Addis Ababa University
School of Graduate Studies

FEMALE HOUSEHOLD HEADS, FOOD SECURITY AND COPING STRATEGIES IN KONSO WOREDA OF SOUTHERN ETHIOPIA

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In Partial Fulfilment of the Requirement for the Degree of Master's of Arts in Regional and Local Development Studies (RLDS)

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List of Abbreviations Used in the Paper

RLDS	Rgional and Local Development Studies
SGS	School of Graduate Studies
CERTWID	Centre for Research, Training and Information on Women in Development
UN	United Nations
HHHs	Household Heads
FHHHs	Female Household Heads
MHHHs	Male Household Heads
MOLSA/WAD	Ministry of Labour and Social Affairs/Women's Affairs Department
CSA	Central Statistical Authority
NGOs	Non-Governmental Organisations
CRDA	Christian Rehabilitation and Development Associations
FAO	Food and Agricultural Organization
Omo MFI	Omo Micro-Finance Institution
CODESREA	Centre for Development and Social Research in Eastern Africa
SNNPR	Southern Nations, Nationalities and Peoples Regional State

Definitions of Local Terms in the Paper

Kenta	Konso traditional villages in which up to 10 households live together surrounded by basalt walls
Shellakta (aleko)	A plant used as a vegetable in Konso area
Konsita	Farmlands outside the Palewa
Komayta	The common land, usually forests and uncultivable lands
Palewa	The Farmland inside the Palewa
Kelta	A traditional Konso calendar, one kelta is equivalent to eight years
Cheqa	A traditional Konso beer that is made from Sorghum or maize
Calssita	An item made from a hide, used for carrying pots, grain, etc.
Kooreta (bulliko)	A garment made from cotton in traditional shema-men
Hadaya (konfa)	A short trouser made from shema
Idder	a traditional insurance for mutual support in cash or kind
Iqqub	a rotating credit group among the socoiety

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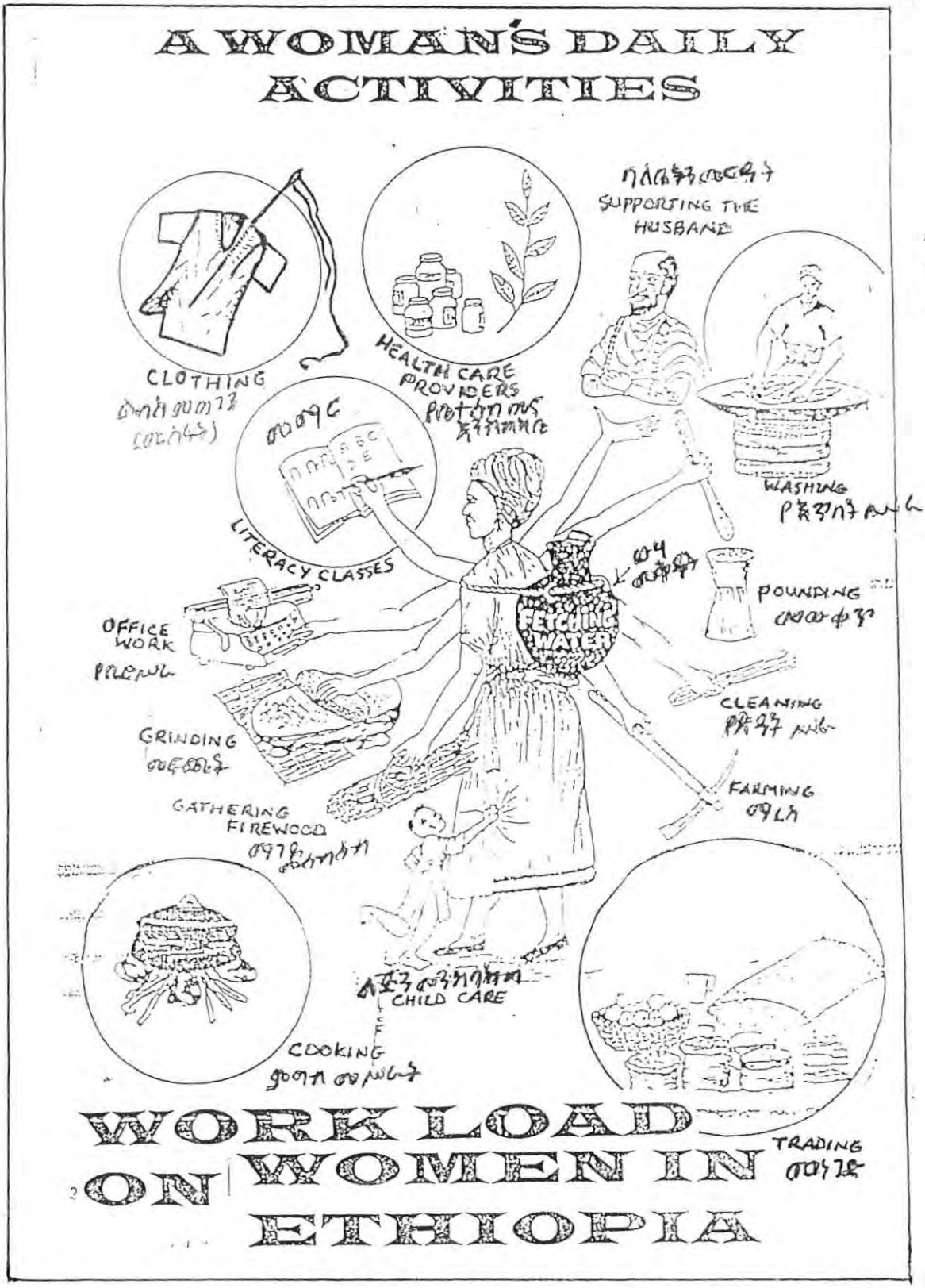
WOMEN ROLE IN HOUSEHOLD DYNAMICS



