PARTICIPATORY COMMUNITY NEEDS ASSESSMENT
FOR LIVELIHOOD FOOD INSECURITY OF
LOWER SHABELLE REGION
04-19-04/2009

Summary

Food security is conventionally defined as "access by all people at all times to enough food for an active and healthy life". It is generally accepted as entailing not only food availability (adequate supply of food) but also food access through home production, purchase in the market or food transfer.

Food insecurity in the country is principally a rural problem. The following are the main factors generally create livelihood food insecurity.

i) Environmental crises: comprise two elements, i.e., climatic hazards (drought, flood, etc.), and land degradation through soil erosion, loss of nutrients, deforestation and overgrazing.

ii) Population pressure: rapid growth of human and livestock population resulting in diminishing holding size and fragmentation of farmland and absence or shortage of fallow periods.

iii) Poor asset base: involve aspects such as lack of invest able surplus cash, lack of farm input, absence of off-farm employment opportunities and inability to purchase modern farm inputs.

iv) Social (cultural issues): poor rationing of grain produced at home because farmers utilize a considerable proportion of their annual production for various ceremonies and celebrations immediately in post-harvest periods. Low level of educational background among the people in the area can also be the other variable.

v) Poor rural infrastructure: inaccessibility to roads, absence of rural credit, lack of irrigation practices, lack of agricultural extension services, poor health facilities, poor storage and unfavorable market for agricultural produce.

vi) Civil war: it creates instability, displacement and immediate famine.

In order to identify the root causes of livelihood food insecurity, Participatory Community Needs Assessment conducted by LORDO with the following findings.

Basic root causes hindering crop production in the villages:

1. Tractor hiring for land preparation is very high
2. Canals silted.
3. Lack of training on improved farming practices.
4. Poor quality seeds
5. Poor market accessibility such as culverts and roads

6. Poor flood protection structures such as river broken points and river dikes and river deepening

7. River bridges which became old and not functioning.

As social problems contributing livelihood food security crises are:

- Lack of formal and informal education
- Lack of health posts and care
- Poor hygiene and sanitation practices
- Lack of clean potable water.
- Lack of training for TBAs
- Lack of boats for river crossing. Because of the crocodiles killing at least one person/week while people are fishing or fetching water from the river.
- Lack of income generating activities
- Lack of human rights protection

Access to cash for coping mechanisms:

1. Lack of activities for cash
2. Lack of credit initiations

Table 1

<table>
<thead>
<tr>
<th>S#</th>
<th>Root causes</th>
<th>% presented</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Tractor hiring</td>
<td>95</td>
</tr>
<tr>
<td>02</td>
<td>Silted canals</td>
<td>100</td>
</tr>
<tr>
<td>03</td>
<td>Lack of training on improved farming system</td>
<td>98</td>
</tr>
<tr>
<td>04</td>
<td>Poor culverts</td>
<td>88</td>
</tr>
<tr>
<td>05</td>
<td>Poor roads</td>
<td>87</td>
</tr>
<tr>
<td>06</td>
<td>Poor sluice gates</td>
<td>92</td>
</tr>
<tr>
<td>07</td>
<td>River broken points</td>
<td>78</td>
</tr>
<tr>
<td>08</td>
<td>River digging/deepening</td>
<td>72</td>
</tr>
</tbody>
</table>

Not these are the main root causes, but there exist social problems which contributes food insecurity to the livelihoods. These problems presented by the focus groups are summarized as follows:
Table 2

Summarizes the social problems contributing to the livelihood food insecurity

<table>
<thead>
<tr>
<th>S#</th>
<th>Social causes</th>
<th>% presented</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Illiteracy</td>
<td>80</td>
</tr>
<tr>
<td>02</td>
<td>Diseases break out</td>
<td>99</td>
</tr>
<tr>
<td>03</td>
<td>Lack of potable water</td>
<td>98</td>
</tr>
<tr>
<td>04</td>
<td>Poor hygiene and sanitation</td>
<td>100</td>
</tr>
<tr>
<td>05</td>
<td>Lack/ poor river crossing boats</td>
<td>86</td>
</tr>
<tr>
<td>06</td>
<td>Lack of human rights protection</td>
<td>98</td>
</tr>
<tr>
<td>07</td>
<td>Lack of access to income generation activities</td>
<td>87</td>
</tr>
</tbody>
</table>

A strong recommendation is done to reduce the livelihood food security crises in Somalia. Here are the most important results to act are listed below.

- Improved access to productive resources and services:
  - Improved access to the production area
  - Reduced mitigated impacts of floods & droughts
  - Improved access to cash for livelihood activities
  - Improved access to social services
  - Initiation for credit program.

Reduced human rights, gender based and child abuse and violation.

