Strengthening Emergency Response Abilities
SERA Project

Vulnerability Profile: SUMMARY

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A. SUMMARY OF MAJOR FINDINGS

Population: 96,129

Agroecology: Dega 40%,W/Dega 50% and Kolla 10%

1. Introduction

Vulnerability refers to the full ranges of factors that place people at risk of becoming affected by disaster. It is the propensity of a society to experience substantial damage and disruption as the result of hazards (e.g. draught, floods) and difficulty (through lack of resources) to cope with, and recover from them. People or households can be highly exposed to specific hazard but the degree of vulnerability for an individual, household or group of person is determined by their exposure to the risk factors and their ability to cope with or withstand stressful situations.

Therefore, Vulnerability in simple term is explained:

Vulnerability = Hazard + Inability to cope.

Vulnerability can lead to disaster, when the capacity of the households or community to cope with is eroded. The major content areas (under which have many specific indicators) to answer the leading question are categorized in to six areas as demographic and socio cultural, physical and climatic, economic and agricultural, institutional and program, disease and malnutrition, and disaster history. The information related to each category of indicators is collected from two major sources namely the primary and secondary sources; the primary source includes data from household (both household and women questionnaires) and through RRA (key informant interview and focus group discussion) and secondary data in chapter is used the trends of some indicators over three to four periods. Data collected from different sources may vary both in quality and adequacy but maximum effort is made to make the data quality and reliable. This summary is intended to integrate the most important findings.

1. Disaster history, Climatic and Risk, drought and epidemics

The two common disaster ever remembered by the community are drought (or drought induced famine) and epidemics. The sever drought occurrence in the wereda was every decade or above prior to 1980s but since the last few years drought occurred almost every 2-3 year except the difference in magnitude. Even during the relatively wet season above 40 percent in the wereda depend for food on food aid and related food programs. The wereda climatic future is explained as erratic and unpredictable rainfall with greater fluctuations around mean and unpredictable start and finish. The annual average rainfall (as computed for 1992-1997G.C years rain falls from one station) to be between 923-1214mm and the distribution is around the aggregated mean.

The over all trend in vulnerability to famine (drought induced) as perceived by the community is increasing in the last 30 years, The main causes are recurrent drought, environmental degradation due to population pressure and poor natural resource management, deforestation) where as the vulnerability to epidemics (both animals and human) are decreasing because of the improvements in the health network and quick response by the government for any report.

2. Population pressure, Natural and Environmental resources

Population of the wereda is growing quickly, it is doubling almost every quarter of a century this has a negative effect in land holding and other natural resources, man to land ratio has increased significantly. The finding of this Survey regarding population-environment relationship is summarized as follows:

- Crude population density increased by 1.06x in less then 5 years.
- Dependency ratio increased from 95.1 to 151.1 in less than 5 years. , increased by 1.48 x
- Proportion of landless increased from almost zero during land redistribution to about 12% in less than 10 years.
- Mean Family size 4.1(5.1 for MHH and 2.8 for FHH)
- 28.3% of the MHHs and 5.7%FHHs are iliterate
- Percent of female headed households in the wereda is 43.3%
- There is a tendency of decrease in the proportion of out migrants.
- The age structure in the wereda has changed significantly in four years time such as the proportion of young age group (15-49 years of age) increased from 44.3% in 1987 E.C to 50.3% in this survey, in other woredas active age group decreased from 51.1 to 44.3%.
- As a result of population pressure, cultivation on un recommended area has increased that (according to the HHs perception on their main plot) currently 85.4 % of those households cultivating in top hill and upper slope, 58.7% of the of those cultivating on the middle slope and 26.6% in plain have infertile main plot.
- Among the key informant interviewed for the trends on the major environmental stress such as soil erosion, deforestation, flood, pasture problem .All the key informant perceived that the problem of all the above stresses except pasture problem have shown improvement (that is not high or very high) at present nearly over one third said pasture problem is still very high than any time.