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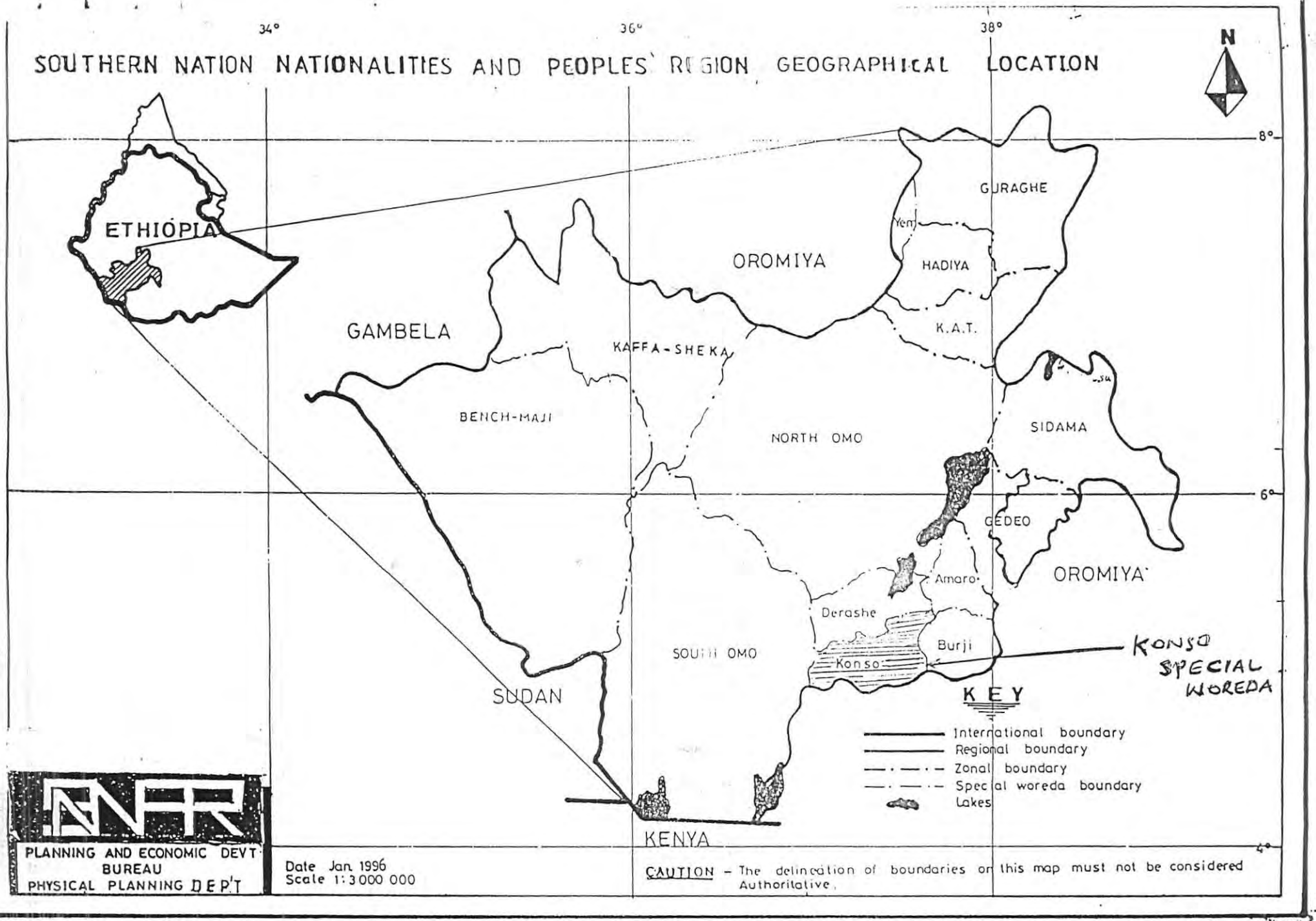
SOUTHERN NATION NATIONALITIES AND PEOPLES' REGION GEOGRAPHICAL LOCATION
N
34°
36°
38°
8°
6°
4°
ETHIOPIA
GURAGHE
Yem
HADIYA
OROMIYA
K.A.T.
GAMBELA
KAFFA-SHEKA
BENCH-MAJI
NORTH OMO
SIDAMA
GEDEO
OROMIYA
Amaro
Derashe
Burji
Konso
SOUTH OMO
KONSO SPECIAL WOREDA
SUDAN
KENYA
KEY
International boundary
Regional boundary
Zonal boundary
Special woreda boundary
Lakes
PLANNING AND ECONOMIC DEVT BUREAU
PHYSICAL PLANNING DEP'T
Date Jan 1996
Scale 1:3000 000
CAUTION - The delineation of boundaries on this map must not be considered Authoritative.