INTRODUCTION

Somalia is one of the poorest countries in the world with an annual per capita income of less than USD200 per year. The economy is largely dependant on the exploitation of natural resources, principally livestock and agriculture. The Human Development Report for Somalia (UNDP 2001) estimates that Somalia’s annual renewable freshwater fell from 2,500 m³ per capita per annum in 1950, to 980 m³ in 1990, with a prediction of 363 m³ by 2025. When this value falls below 1,000 m³ per annum, the condition of water scarcity begins to hamper health, economic development, and human well-being. Below 500 m³ per annum it becomes life threatening.

Whilst climate change models predict a reduction in rainfall and increasing hydrological drought throughout the pastoral areas, at the same time they predict up to a 45% increase in annual run-off in the major river basins of Somalia by 2030. The implication is for an increased frequency of drought in the pastoral areas accompanied by more common flooding of the riverine communities along the Juba and Shabelle Rivers. The civil war which followed the fall of the Siad Barre regime in 1991 lead to the widespread destruction of civil infrastructure and the collapse of public services. The high rates of morbidity and mortality among infants are an illustration of the profound effect the lack of a recognized government and the absence of public services have had on the civilian population. These and others may contribute strongly the food insecurity in the country.

The root causes of food crises in Africa are numerous, varied and complex. The principal factors attributed to the continent's failure to adequately feed its population include: i) climatic hazards; ii) severe environmental degradation; iii) rapid population growth outstripping agricultural growth; iv) unstable macroeconomic environment and inappropriate government policies in some nations; v) low purchasing power of the people (poverty); vi) the absence of food security policies at national or regional levels; vii) lack of storage facilities; viii) limited access to infrastructure and basic services; ix) civil war; x) inappropriate incentives; and xi) low productivity of agriculture resulting from insufficient farm input. However, empirical investigations attempting to establish causal association between the above listed constraints and food shortages have been scattered.
As is true in most Sub-Saharan African countries, Somalia is currently facing challenging problems ranging from those induced by environmental crises to those caused by demographic and socio-economic constraints, which adversely affect peoples' production system. The country is generally characterized by extreme poverty, high population growth rate, severe environmental degradation conflict and clashes between Militia and TFG and recurrent drought. This has resulted in agriculture being poor for several years, to the extent that the country could not adequately feed its population from domestic production. This has been manifested in the prevailing food insecurity, both chronic and transitory, which has almost become a structural phenomenon and the way of life for a significant proportion of the population of the country.

The principal indicators of the magnitude of the problem at national level include: i) sharp decline in per capita food available for consumption, in response to the rapid population growth on one hand, and the stagnant or very slow growth in agricultural production, on the other hand, which has been far below the recommended rate (2100 Kcal) ; ii) considerable increase in the volume of imported food both through purchase and in the form of aid; iii) prevalence of energy deficiency among adults; and iv) high rate of children's malnutrition as evidenced by high rates of stunting, wasting and being underweight. For at least 60% of farm families, production systems do not satisfy basic needs. Increasing numbers each year become food insecure and most rural households face a hungry season every year).

Somalia is a country of 637,540 square kilometers, situated within the Sahel Zone of the Horn of Africa and populated by an estimated 7 million people. About 66% of the population lives in the rural areas, where livelihoods are largely dependent upon livestock and agriculture. Widespread poverty and vulnerability to food insecurity is heavily influenced by the harsh, predominantly arid climate.

With an estimated annual internal renewable fresh water resource of less than, 1000 m³/person/year, Somalia is considered to be "water scarce". Irrigated agriculture is dependent on the water resource of two permanent rivers, the Juba and the Shabelle which both originate in the Ethiopian Highlands and flow through Southern Somalia.

The outbreak of the civil war that led to the ousting of the Siad Barre government in 1991 affected the productive regions severely. Agricultural infrastructure, including essential irrigation infrastructure like water conveyance systems, flood protection structures, rural access roads and other marketing infrastructure, were destroyed and lack of maintenance led to further deterioration and malfunctioning, reducing the production of food and cash crops. Irrigation farming using gravity or pump fed systems developed along these two rivers, particularly in the Middle Shabelle, Lower Shabelle and Lower Juba Regions with an estimated combined population of 1.6 million people are not functioning.

The pre-war irrigation sector was characterized by the presence of less than a dozen large-scale government controlled irrigation schemes, probably 200 – 300 medium-scale and privately owned commercial operations and thousands of small-scale farms.

The lack of a functioning administration and the challenging security situation does hamper rehabilitation efforts in the area. As of 2004, irrigated agriculture is characterized by a large number of small-scale farmers producing food crops for subsistence and for the market. Small and medium scale commercial farms produce food and oil crops for the market.

Lower Shabelle Region is among the richest regions of agricultural production in southern Somalia. The region is bisected the Shabelle River. Agriculture in the form of crop production is the main principle economic sources for livelihoods in the area. 75% of the population is estimated to be subsistence farmers owning a farm land from 0.5 to 2 hectares. The farming system in the area is based on traditional farming methods; land preparation, is usually carried with removal of bushes using hoes. Though, the farming system in the area is based on irrigation system, the irrigation infrastructure in the
area is not functional and has adverse impacts on the crop production in the area. Shabelle River is the main source of irrigation water to the farmlands cultivated by both subsistence and plantation farmers.

