased	103	78.0%
Able to contain erosion	38	48.1%

#### 4.10 Climate Change Knowledge and Awareness

The level of climate change awareness is quite high. Three of every four respondents 76% are aware of climate change. Radio is the main source of information on climate change for the 92.4 % of the respondents. Climate change information is yet to reach one quarters of the population. This limits household ability to understand the seasonal dynamics and their participation in adaptation and mitigation measures.

**Fig 2: Climate Change Awareness**



The other source of information for negligible population is the print media. Verbal sources of information such as creation of awareness are largely lacking. Other channels of communication have not been utilized in imparting climate change information or are largely inaccessible to the residents of the target areas.

**Table 25: Knowledge and Climate Change Awareness**

Variable	Frequency	Percent
Aware of Climate change	175	91.1%
Heard of global warming	145	76.3%
<b>Source of Climate Change Information</b>		
Radio	162	92.4%
Religious leaders	2	1.2%
Newspaper	1	0.2%

Gedo region has witnessed prolonged droughts in the last five years. In addition there have been changes in various rainfall parameter and manifest effects. To capture any inter –district variations on the trends, respondents were asked their views on Gu and Deyr rains. This was also intended to gauge their interest on climate. Majority of respondents 69.1 % indicated that the Deyr rains has increased. The Gu rains were reported to have declined by 94.1% of the respondents. Majority of respondents 84% also indicated that flooding had reduced hence, confirming the finding that the Gu rains had decreased in intensity. Since most respondents reported variations in either decrease or increase of rains during the two seasons, there are notable effects of climate change in the region.

**Table 26: Seasonal Trends**

	Frequency	Percent
<b>Trend in Deyr Rains</b>		
Increased	130	69.1%
Decreased	58	30.9%
Remained the same	0	.0%
<b>Trend in Gu Rains</b>		
Increased	11	5.9%

Decreased	177	94.1%
Remained the same	0	.0%
<b>Trends on Flooding</b>		
Increased	27	14.4%
Decreased	158	84.0%
Remained the same	3	1.6%
Training on Environmental conservation	3	1.9%

Respondents attempted to explain the causes of the changes in observed patterns. The changes in rainfall are perceived to be caused by the climate change. Up to 35.1% attributed the changing seasonal trends to climate change, 21.6 % to deforestation, 4.2% to divine reasons, while the rest were not aware.

#### 4.10.1 Shocks Experienced and Coping Mechanisms

Seven in every ten households experienced a form of shock. This implies that households and communities are vulnerable to various contextual shocks. Drought was the most common type of shock experienced by 52.5%. Floods were also experienced by 26.3%, while crop failure was experienced in 21.7%. Eight percent of households experienced livestock diseases. This indicates that a variety of shocks affect the targeted households of Gedo Region.

**Table 27: Households Experience of Shock**

	Frequency	Percent
<b>Household Experienced Shock</b>	139	70.2%
<b>Type of Shock Experienced</b>		
Drought	104	52.5%
Crop Failure	43	21.7%
Livestock Diseases	16	8.1%
Floods	52	26.3%

#### 4.11 Local capacity of Climate Change to Induced Shocks

Various mechanisms have been used cope with shocks that households experience. Majority of households 14% turn to relief support, 13% apply disaster reduction skills to alleviate the impact of shocks, 11% go for livestock sale and consumption, 10% depend on the small scale business including retail shops, charcoal selling, sand harvesting. Still another proportion 5% engage in casual labour, while 4% put to work of their various hands on skills such as carpentry , tailoring and others to for survival . In other instances, households scale down their meals or as for help from family members and other well-wishers. Therefore some of the coping mechanisms such as charcoal trade and sand harvesting has detrimental effects on environment. The dependence of relief also has questions on sustainability. It appears that the locals are significantly informed on disaster reduction including coping but are not

facilitate utilize it. The continued dependence on relief is not sustainable considering that the effect of climate change may be increasing on scale.

## 4.12. Peace and Governance

### 4.12.1 Perceptions of Security and Country Progress

Respondents were asked to rate their view of security within their context. Surprisingly, almost half, 45.5% rated their security as very good, while half fairly good, while the remaining 4% rated security as bad. This shows that residents feel relatively safe and settled an important ingredient of stabilization and post conflict recovery. With the exception of few pockets covering the 4% there is enabling environment for social reconciliation, peace building and taking stabilization agenda forward. This is underscored by the finding that 78% indicated that they feel proud of their country. This is illustrative of the level of patriotism despite, the context circumstances.