Abstract

The paper is aimed at examining the role of female household heads in food security and their coping strategies in two kebeles of Konso woreda. Konso woreda is found in South Ethiopia Regional State. It is located 665 km south of the capital Addis on the main road to **Jinka** town.

The paper begins with introducing the background, the problem, the research questions and objectives including the significance. It follows by describing the physical and socio-economic conditions of the woreda. It reviews gender aspects of household relations, food security/insecurity, and coping strategies.

Female household heads play an essential role in food security of households as producers, purchasers, processors, and providers. They are also critical in coping with food insecurity. Female household heads also play an important role in mutual support systems; risk minimizing activities, seasonal coping strategies and social adjustments. There are changes and sequences in coping strategies. The role of assets and personal preferences matter the capacity of female household heads in coping with insecurity.

Survey results of this study have indicated that female household heads are critical to the food security and coping mechanisms of households in the area. They perform agricultural tasks: digging, planting, weeding, threshing, transporting and storing. The result of the survey in this study confirms with that of Boserup (1970) and Ostergaard (1994) research reports that female role is critical in hoe-based agriculture. They collect firewood and fetch water to process food for the family. Here it had been found that male household members help women in agricultural practices such as digging, planting and building grain stores. Males perform limited domestic jobs such as boiling grain.

Female household heads have limited rights of ownership in productive assets as well as their fruits of labor. Lack of access to and control over resources, incomes, and marketing of major assets affect the role of female heads of households. Marriage and divorce patterns, land deterioration and recurrent drought also affect their role in food security and coping with food insecurity. They have limited role in decision on income utilization, and marketing of major assets. Their limited role in these aspects potentially affects their purchasing power and further participation in marketing as well as access to acquire food.

In spite of considerable investment of female household head's labor, farmlands are too small and the area is too arid to provide enough food for most households. Local non-agricultural activities and coping strategies become 'erosive'. They find it difficult to bridge the present gap of food insecurity. It actually exacerbates the pressures at the household to increase females' labor for diversifying income sources. Under these circumstances, therefore, providing an alternative and more reliable source of local employment targeted to benefit female household heads is needed such as food-for-work. Increasing the productivity of activities seems to be critical and urgent since the burden of securing food for the family falls considerably on female household heads.

CHAPTER – ONE - INTRODUCTION

1.1 General Introduction and Conceptualization

Food security can be dealt at global, regional, national, local and household levels. The concept food security is a recent concept of 1980s, a term used as food supply and demand gap increased (World Baank 1989, Dagnew 1994).

Later on, the term coping strategy has been dealt as part of analyzing food security when individual responses to risks of food crisis has been varying in taste, preference and level of assets (CRDA 2000, Goldstein 1994). This differed in gender and division of labor in the household.

Thus, household food security and coping strategy are an even a recent concept that incorporate the role of household members in fulfilling food needs for an active healthy life (Seigle 1995, Webb 1994, Dagnew 1994, Davies 1993, Frankenberger 1994, Smith et al 1996).

Food security and coping strategies are analyzed under the concepts to fulfilling the need for (FAO 1998, WVA 1995).

1. Food access; ability to acquire food or stabilize purchasing power.
2. Food Availability; ability to create sufficient stock of food asset creation and management.

3. Food sufficiency; ability to create food access and stock which is rich and sufficient for an active healthy life in terms of kilogram calorie.

This research paper assessed the role of female and male household heads in household food security and coping strategies in their roles of creating food access and availability in grouping the activities into:

1. Production-based activities such as crop and livestock production
2. Market-based activities such as handicrafts, wage-labor and petty-trading
3. Non-market-based activities such as mutual support arrangements in the households and in the community at large.

Thus, in the entire, the role of female and male household heads in food security and coping strategies were analyzed based on the above concepts whether they differed in gender, assets (land and livestock), labor and management of all kinds of incomes in the household.

Even though dealing with all household members, especially a wife's role in male-headed households could have illuminated sufficient view of the activities performed by gender in the household and its effects in food security and coping status of households. In this research, I was interested in dealing with how individual household heads, being breadwinner, strategize food security and coping food crisis under the above concepts and variables. Therefore, the review literature as well as the analysis has been based on these concepts and variables in the entire paper.

1.2 Background of the Problem

Recent debates on gender emphasize women's disadvantaged status despite their role in development and household food security. In disclosing women's disadvantaged status and their role in general, lack of trained women researchers and the cultural barriers in the way of male researchers doing fieldwork among women become potential deficiencies (Dessalegn 1991). In this regard, researchers who have familiarity with the culture, and language of a particular community may play an important role in disclosing the realities of women in development and in the household.