Food insecurity in the country is principally, but not exclusively, a rural problem. When famine strikes, it is the rural population who is most vulnerable. Interventions need to be planned on the basis of a good understanding of the factors that contribute to the particular vulnerability of rural people.

Drought and conflict are the main factors that have exacerbated the problem of food production, distribution and access. High rates of population growth and poverty have also played a part, within an already difficult environment of fragile ecosystems. In fact that, almost 80 percent of the population of the country is rural, and depends almost exclusively on agriculture for their consumption and income needs. Means that measures to address the problems of poverty and food insecurity must mainly be found within the agricultural sector.

The country presents perhaps the most difficult challenge anywhere in the world to achieving livelihood food security. It is estimated that more than 50 percent of the people in the country survive on less than US$1 per person per day. In each level of the people, different poverty lines have been set, reflecting in monetary terms the resources needed to purchase a diet that provides the minimum acceptable energy requirements, but the overall picture is similar and it is one of very widespread and deep deprivation.

The connection between poverty and food insecurity is important. Food production is significant because, for the majority of the poor, agriculture is the main source of livelihood and some 65 percent of the population is classed as agricultural. However, it is only when poverty can be alleviated or diminished that the level of food insecurity is reduced. Consequently, the long-term solution to food insecurity lies beyond the production of additional food and includes the need to address rural livelihoods in general. Social safety nets of various sorts are also part of the solution to absolute poverty and food insecurity, not only in exceptional circumstances such as drought, but also over the long periods required to arrive at socially inclusive sustainable solutions.

**NATURAL HAZARDS**

Drought and other climatic extremes are major factors contributing to vulnerability to food insecurity. In the country there is no year or season in which the whole regions receive normal rainfall and is free from climatic anomalies such as flood or drought. Drought is the most catastrophic natural event that causes widespread periodic famine in the country, but it is by no means the only natural hazard facing the people of the area. Periodically, floods afflict localized parts of even the driest areas as was the case at the outset of the current crisis. For example, during 1997/98 severe floods with heavy rains were observed over many parts of the country, and were followed by the drought that has persisted over parts of the country since late 1998.

Drought is a fact of life in many parts of the country - it has been recorded from as far back as long period. Somalia is a country of arid and semi-arid, with annual rainfall of less than 500 mm and subject to a high degree of unreliability, both from year to year and in the distribution within each year. In the last 30 years there has been at least one major drought episode in each decade. There were serious droughts in 1974/75, 1984/85, 1987, 1992 to 1994 and 1999/2000. Drought is, therefore, a recurring phenomenon in the country and there will always be certain locations experiencing localized drought.

Dramatic increases in food prices disproportionately affect the poor in the country. The purchasing power of families and aid agencies erodes as prices rise, and they cannot keep pace with rising costs. Confronting the current crisis and achieving lasting country food security will require immediate attention and long-term investment.
**Conceptual Framework**

**Definition of Concept**

Food security is conventionally defined as "access by all people at all times to enough food for an active and healthy life". It is generally accepted as entailing not only *food availability* (adequate supply of food) but also *food access* through home production, purchase in the market or food transfer.

Food security and its achievement can be targeted at global, regional, national, sub-national, household or individual levels. However, nowadays, the latter two have increasingly become a focus. In the context of subsistence farmers' households, food security refers to the ability to establish access to productive resources such as land, livestock, agricultural inputs and family labor, combined to produce food or cash.

Food insecurity is a situation in which individuals have neither physical nor economic access to the nourishment they need. A household is said to be food insecure when its consumption falls to less than 80% of the daily Minimum Recommended Allowance (MRA) of caloric intake for an individual to be active and healthy. Based on temporal dimension, two types of household food insecurity can be distinguished: *chronic and transitory.*

**Chronic (permanent) food insecurity** refers to a continuously inadequate diet resulting from lack of resources to produce or acquire food (Reutlinger 1987). It is argued that chronic food insecurity at the household level is mainly a problem of poor households in most parts of the world. **Transitory food insecurity** refers to a temporary decline in the households' access to enough food. It results from instability of food prices, production or incomes. The worst form of transitory food insecurity is famine. Hence, transitory food insecurity faced by farm households should be understood as a seasonal food shortage of any magnitude ranging from mild to severe.

The following are the main factors generally create livelihood food insecurity.

i) **Environmental crises**: comprise two elements, i.e., climatic hazards (drought, flood, etc.), and land degradation through soil erosion, loss of nutrients, deforestation and overgrazing.

ii) **Population pressure**: rapid growth of human and livestock population resulting in diminishing holding size and fragmentation of farmland and absence or shortage of fallow periods.

iii) **Poor asset base**: involve aspects such as lack of investable surplus cash, lack of farm input, absence of off-farm employment opportunities and inability to purchase modern farm inputs.

iv) **Social (cultural issues)**: poor rationing of grain produced at home because farmers utilize a considerable proportion of their annual production for various ceremonies and celebrations immediately in post-harvest periods. Low level of educational background among the people in the area can also be the other variable.

v) **Poor rural infrastructure**: inaccessibility to roads, absence of rural credit, lack of irrigation practices, lack of agricultural extension services, poor health facilities, poor storage and unfavorable market for agricultural produce.

vi) **Civil war**: it creates instability, displacement and immediate famine.
To study real situation of the Lower Shabelle region community’s livelihood food security crises and their root causes. The assessment covers all sectors, including

- Crop production
- Cash generating schemes
- Social services, etc.