3. Access to basic services, infrastructure and their quality

The availability and accessibility of basic social and economic services to a community contributes in minimizing vulnerability through addressing chronic and structural problems. Most of the services have improved substantially especially in coverage.

- Agricultural extension coverage for crops from 0.5 to 26.6% (1988-1991), and almost insignificant for livestock extension which grow from 0.43 to 13.4 percent. The ratio of extension agent to households is very high (1:1275) indicating the work load of The EA
- Gross enrollment of students increased from 35.7% to50.1% (1988-1992 e.c) and number of school from 13 to20 & Students dropout (grade 1-4 for the year 1988-1991) &(48.3 percent for boys and 57.7 for girls. Student teacher ratio rose from 59.8 to 61.4 in the same years.

- Health service coverage has grown quickly from 24% to 40% in less than five years. The proportion of children fully immunized is 29.4 percent, ANC 49.9%, TT2 15.4% and family planning 9.5%, during the survey year.
- Potable water supply increased from 21(1987 E.C) to 40.2% during the survey year and if broken hand pumps maintained it reaches 47%. This has shown an increase of two fold in less than 5 years.
- The above increase of service in quantity (availability) however have to be accompanied with due emphasis to the quality of the service. The functional adequacy is strongly commented by the inhabitants.

4. Community livelihood, food insecurity and poverty

- The live hood of the community under this survey depends on agriculture however the very small crop production per household (2.88Qt) is far from their annual food requirement. The community wealth ranking[1] show nearly half of the households are categorized as poor or very poor.
- The food gap analysis[2] shows, 100% of the sampled population have food shortage regardless of the length of time , 66.6% of which have food deficit over nine months , 16.9% between 6-9 months. Average production computed for three years (1988-1990) also revealed that the wereda cover 19.55 % of their annual food requirement. Agro-ecologically, Food deficit over 9 months is higher in dega (69.2%) than weyanadega (64.9%).
- The proportion of HHs participated in Non- and off-farm activities during survey year is 45.1% and10.8% percent, with mean income of Birr 534 and 988, respectively.
- The factors found to have contribution to low crop production beside the natural calamities are shortage of crop land and grazing land, lack of ox (en), land degradation, post harvest loses
- Based on the self assessed income the poverty multivariate analysis shows that the determinant factors identified to have significant relationship for the welfare of the household are the land holding size, livestock ownership, Participation in non-farm activity, family size, literacy status, improved seed, credit and presence of out migrant in the household.
- Among the felt problems such as shortage of rain fall, labor constraints, food insecurity and epidemic experience found to have negatively contributing to the welfare of the HH.

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[1] The indicator for wealth ranking in the community is Number of livestock especially ox, they consider landholding as little important because of the land redistribution conducted in no more than a decade.

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5. Illness, malnutrition and child mortality

With the implementation of the new health policy, over all physical access to health service has improved in the last ten years. However still the magnitude of some health and health related indicators shows due emphasis on the quality of the service.

- Health service utilization (antenatal & post natal) was assessed, Antenatal checkup and safe delivery reduce maternal death and improves child survival, however less than half of the pregnant women in sample HHs received antenatal checkup and only less than half % had received TT2
- Two weeks disease prevalence was seen in 44% of the eligible mothers and in 45.9% of the children.
- Malnutrition rate of children in the wereda is 57% for stunting 5.6 % for wasting and 50.8% under weight, which is higher than the national and regional average.
- According to the Coale-Demny West family model life table, of 1000 children born in the wereda, the child & infant mortality rate as computed from the HH survey is 43 and 91 which makes the under five mortality 130, Which is reduced by 27.3 from the CSA (1987 E.C) report . The most important predictors from the multivariate rate analysis are condition of child during delivery and the vaccination status. The model also supports that sex of HHH, marital status and wealth of the HHs has contributed positively or negatively to child mortality.