Academic research should address the role of women in the household.

> *Especially in Sub-Saharan Africa, I think it has been clearly stated over and again that women are responsible for between 60 to 90 percent of the food production, processing, and marketing. No one can really address the food crisis in Africa or many of the other crisis that seem to exist here without addressing the role of women. --- Research should specifically address the role of female heads of households (M. King 1986 cited in WCED 1987:124).*

More than 88 percent of Ethiopian women live in rural areas. Out of the total number of households in Ethiopia, 15 percent are female-headed households (CSA 1998). This figure comprises female heads of households who are either divorced or widowed. There are also female heads of households who are abandoned by their husbands.

More than 85 percent of rural women's labor output is spent on agricultural activities. The other 15 percent of their time is occupied with household management activities with little time for rest (MOLSA/WAD 1999). The latter consists of laborious and tiresome household tasks that are often ignored in national statistics (Abbot 1995; Boserup 1970).

Women are mainly responsible for food production, processing, preparation, and provision. They are also responsible for childcare and feeding, motherhood and other domestic activities. This reality calls for sufficient awareness; gender disaggregated research and data on female heads of households.

Recent efforts of the Ethiopian government to promote women's role in development, and enabling women to participate in economic, social and political endeavors are notable. In this regard, the government has established women's development and research fund. Recently, the establishment of the implementing machinery such as a Women's Affairs Offices at all administrative levels is worth mentioning. However, concrete steps should be taken to enhance women's access to and control over resources. The state should also be practically committed to the availability of adequate statistics and research work on women in general and female heads of households in particular.

1.3. Statement of the Problem

Ethiopia is a country facing multifaceted problems such as poverty, economic stagnation, and low agricultural productivity (Ginjo 2000). The population of Ethiopia is above 63 million. Rural women who constitute the bulk of the country's agricultural workforce and who engage in food production, processing, preparation and provision are often neglected and deprived of services and amenities. They are vulnerable to poverty, food insecurity, gender bias and effects of environmental changes and disequilibria.

Female-headed households are the most vulnerable to food insecurity. Women occupy subordinate position to men in terms of social status. Their access to and control of resources is limited. Their deprived status is often not recognized by the public. Gender disagggregated data on their status is not widely available.

Rural research reveals little about the allround potential of women. Hence, heavy male bias continues to inform development planning and extension activities (Dessalegn 1991). Rural policy does not include women's overall role in food production, processing and marketing. It has often concentrated on their traditional work, which is small-scale, provides limited income and chances of growth, and requires more time than their net worth (Sarkar, 1999). Very few new sources of economic participation for women are introduced. Policy is especially likely to neglect female-headed

households. This is partly a result of lack of innovative and gender-oriented research as well as the inability to implement relevant policies and programs.

Since rural households are non-functional without female roles in field and domestic activities in Ethiopia (Yared 1999, MOLSA/WAD 1999), these roles should be investigated. Most of the rural households live subsistence life thus, activities of food security and coping strategies to food crisis are essential activities of rural household members.

The problem of lack of adequate research on roles of gender in food security as well as coping strategies at household level in the area calls definitely for a need to describe gender roles in the household in fulfilling the need for food access and availability.

Dealing with the role of gender under the above concepts and variables will solve the problem of lack of adequate research data in a diaggregated manner in household food security and coping with food crisis. On the other hand, it will throw light on how individual household heads strategize food security and coping food crisis in the household being the principal breadwinner as well as individual member in the household varying in asset ownership (control), income level and gender.

1.4. The Objective of the Study

The paper is aimed at examining the role of female heads of households in food security and coping strategies in terms of their participation in food production, processing, management, income generation, marketing, and decision-making as well as control over resources taking **Konso** in Southern Ethiopia.

1.5. The Research Questions

To meet the objectives of the study, the following basic questions were examined throughout the study. These were 1) What role do female household heads play in food production, processing, in income generation, management and marketing in the household in maintaining household food security? 2) What are the specific coping mechanisms that are pursued by female household heads in time of household food insecurity? 3) What essential economic resources do female household heads control and decide on in the household? 4) What is the participation of female heads of households in formal institutions such as extension services, and credit?

1.6. The Significance of the Study

The above objective allows us to see the role of female household heads in household food security and coping with food insecurity. This allows us to mobilize their knowledge and resources in the household food security interventions. The findings on

the role of female heads of households in coping with food insecurity will also contribute to debates on gender aspects in rural households. It may influence local level policy decision by indicating implications for the intervention that could target head of a female-headed household.

1.7 The Organization of the Paper

The first chapter of the paper consists of the background to the research problem, the research problem, the objectives and the research questions as well as the significance of the study. The second chapter deals with the research design-both qualitative and quantitative aspects. The third chapter presents the description of the study area including the food security situation of the area.