The team consists of:

- One Private consultant from Sunshine Consultancy Agency, and
- Two LORDO staff.

OBJECTIVES OF THE ASSESSMENT:

The study aims at examining and identifying the environmental, demographic, economic, social, and infrastructural constraints that contribute to the livelihood’s food insecurity in Lower Shabelle region.

The specific objectives of the study are:

i) To study the social and demographic characteristics of the population, which are expected to have implications for the households' food production and supply

ii) To observe the situation of farm structure, i.e., holding size, fragmentation of farms, and access to and use of modern agricultural inputs;

iii) To identify the underlying causes of the livelihoods' food insecurity.

iv) To identify the root causes of human rights, gender based and child abuse and violation.

With regard to the practical purposes, the findings with the recommendations given by the assessment team may be utilized by planners for the formulation of new policies as well as policy reforms in the areas of population, environment, agriculture and food security. Moreover, indigenous as well as international NGOs interested in intervening with the aim of promoting rural development into the study area would benefit from the findings of the study.

During the assessment period, the team assessed Five Districts of Lower Shabelle

- Sablaale
- Barawe
- Kurtunwarey
- Korioley, and
- Afgoie, of Lower Shabelle region

From these Districts, 25 selected villages were assessed deeply.

Methodology:

- **Focus Group Discussion** - Focus group discussions were held in study communities. The participants involved representatives from different age groups, from various types of the communities, from different economic strata and from both sexes to maintain gender balance. The participants expressed their own feelings (perceptions), and offered their experiences regarding the root causes of the issue under study.
Specifically, the research questions are the following:

i) What is the root causes hindering the crop production of the area which creates livelihood food insecurity?

ii) What are the solutions to overcome the above mentioned issues?

iii) What are other social factors affecting the livelihood food security?

iv) What are the solutions to overcome the problem?

v) What are the coping mechanism practicing the community during food security crises? How to create access to cash for livelihoods activities?

vi) What the root causes of human rights and sexually gender based violation? and how to overcome it?

Assessment Findings and Recommendations:

1. Findings

The assessment was started with the history and exact period settled these villages. This helps us to clarify the long-term problems which people could not develop. It is obvious that about 95% of the villages settled more than two centuries and if you observe the community status, housing are still using traditional based systems. The observation tells us that most of them are still under learning process of changing attitudes. The demography of the villages remains almost the same. This is due to many people dies for different diseases and disaster based conditions which the community does not adopt. One of the root causes of this finding is the poverty. If they go to the hospital they may not get funds for purchase the medicine or pay for the operations required. Therefore, they use traditional medicines which may cause deaths. The other root cause mentioned by the community, population movement due to the draughts and floods, and the most critical one is the conflicts and civil war. They have also mentioned, certain period the population increases and that is the time when there is good rains to cultivate. At this moment, they mentioned that they have IDPs escaped from the clashes in the Capital city, but originated from the area. It was really observed that the villages have new people which are different physically see table 1.

Traditional housing is found in the villages

The total number of household lives in these villages are almost 16,231 (see table 1) with average families/village will be 552. About 96% of the households are subsistence farmers where by their holding farm land is less than 5Hectares. Due to the circumstances of floods, draughts and conflicts they cultivate less than one hectare of land. The subsistence farmers depend on the investment they have, if they put all what they have they may lose due to unreliable rains, floods and/or displacements. The other problem they face could be pastoralists bring their animals near the farm and at night they graze the crop stand. The pastoralists are more aggressive than the settled farmers, because the pastoralists want food for his animal and afraid of loose the livestock Therefore, the pastoralists are ready to fight for their animal feeding.
Land Tenure:
In Somalia, cultivated land is not a problem, because farmers are inherited the land from their ancestors and divide among the descendents of the family. Total land used to cultivate by these villages is 102,892 Hectares. From these hectares about 25% are under cultivation at this period and the remaining became bushes (see table 1).