### 4.12.2 Awareness Basic Civic Information

Only one in every three respondents is aware of the stabilization plan for Somalia. Similarly a negligible proportion of Gedo residents 1.5% know their respective MPs. This indicates that majority of residents are not well engaged or adequately participate in their civic duties. The stabilization process and formation of inclusive local administration faces participation gaps that need to be addressed. The vast majority of residents who are aware of the stabilization plan for Somalia 96.9% got information through the radio, while the rest 3.1% received information from traditional elders. Therefore, other important channels of civic information such as religious leader and print media have been largely ignored.

**Table 28: Governance Summary**

Variable	Frequency	Percent
<b>Rating of Security</b>		
Very Good	93	45.4%
Fairy Good	104	50.7%
Neither good Nor Bad	4	2.0%
Very Bad	4	2.0%
<b>Knows area member of parliament</b>	3	1.5%
<b>Aware of the stabilization plan for Somalia</b>	64	30.3%
Source of Information on Stabilization		
Radio	62	96.9%
Traditional Elders	2	3.1%
<b>Proud of the country</b>	<b>158</b>	<b>78.2%</b>



### 4.12.3 Opinions on Peace and Stability

Respondents were asked various questions about what they considered current priorities for the country. Majority 76.9% indicated that building peace and stability is vital at this time. Related to this, 9.5% considered protecting people's rights to live safely as their most important priority. The improvement of the living conditions of the poor was considered a priority by 6.5%. This shows that the residents understand that improvement of their welfare can only take place in an environment of peace and stability.

On support to peace and reconciliation, slightly over half of the respondents strongly support the intervention, 48.3% supports, while only 0.1% seemed not to support. Therefore support to peace building and social reconciliation is almost universal. On rating of the country's progress, only 8% indicated that the country was headed in the right direction, 73.6% observed that the country was headed in the right direction but needs some improvement. A sizeable proportion 20.4% had varied opinion and indicated that the country was headed in the wrong direction. Another 2% indicated that the country requires external support to get out of the current critical situation.

**Table 29: Citizens Opinions and Priorities**

Variable	Frequency	Percent
<b>Considered as most important priority</b>		
Building of peace and stability locally and nationally	153	76.9%
Improved economic conditions of the poor	13	6.5%
Protecting people's rights to live safely	19	9.5%
Maintaining order in the nation	7	3.5%
Giving people more say in government decisions	7	3.5%
<b>Opinions on Peace Building and Social Reconciliation</b>		
Strong support	103	51.2%
Supports	97	48.3%
Does not support	1	.5%
Rejects strongly	0	.0%
<b>Opinions about direction taken by the country</b>		
Right direction	8	4.0%
Right direction but needs improvement	148	73.6%
Wrong direction	41	20.4%
Wrong direction requiring external support	4	2.0%
<b>Satisfaction with the local administration</b>		
Very satisfied	48	23.9%
Satisfied	121	60.2%
Unsatisfied	31	15.4%
Very dissatisfied	1	.5%
Peace Building Messages received	132	66.3%

Overall, 84.1% of residents are satisfied with local administration. This constitutes 23.9% who are very satisfied and 60.2% who are satisfied. Sixteen percent are unsatisfied with the local administration. Again, this underscores the enabling environment needed for stabilization. Two in every three respondents 66.3% had access to peace building and social reconciliation messages

### Preferred Security Arrangements and Citizen Aspirations

Respondents were asked whom they consider best suited to oversee security in their respective contexts. Majority 59.6% indicated that they prefer the local administration. Other respondents placed their preference to national government, clan elders and religious leaders at almost equal measure. Only 2.4% prefer militia groups to have local security oversight. This indicates that citizens prefer to have legitimate local and national structures to manage their security

**Table 30: Preferences for Security oversight**

Preferred Security Oversight	Frequency	Percent
Local Administration	124	59.6%
Religious Leaders	27	13%
National Government	26	12.5%
Clan Elders	26	12.5%
Armed groups	5	2.4%

## 5 Summary Conclusion and Recommendations

### 5.1 Summary and Conclusions

From the foregoing analysis a brief summary and accompanying conclusions on key areas of the assessment are made as follows;

#### **Socio-economic Context**

##### **Living Conditions**

The general living conditions of the communities in Gedo region are wanting. Almost all respondents live in Somali Hoori where they are vulnerable to hard environmental conditions and insecurity. Even as the country gets into post conflict recovery and stabilization, getting households into proper living conditions will continue to be challenging.