The fourth chapter reviews the literature on the concepts of food security; insecurity and coping mechanisms. It also deals with gender issues in the household and types of coping strategies pursued by households. The role of female household heads in household food security as well as the constraints that affect their roles is displayed in this chapter. The fifth chapter presents the findings of the study. The final chapter consists of the concluding remarks and policy recommendations.

CHAPTER – TWO - RESEARCH DESIGN AND METHODOLOGY

2.1 Kinds of the Methods and Data Sources Used in the Study

Descriptive and survey methods were used in the course of the research. A survey was used to obtain quantitative data; where as focus group interviews, household case studies and discussions with key informants were used to collect qualitative data. The qualitative data stressed on views, norms and practices related to gender relationships in the household. The combination of methods also enhanced validity through triangulation.

Two sources of data were used. The primary sources of data were key informants, focus group discussions, household case studies and household survey. These sources generated qualitative and quantitative data on demographic, physical and socioeconomic aspects of the area. It also generated data on essential economic assets, factors affecting the roles of female and male household heads in food security and coping strategies as well as gender differences in it. These sources also generated data on production, market and non-market-based activities in the area in a gender-disaggregated manner (see appendix 5 for details on page 128).

The sources of secondary data were books, journals, booklets and other relevant documents. This source provides information and a theoretical background on food security, the status and role of female heads of households in managing food security/insecurity.

Information on population, the food security situation, physical and socio-economic situations of the area was collected from annual reports and documents of the Woreda offices, Bureau of Agriculture, Central Statistical Authority, research documents and Kebele level data on households. Data about conservation activities, market infrastructure, gender relations and activities were also collected from these sources.

2.2 Sampling Procedure

Regarding the survey woreda, it was selected because of its high population, environmental fragility, and low development and the researcher's familiarity with the area, the culture and the people.

Out of 31 kebeles in the Woreda, 2 sample kebeles were selected on random basis after stratifying into ecological, demographic and socio-economic basis. Ecologically, 21 kebeles are in the lowland and 10 kebeles are in the midland climate. Demographically, the kebeles are grouped in terms of population (13 kebeles with population below 5000 and 18 kebeles with population above 5000). FARM Africa assessed three wealth ranks (rich, medium and poor) based on grain stock, number of livestock, modern possessions and other assets such as land. The population in each of the kebeles was used as sample frame. Therefore, one kebele from the midland and one from the lowland were selected.

The kebeles are:

1 Gewada is in the midland having high population, and medium wealth status according to FARM Africa (2000)

2 Kemele is in the lowland having high population and poor wealth status according to FARM Africa (2000).

The sample was taken from the *Kentas (traditional Konso villages)*, and households in the *Kentas* were stratified into female and male-headed households.

2.3 Data Collection Instruments, Analysis and Presentation

Four sets of instruments were prepared to collect data from key informants, focus groups, household case studies and the survey. Interview guides were used for key informants, focus group discussions and household case studies. A structured as well as unstructured questionnaire was used to collect survey data.

The instruments were set in Amharic and English. Research assistants were hired based on language fluency (English, Amharic and the Local afa'Konso languages). On this basis six enumerators (12+9 months training in agricultural development) were hired and given two days training on how to conduct the household survey. They were paid 18 Ethiopian Birr a day for 20 days by the researcher.

The data gathering instruments were pre-tested in the kebeles before the final study. Necessary corrections were made to improve the validity and the relevance of the instruments. This improved the rates of return and maximized the quality of the responses. Respondents were pre-informed about the objective of the study before each interview.

The data was analyzed by using different statistical methods relevant to each variable. The statistical instruments used were percentages, crosstabulation, and frequency tables to see the relations between variables.

CHAPTER – THREE- DESCRIPTION OF THE STUDY AREA

3.1 Demographic Aspects

3.1.1 Language, Ethnicity and Religion

The language of the Konso is of Cushitic origin, related to Oromifa, and is called afa'Konso (Southern Nations, Nationalities and Peoples Region Agriculture Bureau 1998). There are Christian, Islam and traditional religions in the woreda. In this respect, 11.4 percent of the population is Orthodox Christians, 34.7 percent adhere traditionalists, 50.9 percent Protestant Christians, and 2.8 percent belongs to other religions. There are also different ethnic groups in the woreda 2 percent of which are Amhara, 79 percent Konso, 17 percent Gewada, 0.6 percent Gamo, 0.6 percent Gofa and 0.8 percent belongs to others (FARM Africa 2000).

3.1.2. Level of Education and Age

FARM Africa (2000) has carried out an extensive socio-economic survey in 11 peasant associations. About 85.5 percent of the population was illiterate. Out of this, 90 percent were females and were illiterate. The situation indicates that higher illiteracy rate correlated with femininity among Konso society. Out of the illiterate population, males comprised 10.8 percent. The survey in this study also confirmed that 95.4 percent (69 out of 71) of female heads of households were illiterate as compared to 4 out of the 37 males included in the sample.