Table 1
Shows settled period of the villages; Demography, cultivation land and distance from the nearest town:

<table>
<thead>
<tr>
<th>Region</th>
<th>District</th>
<th>Villages</th>
<th>Settled Period</th>
<th>Households</th>
<th>Farm land Ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>L/Shabelle</td>
<td>Kurtunewarey</td>
<td>Dara’aha</td>
<td>1515</td>
<td>320</td>
<td>3200</td>
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<tr>
<td></td>
<td></td>
<td>Bulo Warbo</td>
<td>1500</td>
<td>500</td>
<td>4000</td>
</tr>
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<td></td>
<td></td>
<td>Bananey</td>
<td>1971</td>
<td>1600</td>
<td>2700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Uraanurow</td>
<td>1978</td>
<td>450</td>
<td>2400</td>
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<td></td>
<td>Bombaasa</td>
<td>1900</td>
<td>1160</td>
<td>3750</td>
</tr>
<tr>
<td>Koriolei</td>
<td></td>
<td>B/Sheikh</td>
<td>1910</td>
<td>720</td>
<td>3000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Haduman</td>
<td>1882</td>
<td>960</td>
<td>2000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jasira</td>
<td>1899</td>
<td>500</td>
<td>3000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B/Sidow</td>
<td>1942</td>
<td>670</td>
<td>3800</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gawarrow</td>
<td>1887</td>
<td>1448</td>
<td>4700</td>
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<tr>
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<td>B/Amiin</td>
<td>1387</td>
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<td>7000</td>
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<td></td>
<td>Mordinle</td>
<td>1194</td>
<td>367</td>
<td>396</td>
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<td>1300</td>
<td>278</td>
<td>210</td>
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<td>Jambaluul</td>
<td>1250</td>
<td>750</td>
<td>3000</td>
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<td>Sablaale</td>
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<td>72</td>
<td>280</td>
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<td>3000</td>
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<td></td>
<td>Salaxow</td>
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<td>450</td>
<td>1875</td>
<td></td>
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<tr>
<td></td>
<td>Diirimow</td>
<td>78</td>
<td>200</td>
<td>1500</td>
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<tr>
<td></td>
<td>Laab Gesi</td>
<td>45</td>
<td>392</td>
<td>2500</td>
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<td></td>
<td>Fulayley</td>
<td>88</td>
<td>345</td>
<td>1500</td>
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<tr>
<td></td>
<td>Holoq Tirey</td>
<td>97</td>
<td>300</td>
<td>2800</td>
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<tr>
<td>Barawa</td>
<td>Maringubay</td>
<td>1408</td>
<td>320</td>
<td>10000</td>
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<tr>
<td></td>
<td>Iji Mahad</td>
<td>240</td>
<td>156</td>
<td>900</td>
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<tr>
<td></td>
<td>Iriile</td>
<td>133</td>
<td>200</td>
<td>1200</td>
<td></td>
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<tr>
<td></td>
<td>Mudul</td>
<td>808</td>
<td>287</td>
<td>3750</td>
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<tr>
<td>Total</td>
<td>5 Districts</td>
<td>25</td>
<td>16231</td>
<td>73821</td>
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</tr>
</tbody>
</table>

PROBLEMS HINDERING CROP PRODUCTION:
This is the most important issue for the study to identify the root causes hindering the crop production. The focus group of every village presented the problems, but during the analysis all the causes are same. This means the reason for food shortage in the country are based on low agricultural production. Table 2 presents the root causes mentioned the focus groups from every village.
Table 2

Summarizes the Root Causes Presented by the Focus Groups of the Villages:

<table>
<thead>
<tr>
<th>S#</th>
<th>Root causes</th>
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</tr>
</tbody>
</table>

All the focus groups from the selected study villages presented the above mentioned problems are the main root causes which hindering crop production. 95% of the farmers complaining that the price of tractor hours is increasing and they cannot afford to hire for land preparation. Therefore, it is compulsory to use hand hoe and prepare an area of less than one hectare. Moreover, these farmers under the poverty line, they always expect food aid from any organization visit them.

About 100% of the farmers presented problem of irrigation through the canals. This is very essential issue need to be solved since all canals are silted and need to be rehabilitated. Irrigation water is important for the plant to grow and produce sufficiently. This is an issue all the village communities strongly recommended to take action.

Seeds degenerate if it keeps a long time in storage. Since these farmers do not harvested for about two years, all the seeds they have is degenerated and used for consumption. Now it seems almost all the farmers require quality seeds for Maize, Sesame and Cowpeas. Having good quality seeds will help to contribute to the increase of production.

The other important root cause which farmers presented is lack of training on improved farming systems. Before the collapse of Siad Barre’s regime, extension groups were training the farmers and conducting on-farm trials to demonstrate the good practices which could contribute increase of farmer’s production.

Beside the farm inputs, access to the market through culverts and roods became another obstacle which reduces the production in general. Almost all road crossing is not functioning due to lack of culverts. Farmers have problems on carrying the production from the farm to the market area. Another cause which supports the lack of culvert is poor roads. Roads either became bushes or heavy cracks have seen from the floods. Lack of Market shelters is another issue presented the groups.