Apart from the mainstream livelihoods, which constitute; pastoralism, farming and agro-pastoralism, there is limited diversity of other sources. However, a significant proportion is engaged in small scale business and negligible proportion on skills. Options for households are quite limited.

##### **Food Security**

Most households cannot afford or access three meals per day. Majority have two while significant proportions have only one meal. Relief food and cash for work has been received to a significant proportion of households. Food security is more skewed in El Wak compared to the other three. This implies that all livelihood sources are not able to meet subsistence needs of households.

##### **Education**

The vast majority of the respondents and residents by extension are not educated. This has implications on various other outcomes for both men and women. On average one third of children from each household of eligible age 6-13 years do not attend school. The education sector is faced with community, school setting and teacher related problems. Engagement of children into household chores and herding has been associated with inconsistent schooling while limited teachers, learning space, equipment and supplies are the main draw-backs to effective schooling in the three areas.

##### **Water and Sanitation**

Availability of water does not appear to be a big problem due to proximity of the target areas to Daa and Juba river systems. However, access is curtailed by distances to the water sources and time taken in the procurement of water. Secondly water quality is an issue as most household fetch water from the river with a few accessing boreholes, Berkads and other close sources. Boys and Girls of school age are mainly engaged in fetching of water hence, jeopardizing their concentration in school and exposing them to future skeletal diseases. Equally, girls and women remain vulnerable to sexual based violence as they

draw water from the riverine. The communities are also vulnerable to disease outbreaks such as; cholera due to their connection with the water system.

Open defecation predominates most of the households. Similarly, the vast majority of households do not handle children faeces in appropriate manner. Since over half of population exhibit inappropriate hand washing behaviour, open defecation, the direct connection to the river system leaves the target districts very vulnerable to water borne diseases. The scatter of pathogens at various points provides a fertile ground for breeding and transmission.

### **Farming Livelihoods**

Crop farming is a significant source of livelihood for the communities in the vicinity to the water systems. Household food subsistence is largely unmet by scale of farming that is currently in practice. Most of the farmers practice irrigation in place of rain-fed farming, implying that rain has not been quite reliable. Apart from crop farming, fodder seems to be claiming a space in most household farms. This not only enhances the agro-pastoralist livelihood but also the diversity of coping with droughts

Farmers have reported decline in harvest and the land under cultivation. The challenges associated with this include, insufficient water due to drought, infrastructure and technical problems and shortage of farm inputs. Changes in rainfall patterns resulting from climate change are seemingly making rain-fed agriculture unreliable. Crop failures are largely caused by diseases, drought and flooding. Maximizing farming returns is curtailed by lack of skills due to limited extension and capacity building support to the farmers

### **Livestock Livelihoods**

Livestock is a dominant sector with pastoral and agro-pastoralism in practice in majority of the households. Goats are most common livestock followed by sheep while donkeys are less common. Over the period ranging from 1-5 years, there has been decline in livestock numbers for all categories with exception of camels. The decline has been largely associated with recurrent droughts. Veterinary / animal health care services with most farmers self-administering drugs for sick animals by purchasing drugs. Livestock farmers indicated that diseases and parasites are the main common challenges facing the farmers. Livestock keeper/ herders too struggle with lack of skills on animal husbandry and this largely jeopardized production. Local markets are destination for most the livestock and their products.

### **Alternative Livelihoods**

Majority of the households interchange between livestock as main and alternate livelihood sources. Apart from casual labour and small; scale business are the most common alternatives or fall backs. Other alternates such as bee –keeping have been utilized despite their local potential. However, poultry keeping has been practice in small proportions and has potential for scale up.

### **Natural Resources**

Firewood remains the main source of energy for cooking and lighting. Despite this, unsustainable use of wood fuel without replacement. Charcoal has been general use without proper energy conserving stoves. There are indications of deforestation and potential desertification because communities continue to cut trees without replacing. The vast majority have never planted trees in their life time. Most of the household prefer solar to the current source of energy.

### **Soil Conservation**

Most of the households indicate that land is of reasonable fertility. However a significant proportion indicated that Gully erosion has been common, while rill and stream bank has also been experienced. Wind erosion has also been reported. Most farmers indicated that they had no capacity to address the erosion problem. Erosion is likely to continue as vegetable cover appears to be diminishing with prolonged drought and climate change.