Table 3.1.2a Age and education level of household heads

Education level and age		No of FHHs	Percent	No of MHHs	Percent
Age	15-25	19	26.8	-	-
	26-35	26	36.6	24	64.9
	36-45	20	28.2	7	18.9
	46-55	6	8.5	6	16.2
	Total	71	100	37	100
Level of education	Illiterate	69	97.2	4	10.8
	Literate	2	2.8	27	73
	1-6	-	-	6	16.2
	Total	71	100	37	100

Source: Survey 2001.

3.1.3 Marital Status

Higher proportion of widow prevailed for females. Out of the female household heads, 72.2 percent of females were married (but abandoned by their husbands) and 2.8 percent were divorced (only two female household heads). The percentage of divorce is insignificant. According to the case study women and focus group discussions, females find it difficult to lead an independent life due to lack of assets (appendix 1 and 3). The survey results in this study also showed that 23.9 percent of female household heads were widows.

As assessed by FARM Africa (2000), 93.2 percent of females were married out of those biologically and legally fit for marriage. The finding of FARM Africa (2000) has shown that unlike most rural Ethiopia, early marriage is not a serious problem below the age of 15. The average age for marriage in Konso is 14 years for females and 17 years for males according to the elders of the area (appendix 2).

The survey in this study indicated that women who were married to old spouses lost their husbands as early as 15 - 25 years old when their spouse died due to old age. The survey in this study revealed that 66.1 percent of the female household heads are leading their independent families without a husband due to: 1) Abandonment by their husbands 2) Due to spousal death

Table 3.1.3a Marital status of household heads

Females Situation		Female headed		Male headed	
		Frequency	Percent	Frequency	Percent
Marital status	Single	-	-	2	5.4
	Abandoned	52	72.2	35	94.6
	Widowed	17	23.9	-	-
	Divorced	2	2.8	-	-

Source: Survey 2001.

Female household heads are breadwinners of their family and male spouses who abandoned their wives or living with their first wife does not even attend after their children. However, females in this nationality assume that their absent spouses still govern the family and they would prefer it if their husbands assumed the headship of their household (appendix 3.2). Hence, 48.1 percent of female heads of households assume their absentee husbands are still household heads and all males normatively assume themselves as household heads even if they abandoned their wives.

3.1.4 Migration

Konso men migrate to nearby cotton plantations and towns to earn off-farm income either permanently or temporarily. They generate income by selling wage labor engaging in collecting cotton and cultivating in the plantations. They get income in cash and kind. Women have the responsibility to manage the livelihoods and the security of the family in their husband's absence.

Table 3.1.4a migration status of household heads

Migration status	No of FHHs	Percent	No of MHHs	Percent
Migrated	5	7	19	50.4
Not migrated	66	93	18	49.6
Total	71	100	37	100

Source: Survey 2001

The FARM Africa (2000) survey indicates that 89.7 percent of the population is non – migrants and 10.3 percent are migrants from within the special woreda. There is no significant migration into the area apart from government workers and others living temporarily in the area. The survey result of this study (table 3.2.4a) showed that 22.5 percent of the 108 samples migrated out of the woreda. Out of the 22.5 percent migrated out of the woreda females comprise only 7 percent (table 3.2.4a).

3.2 Physical Conditions

Konso is one of the Special Woredas in Southern Regional State and has 31 kebeles. Its population, according to CSA (1994), is 203,227 of which about 55 percent are women. Oromia in the South and Southeast, South Omo Zone in the West, Derashe special Woreda in the Northwest and Burji special woreda in the Northeast bound the woreda.

Konso woreda faces frequent incidents of climatic disruption and occurrence of crisis conditions. Konso community is known for its indigenous water and soil conservation practices such as terracing constructed by basalt stones. The soil is too depleted to provide sufficient means of livelihood for the people. Recurrent drought, population pressure and insufficient food supply further affect it. Due to co-existence of poverty and fragile environment, simultaneous solutions to poverty and sustainable natural resource protection have been complex and difficult (Bowonder1985).

Konso soils are so depleted that even fertile areas have a topsoil depth of roughly 10 - 15 cm. The woreda's elevation ranges from 557m in the 'Woyto' plains near Borena (Oromiya) to 2100m in the 'Aylota' mountain near Derashe special woreda. It has a total annual average rainfall of 750mm (Southern Nations, Nationalities and Peoples Region Agriculture Bureau 1999). This shows that the rainfall pattern is scarce and variable through seasons.

Konso woreda has two major soil types. They are black and red notosols as assessed by Southern Region Agriculture Bureau 1990. The temperature varies from 25-30°c with a yearly average of 27 °c. There are four main rivers- *Segen, Woyto, Dalbena*, and *Gatto*. The vegetation comprises acacia trees and certain broad-leaved evergreen plants such as auks.

Even if the soil is so degraded, farming is the most important economic activity in Konso woreda as 87.1 percent of the household heads included in the survey in this study is engaged in it followed by handicrafts (6.5 percent). According to FARM Africa (2000), 94.4 percent of the population above 10 years of age is engaged in economically productive activities. Child labor is important starting the age of 10 for looking after animals, smaller children and keeping house. They also fetch water and fuel-wood.