Farmers also mentioned that there are no gates along the intake of the irrigation canals from the river. All sluice gates are looted and/or rusted. It is another root cause which facilitates the river to flood. Some villages presented their critical problems which again hindering the crop production. One of these issues is River digging along the areas of Kurtunwarey villages. Here the river is silted heavily and became the same level of the cultivation land, every year it easily destroys the farm land of these.
communities living in the area. About 25Km the river is silted heavily, in order to reduce the river flood, the community collected funds at least to start river digging. They dug almost 9 Km out of 25 Km, hiring two Bulldozers, with the Bed of the river is 25m and depth of 6m. The river deviated east of these villages going down areas to Kurtunwarey. Below is shown River digging process.

Another issue the groups strongly presented is River Broken Points. This is another point which facilitates the river to flood. The main causes of the river broken points are:

- Weak river banks
- Livestock watering

**SOLUTIONS FOR THE ABOVE MENTIONED CAUSES:**

1. Tractor hiring: This could be solved either of the following:
   - Provision of loans for land preparation
   - Provision of fuel and tractor as individual or as cooperative

2. Canals silted: This could be solved through:
   - Canal rehabilitation

3. Quality seeds: This could be solving by providing of good quality seeds for the different food crops.

4. In order to get accessibility for the market, culverts and roads should be constructed and rehabilitated.

5. Sluice gates should be constructed in order to reduce easy silt sedimentation of the canals and river floods.

6. River digging and river broken points: These are an important issue to overcome otherwise it affects heavily the crop production, accessibility and creates evacuations from the villages.

7. Construction of market shelters for the central villages.

**Problem Prioritization:**

The Focus Group Prioritized the causes as follows:

8. Land Preparation is the first to be considered

9. Canal rehabilitation will be the second

10. Training on improved farming practices.

11. Quality seeds is also very important issue to be considered

12. Market accessibility such as culverts and roads

13. Flood protection structures such as river broken points and river deepening
14. River bridges which became old and not functioning.

**SOCIAL FACTORS AFFECTING THE LIVELIHOOD FOOD SECURITY**

Social problems play very important role for enhancing the livelihood food security.

In this situation, the focus group presented the following as the effects of social problems:

- Lack of educational background
- Lack of health posts
- Poor hygiene and sanitation (pilatrines)
- Lack of clean potable water.
- Lack of training for TBAs
- Lack of boats for river crossing. Because of the crocodiles killing at least one person/week while people are fishing or fetching water from the river.

Table 3

**Summarizes the Social Problems Contributing to the Livelihood Food Insecurity**

<table>
<thead>
<tr>
<th>S#</th>
<th>Social causes</th>
<th>% presented</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Illiteracy</td>
<td>80</td>
</tr>
<tr>
<td>02</td>
<td>Diseases break out</td>
<td>99</td>
</tr>
<tr>
<td>03</td>
<td>Lack of potable water</td>
<td>98</td>
</tr>
<tr>
<td>04</td>
<td>Poor hygiene and sanitation</td>
<td>100</td>
</tr>
<tr>
<td>05</td>
<td>Lack/ poor river crossing boats</td>
<td>86</td>
</tr>
<tr>
<td>06</td>
<td>Lack of training for TBAs</td>
<td>98</td>
</tr>
<tr>
<td>07</td>
<td>Lack of Human rights /sexually gender based</td>
<td>98</td>
</tr>
</tbody>
</table>

During our observations, all villages have no good hygiene and sanitation. Children were defecating around the houses, in the roads, in the public places and near the wells. This is a sign of illiteracy of the community of the area. Most of the people in the area are complaining about diseases such as:

- Malaria
- Diarrhea
- Tuberculosis
- Six killing diseases,
Malnourishment for pregnant women and children, etc and there is no health posts in the villages.

**Pregnant and Malnourished Woman**

No schools are found in the most of the villages. Children are without education in the villages except very few. Clean potable drinking water availability is another issue which hindering to get healthy people in the villages. Those who have wells are not sanitary and potable to human being.

**Solutions for Social Problems:**

The main solutions to overcome these social issues as presented by the groups are:

- Construction of schools for those villages does not have schools.
- Incentives for the teachers
- Construction of health posts
- Provision of essential drugs
- Rehabilitation of existing wells and construction of new wells
- Provision of pit latrines for sanitation practices
- Training for TBAs
- Boats for river crossing
- Training of good hygiene and sanitation practices
- Increase community awareness on human rights and sexually gender based protection.

**Coping mechanisms practicing the farmers during food insecurity:**

Farmers have specific period when food insecurity disturbs them. It is the time when food crops are at flowering stages. This period farmers request either loan from the friend, Business people in the village and/or work for the large scale farms. Some farmers use as a food for the certain weeds appropriate to eat. This is the time where most of the farmers leave their farms and harvest nothing, because they evacuate for food searching. This period the farmers call it “Yabal baroor”, period of food shortage.

The focus groups of the villages presented that at this period, it is the time we all feel sorrow seeing our farms are burning either without weeding activity or lack of water, because none of us can survive and do farm activity without energy. It is the time where many pregnant women die for malnutrition; many kids seek malnutrition and die for it. Strong people used to go to the big towns in order to earn some income to survive for his family. But now no place to run except stay home and die in it.