### **Climate Change Manifestations**

One of the salient indicators of environmental and climate change are water and rainfall volumes. Respondents were of the view that compared to 5 years ago; both water volumes and rainfall intensity have dropped. This has been perceived to be consequence of environmental degradation, climate change and population pressure. There is concurrence Deyr rains have creased in intensity while Gu rains are on declining trend. This has been validated by similar indications that the amount of water accessed for irrigation has been declining.

### **Knowledge and Awareness of Global Climate Change**

Three in every four respondents are aware of climate change. Most of respondents received information on climate change from radio, indicating that other channels have not been utilized. The proportion that is not yet aware of climate change has potential to miss out on adaptation and mitigation and need to be targeted.

### **Experience of Shocks and Coping Mechanisms**

Seventy percent households experienced shocks over the last year. Most of the shocks are consequences of climate related dynamics. These included drought, crop failure, and flooding. Household have employed various mechanisms to cope shocks. These include; applying requisite knowledge on disaster reduction, skipping meals, sharing, switching to other livelihood alternative and diversification of sources.

### **Peace and Governance**

The target areas seem to be convincingly secure as reported by most respondents. However, only a third were aware of stabilization plan for the country and know their area MP indicating poor participation in civic affairs. Two in every three respondents received peace building messages indicating that a significant proportion is left out. Majority of respondents are proud of their country. Peace building was rated as the most important priority by respondents and not material or programmatic support. The current state of affairs creates an enabling environment for the intensifying stabilization effort for the country.

## 5.2 Recommendations

The targeted regions of Gedo regions face formidable challenges in all sectors but the prevailing context provides an enabling environment to offer various interventionist measures in response. From the foregoing findings, the following recommendations are made

- There is need to come up with a plan to improve living conditions especially the shelter by mobilizing locals tot building better structures with local materials with some incentives to cater for likely upsurge of population in response to stability
- There is need to improve adult literacy and address barriers to accessing primary and secondary education starting from home , school and teacher facilitation dimensions
- All stakeholders need to join hands in eradicating poverty and food insecurity as the main obstacles to household well-being. This is particularly important when solutions of dependence on relief are urgently required as recovery and stabilization are inevitable realities
- There is need to support the communities to diversify their sources of livelihood to more friendly alternatives such as, poultry and bee –keeping and other income generating initiatives such as business so as to alleviate suffering recurrent shocks
- There are several marketable skills idling in households that need to be utilized through proper guidance, empowerment and start- up capital
- Water access to communities that are not within the river system warrants some urgent attention. Improving access to water will leave boys and girls with more time to concentrate in school as they are the main source labour for fetching water.
- Due to alarming levels of open defecation, Total community led sanitation (TLS) is urgently needed to deliver the community from risky practice. Promotion of appropriate hygiene behaviours should go along with this if outbreaks of diarrhoea diseases have to be contained
- The current scale of farming should be improved to ensure that households are able to get at least enough subsistence. This can only be realized by providing adequate inputs, improving irrigation infrastructure and building capacity of farmers on proper farming practices and climate change adaption
- There is need for improved coverage of veterinary services and drought resilience plans to mitigate the effects of drought on the on the livestock sector
- Livestock sector needs to be supported with drought / disease resistant breeds and possibly upscale fodder, hay and silage production through provision of relevant seeds and extension and veterinary support.
- There is need to re-organise livelihoods and possibly integrate them to gain synergies for example, livestock, farming and alternatives such poultry, bee –keeping and fish farming an gain from these linkages. This will maximize benefits for each
- Diversification of livelihoods by engaging in skills and business is important to ensure that climate change resilience is achieved
- There is need to put measures in place to minimise soil erosion at both individual and community levels

- There is need to intensify re-forestation using the right environmentally friendly tree and vegetative species in the targeted areas
- Tree planting should be intensified create forest cover enough to prevent the seasonal floods and preserve the riverine
- There is need to improve knowledge on climate change as a sizeable proportion is aware of the phenomenon but comprehensive information is lacking. Expanding information avenues and simplifying the content to fit the skewed education levels should be made a priority
- There is need to intensify climate change adaptation in all sectors so as to build collective resilience. This requires inter-agency collaboration
- There is need to introduce alternative stoves and other energy cooking alternatives so as to minimize deforestation for firewood and charcoal burning
- Support is required for harnessing solar energy which is the most preferred source of energy
- There is need to intensify peace building and social reconciliation as the environment is now very good for stabilization
- There is need to intensify civic education to improve participation and ownership of various stabilization initiatives