Table 3.2a Main economic activities of the household heads (multiple answers possible)

Activity	No of HHs	percent
Farming	7561	87.1
Handicraft	575	6.5
Daily labor	185	2.1
Trade	112	1.3
Civil Servants	263	3.0

Source: FARM Africa survey 2000

3.2.1 Environmental Deterioration

Soil and forest deterioration in the woreda has become severe. In some places, it is irreversible, much of which is due to human interference such as deforestation and overexploitation of the land (FARM Africa 2000). Some NGOs such as FARM Africa and Konso woreda agriculture office are implementing stone terraces, planting tree seedlings and encourage inter-cropping by food-for-work payments. But the problem surpasses this action and affected the production-based activities for securing food such as crop and livestock production.

According to the information gathered from experts and focus groups, the amount of land for farming and grazing has decreased significantly due to population pressure. The time for fallowing has decreased over the past two decades exacerbating the decline in land productivity. The focus groups stated that the time for fallowing has decreased from two years in the past to half a year.

People categorize the current drought as the third in three year's time (one worse than the former) caused by failure of rain. According to Konso Woreda Agriculture Office (1998), the rainfall has decreased to 200mm a year in average. This amount of rainfall is insufficient for growing plants and keeping animals. Massive deforestation coupled with population pressure and utilization of organic materials as fuel-wood substitutes causes environmental deterioration. Such actions prevent the replenishment of soil fertility, which further exacerbate land deterioration.

3.2.2 Agricultural Production

The land of the Konso has a total area of 3191 Km^2. Out of the total area, 24,000 hectares is cultivated land, and 52,000 hectares is grazing land. About 2,056 hectares is forest, 76,000 hectares with miscellaneous cover, and 75,000 are potentially cultivable. The remaining 90,000 hectares is unfavorable for cultivation (Konso Woreda Agriculture Office 1994). One can see that only 0.84 percent of the total area (both on common and private lands) is covered with natural and manmade forests indicating severe loss of forest cover.

The latest available data on the size and distribution of land holdings at household level in Ethiopia (based on the 1996/97 CSA Agricultural Survey) shows that the average size of cropland per household is 1.02 hectares without including the grazing land. Close to 63 percent of holdings in Ethiopia are less than 2 hectares and about 28 percent are less than one hectare. Only nine percent of households in Ethiopia possess land more than two hectares (CSA 1996/97). The table below summarizes the average cropland area per household for the four major regions.

Table 3.2.2a Cropland per holding (CSA 1996/97)

Region	Number of Households ('000)	Percent	Total Crop land area ('000)	Percent	Average crop land area per household in hectares
Amhara	2570.21	29.6	3154.81	35.75	1.23
Oromiya	3252.56	37.47	3939.73	44.64	1.21
SNNP	2050.63	23.62	1015.10	11.50	0.50
Tigray	579.26	6.67	483.85	5.48	0.84
Konso*	45.40	100	24.0	100	0.63
Ethiopia	8452.66	100	8593.49	100	1.02

*Computed only on Konso basis and is not added to the national average (Survey 2001).

The table highlights the severe shortage of land in the Southern Nations, Nationalities and Peoples Regional State where the average cropland per holding is only 0.5 hectare. The land holding in this region is not enough to provide enough food for an average size family. It could be inferred from the data that a basic cause in the area of food shortage in Konso seems the severe shortage of land on per capita basis. In this respect, 94.9 percent of the surveyed households in this study possess land less than one hectare, which is 0.63 hectares on average. Added with the recurrent drought, it drained the food security status of households in decreasing the grain harvest in per capita basis in the household.

The land holding of Konso is much less than the national average and a bit more than the regional average of cropland. Provided the incidence of drought, the crop harvest fron these land holding is woefully low. The animal stock is also decreasing with the decrease land holding with its repercussions on draining the coping capacity of households. The forest stock in Ethiopia has decreased to two percent (Alemayehu 1990). In Konso it is 0.84 percent of the total area. The loss of forests exacerbated the deterioration of soil fertility. This shows that the major causes for the loss of soil

fertility in the study area are mainly erosion and overexploitation above the rate of soil replenishment.

Agricultural production has fallen drastically due to severe drought in the last three years. The World Food Programme's food aid report for Konso from 1994 - 1997 indicates the extent of the short fall in food production (table 3.1.2b). The table (3.1.2b) shows the need for and actual distribution of food aid. Even if data was unavailable at the time of the research survey, Disaster Prevention and Preparedness Commission and the woreda government distribute food aid in the area.

Table 3.2.2b Food aid situation in Konso woreda

Year	Number of beneficiaries	Metric tone distributed	Percentage of population given aid by WFP from the total Population*
1994	36,000	5985	11.88
1995	45,000	4739	14.85
1996	94,100	8469	31.06
1997	128,000	16,080	42.24
1998 to 2000	Data not available	Data not available	-

Source: WFP Web Site

*Total increase of aid seekers in trend has shown 25 percent in the four consecutive years and if data were available from 1998 - 2000, it would have tremendously increased.