In order to overcome this issue, the focus groups recommend creating:

- **Job Opportunities and Income Generation Schemes such as:**
Canal rehabilitation where the farmers can earn some income which facilitates to work in the farm.

Provision of fishing materials. There is plenty of fish in the river; they can simply get fish from the river, partially for sale and partially for family food. It could also dry up and send to the other villages and big markets in the towns.

Provision of vegetable crops which could be harvested early and get income for survival. This needs also vegetable growing technology training and pumps for water withdrawals from the river.

Bee keeping which farmers can earn good income from the honey and nutrition for the families. This also needs to have technology training.

Poultry keeping also brings good income and nutrition for the families

2. CONCLUSION AND RECOMMENDATIONS

Whatever the nature of the triggering event, disaster strikes because many people in the country are extremely poor and have little or no insurance in the form of food reserves or any type of asset protection. They have become increasingly vulnerable to disaster-triggering events because of rapid population growth in marginal areas, the increasingly degraded environment that results from over utilization of the fragile resources, an inability to diversify their sources of income and the difficulty of "escaping" to other areas because of political boundaries, conflict and sheer lack of opportunity for betterment. Misguided development programs have often encouraged farmers and pastoralists to adopt productivity-enhancing practices that compromise long-term risk-avoidance strategies.

Despite decades of internationally funded development programs in agriculture and rural development and sustained inflows of food aid and emergency relief operations, increase poverty, undernourishment, food insecurity and, periodically, famine still characterize the lives of a large proportion of the country. The natural conditions in many parts of Somalia make life difficult, and these conditions have been made worse by a shrinking and degraded resource base, combined with an expanded population movement. The economies of the country are largely dependent on the agricultural and livestock sectors and are weak, reflecting the failure of strategies and programs to stimulate growth in the sectors.

However, some opportunities to reduce the risk of famine and food insecurity in these areas are presented by modern technology, the adoption of a comprehensive approach that is more sensitive to the needs and potential of the area and an increase in the allocation of resources to these areas. The approach should aim to derive synergies between restoring the natural resource base and enhancing agricultural productivity including the livestock sector.

RECOMMENDATIONS

We strongly recommend taking action for the following results which we have received from the study and contribute increase of production.

- Improved access to productive resources and services:
  - Availability of Tractors for Land Preparation.
It is a long period where the subsistence farmers in assessed areas have not prepared their land with tractor. This is due to increase of fuel price which resulted increase of the prices of tractor hours. The land has lost its structure and texture since it has water from the floods and also reached the driest area - rain fed farming areas. With this regard, the land even lost its fertility. Land preparation increases the water holding capacity of the soil, provides good seed bed and roots can penetrate easily in order to absorb the nutrients.

- **Canals Rehabilitation:**

In each irrigation area, there is a demand for water and supply of water. The demand for water varies over and depends on the types of crops, crop stage, soil type and the climate. While transporting irrigation water from the water source and applying it to the plant roots, a portion of the water is lost through evaporation, leakage from canals and percolation below the roots of the crops. When supply water exceeds the demand, plants may receive too much water which has a negative effect on their growth. The water needed to supply an irrigation area is taken from the water source. The most common water source found in the project area is Shabelle River which, some parts the river is lower than the cultivated land and other the river is higher than the cultivated. Hence at the diversity mentioned below parts need to use pumps and other parts need only by gravity.

The possibility of supplying as much water to the irrigation area as is needed during each period of the irrigation season depends primarily on the availability of water and its source. Availability may vary a lot over the year or even between one year and another. This could also be lack of availability of irrigation facilities such as:

- Irrigation withdrawals from the source
- Irrigation water runoff – canals.

Therefore, lack of canals is the main issue of reducing the production. This is due the silted canals, leaking, and seepage where the subsistence farmers cannot afford to rehabilitate. Canal rehabilitation farmers will gain an income as labor and contributes for increasing crop production.

- **Provision of Quality Seeds:**

Farmers used to obtain good quality seeds which contribute increase of yield. Like Maize crop, the research station tried to improve the quality seed for Maize crop and successfully introduced Somtux maize with high yield to the farmers in the country. Unfortunately the seeds are mixed up with the local variety; very small area is kept the original seeds. Farmers harvest cannot be more than 800Kg of Maize and 150-200Kg of sesame/hectare of land at normal situation whereby the Somtux will provide more than 1.5 ton/hectare of land with same situation.

- **Provision of Training on Improved Farming Practices:**

Farmers are mainly inherited using of traditional farming systems, which are based on minimum input per output. The outcome obtained from this method of farming have no significant to the farmers. This means it will not cover farmer’s consumption. Farmers used to get extension support in terms of improved farming systems training, quality seeds, appropriate practices for farm activities, proper irrigation, now all these services are not exist due to the collapse of law and order.