6. Resilience and Households coping strategies

About 15 coping strategies are identified. These are grouped in to reversible and irreversible types of coping strategy on the basis of its severity and for convenience. Reversible types are those strategies having seasonal or short term in nature that enables the household top escape short term disaster and can be relatively easily reversed, while the irreversible have chronic nature and result in depletion of resource assets.

Accordingly:

- 26.6% of the sample HHs exhausted the reversible coping strategy
- Reducing number of meals (61.1%) and reducing quantity of meals (63.5%), participation in EGS /FFW (35.7%) seeking job inside PA (32.6), eating less preferred food (3.5%) sale of livestock (45%) etc.
- 68.3% the Households have either shifted or used of the irreversible coping strategy with the Reversible
- Only less 0.2 % has never used any of the coping strategy in the last 10 years.

7. Functional classification of Vulnerability

7.1 Functional classification of vulnerable groups

An attempt is made to answer who are vulnerable groups to specific hazards? Where do they live and when do they face the hazards frequently? The Magnitude of the problem and the nature of the coping strategy people practiced, and the factors that are associated with their vulnerability have been assessed.

7.2 Who are most vulnerable households?

The **Most vulnerable Households** are Households having low agricultural production with annual deficit of food are more vulnerable

- Over 6 months food deficit (83.5% HHs)
- Over 9months food deficit (66.6% HHs)

In general these households have low income and are characterized by:

1. **Small land holding size**
    - Average land holding size of the wereda is 0.49 hectare
    - 62.7% HHs have land size less than 0.5 hectare i.e. 77.5% FHHs and 51.4% MHHs
    - Agro-ecologically 56.4% in weinadega and 71.5% in Dega own below 0.5 hectare.18.8% of weinadega and 26.5% of dega have infertile main plot.
2. **Poor Livestock possession particularly oxen**
    - Proportion of households with no ox are on the average 55.8% (53% in weina dega and 60 % in Dega)
    - The average TLU /HH is 2.24
    - 17 % own no livestock.
    - 52.2% own TLU < 3
    - 60% MHH and 22 % FHH own more than 5 TLU
    - Livestock possession is higher in Weinadega than dega.
3. **Large family size** determines the living condition including the amount and the quality of food intake. The mean family size of the wereda is 4.1 which is 5.1 for the male headed households and 2.8 for the FHHs. There is a general trend to increase household income, but the food deficit bivariate analysis indicates very small and very large family size face high food shortage.
4. **Illiteracy** status is found to have contributed negatively to the household income.
    - Only 28.3% or MHH and 5.7 % FHH are literate,
5. **Non-diversified income**
    - 10.8% and 45.1% have participated in off and Non-farm activities with income of 988 and 534 Birr respectively.
6. HHs having **no out-migrant members** are more vulnerable than their counter parts: The household survey result shows that 5.2% of the household members of ages 10 years and above are migrants; i.e., 92.8% of the males and 90.9% of the females in Atsbi are non-migrants. 3.3% of the household members of ages 10 years and above have experienced seasonal migration.28.7% of the household members of ages 10 years and above are returnees. 30.1% of the males and 25.3% of the females are returnees. 86.4% of the returnees explained that it was because chiger [problem] forced them to move that they out-migrated.
7. HHs with **labor constraints**:
    - 16.1 % of the MHH and 55.4% of the FHH have had labor constraints

7.3 Who are the most vulnerable individuals?

The **most vulnerable individuals** are individuals those who are malnourished and those at high risk to child mortality.

Malnourished individuals:

- Maternal malnutrition: - 45.9% of the eligible mothers are malnourished.
- Child malnutrition: - 56.8% are stunted, 5.6% Wasted and 49.5 % are under weighted. The percent of stunted which is good indicator of chronic malnutrition is quite high as compared to regional and national average.

Children with high risk to mortality:

Children with high risk to mortality are with the following household backgrounds:

- Children of MHH are by four times more at risk than the FHHs
- Children born to mothers who had no access to or do not utilize the PAD
- Children from crowded and unhygienic HHs.
- Children of younger mothers