- **Canal management Committee Training**
Canals are managed a committee selected from the community. Every canal has its own Canal Management Committee, but the problems faced by the committee are lack of proper management. Canals are rehabilitated according to the traditional methods of canal maintenance; this has created problems between the canal users in terms of poor management, with this conflict may create canals to be left behind without rehabilitation. Therefore, canals are silted, leaking in many parts, and not properly managed.

- **Improved Access to the Production area**
  - **Construction of Culverts:**

    Culverts are another problem hindering crop production. Again some of the canals cross the roads and at the intersection points there are no culverts to cross the canals. This may delay time to bring the products to the market. This needs the farmers when they harvest their crops. They need to bring it to the house or to the main road. Therefore, it compels the farmers to go round for a long distance in order to reach their home or market place.

  - **Rehabilitation of the Road:**

    Roads are the most important issue which hinders crop production. During the rainy seasons all the roads joins the villages to the towns and that with in the village and the farm land are not accessible. This is due soil type; lack of rehabilitation for the past 17 years and lack of maintenance. This may create the harvested vegetable crops to spoil while waiting for marketing and this will take more time.

  - **Construction of Market Shelters:**

    Many villages’ women sit under the sun while they are selling food crops and milk. This is due to lack of market shelter and it is very essential to construct every village center for market shelter which the people can hide from the sun, rains, etc.

- **Reduced Mitigated Impacts of Floods & Droughts**
  - **Closing the river broken points and deepening/digging the river:**

    Floods are one of the most dangerous environmental destruction in the area. It covers a vast area and destroys all the plants grown, roads, houses and causes different epidemic diseases which affect the human and livestock. It also affects the movements between the villages and to the main towns. Generally, the floods causes mosquito breeding that brought malaria outbreak and other environmental problems. It also causes displacement to the community in the villages near and distant from the river. Closing all river broken points and digging/deepening the river itself will reduce the floods.

  - **Reduced Environmental Degradation:**

    This is another very dangerous issue whereby all the communities in the area participate as per coping mechanism. But it has a negative effect to the environment. This problem is Charcoal burning from burning the natural trees surrounding in the country. People do think only to get immediate income, but do not think the consequences it brings to the environment. This problem is a root cause of many other effect problems to the farm land, housing, shading and even to the crop production as such. The effect causes which the desertification contributes to the reducing livelihood and household food security are the following:
Soil Erosion- When all trees are cut and burned the land becomes necked, winds and running water will simply takes the fertile soil and will create cracks and galleries along the farm land.

Climatical changes- as we have seen that when the area is bushy with different trees, they may call the rains. But when it becomes desert no rains will receive and no production will be harvested.

Housing- When all trees are cut and use for charcoal, no building materials will be found. Therefore, this results that no houses will be constructed and people will go back to old ages living with the wild animals.

- **Rehabilitation of Water Ponds at the end of the Canals**

  During the dry seasons, all pastoralists gather their livestock to the riverine areas where they want to get water for their animals. These pastoralists could not keep away the animals from the crop stand which may be at the harvesting stage. The animals will graze the crop and in this situation conflict may arise and insecurity will take place. Therefore, construction of water ponds at the end of the canals is the best solution to overcome the issue.

- **Provision of Flood and Disaster Preparedness Workshops to the Elders and village Development Committees:**

  It is very obvious that, flood and draught preparedness technology should be given to the community along the river line in order to defend themselves before the floods start. The FEWS and FSAU should prepare their reports in Somali and distribute to the villages in order to follow the climatic information of the country.

- **Improved access to Cash for Livelihood Activities**
  - Establish of fishing groups
  - Provision of training
  - Provision of fishing materials
  - Establish of women groups for vegetable growing
  - Provision of training on vegetable growing
  - Provision of vegetable seeds
  - Prepare cultivation land for vegetable growers
  - Provision of irrigation pumps

- **Improved Access to Social Services**
  - Enhance educational background of the rural families
  - Improve Health status of the rural families
  - Provision of clean drinkable water
  - Improve the hygiene and sanitation of the rural communities.
  - Increase awareness of the community on human rights and gender based violation protection.

- **Initiation of Credit Programs:**

  It is one way to allow the rural poor access to loans, both for consumption and especially for production. Loans can make it possible for the poor to acquire assets, which both increase their income-earning capacity and provide buffers against disaster. Women should have equal legal and effective access to credit, as its availability allows higher incomes to be earned, and improves the resilience and flexibility of the household's income base. Lending to micro-enterprises using non-traditional and unregulated intermediaries has proved effective in reaching the poor; such schemes
could now be expanded. The success of credit programs for the poor does not in general hinge on an interest rate subsidy, so decisions on subsidy to credit can be made depending on local conditions, culture and religion.

**Therefore, it is clear that the problem of food insecurity in the country cannot be solved within the agricultural sector alone. It is a complex and multifaceted task in which knowledge systems, education, health, energy and infrastructure development provide the framework that will allow people to broaden their economic opportunities and increase their incomes. For this reason, it is essential that the UN and International Donor agencies/governments with different responsibilities take concerted action with the aim of assisting government and other partners in eliminating food insecurity through the above mentioned results.**

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