The types of crops grow in the woreda include cash crops such as coffee, cotton, pepper and *chat*. Food crops include sorghum, maize, wheat, barley, pigeon peas, sweet potatoes, cassava and *aleko*.

In the rainy season, maize is the most important crop. It comprises 56.9 percent of total production in the *Meher* and 30.3 percent in the *Belg*. Sorghum contributes 46 percent

The minimum food requirement of a person per year is 225 kg/person/year (FAO 1998). Average household production as assessed by FARM Africa (2000) is 714 kg/year, which accounts 142.8 kg/person/year. There is therefore, a food gap of 82.2 kg/person/year. The food security gap persisted thus for 37 percent of the year's months. That means, the food security gap stayed for 4.4 months of the assessed year.

3.2.3 Land Use Classification

There are three broad classifications of land use in Konso society.

1. '*Palewa*'[1] (traditional Konso villages) is the land where people (usually up to 10 traditional households) live inside traditional walls made of basalt. They are called *kentas*. The wall is used as protection against wild animals and enemies (usually thieves) and has one or two outlets. The houses are surrounded by '*kincib*', a local plant. The *kincib* is used as garbage place, latrine and for protection against the possible occurrence of fire onto the houses.

2. '*Konsita*' (farmlands) is the area found around the house that is used for crop cultivation (perennials, trees and other crop mixes). It is around or inside the 'Palewa'; the name Konso is derived from, and means favorable for crop production.

[1] It is also called *kenta*, a traditional Konso village surrounded by walls made of basalt

3. '*Komayta*,' are those lands that are far from traditional villages and farmland. It is usually common land, usually not favorable for cultivation but for grazing, forests and wild animals. Due to recent farmland shortages, these fragile and marginal lands have been brought into cultivation with its negative impacts on forests and wild animals.

3.2.4 Land Ownership System

According to FARM Africa (2000), land is a scarce resource in the woreda and 55.5 percent of the survey population control a homegarden less than 0.5 hectares of land. The survey in this study indicated that 94.8 percent of the surveyed households own land less than one hectare, 3.5 percent own 1-1.5 hectare and 2.1 percent own more than 1.5 hectares.

Table 3.2.4a. Land ownership (size) of household heads in the study area.

Survey Kebele	Land size in hectares	No of HHHs	Percent
Kemele	Less than 1	57	95.0
	1 - 1.5	1	1.7
	More than 1.5	2	3.3
Gewada	Less than 1	36	94.7
	1 - 1.5	2	5.3
	More than 1.5	0	-

Source: Survey 2001

3.2.5 Soil and Water Conservation Activities

The history of soil and water conservation is related to water and soil degradation in the past. According to traditional leaders and elders, people started conserving land due

to severe water shortage found by the hill settlers some 500[2] *Kelta* ago. Thus, settlers began to construct terraces intensively to store water as well as to protect soil (Southern Nations, Nationalities and Peoples Region Agriculture Bureau 1998). They also developed the use of multi-cropping, crop rotation with

pigeon peas, application of animal manure, and crop residues on their land and water harvesting techniques to stabilize crop production.

Elders indicated that able-bodied household members construct terraces. Mutual support groups also work on their construction by pooling labor, capital and material (usually basalt stone). Terraces are constructed on private and common lands, and are usually supplemented by multi-cropping as a strategy for food crops, animal feed and fuel wood production.

3.3 Socioeconomic Classification

Out of the total number of households in this study, three households were rich, 15 households were medium and 92 household heads were poor. Households in the area classify individual households based on their ability to feed the household through out the year and assets (land and livestock). As the assets are drained by the recurrent drought, households at present classify individual households into rich, medium and poor based on the ability to feed their households through out the year.

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5 Traditional Konso calendar, one *kelta* is equivalent to eight years.

Table 3.3a Number of household heads in the category of income classification

Income Status	No of HHHs	Percent
Rich	3	2.9
Medium	15	14.4
Poor	92	82.7

Source: Survey 2001

Out of 110 household heads, 26 (24 percent) household heads reported the socio-economic classification by ability to feed the household throughout a year and 82 (76 percent) household heads stated the classification by asset levels.

Table 3.3b Criteria of household's social classification

Social classification	No of HHHs	Percent
Ability to feed the household in the year	26	24.1
Assets	82	75.9
Modern possessions	2	2.8

Source: Survey 2001

3.4 Economic Activities

3.4.1 Crop Production

The largest proportion of households in the surveyed area depends on both farming and the market for their food supply. According to FARM Africa (2000), 80 percent of the 13646 sampled households produce less than 6 quintals in the main season and 75 percent of the 13646 sampled households produced less than 4 quintals in the second season. The amount produced per hectare is 4.9 quintals in the *Meher* and 3.14 quintals

in the *Belg*. Therefore; the annual average is 3.57 quintals per hectare in the two seasons.

The agricultural system is arable farming (inter-cropping) and an intensive system of frequent cultivation mainly by hand tools. Pests, weeds and wild animals damage a great proportion of crops (FARM Africa 2000). It was also indicated that above 88.7 percent of the total surveyed households in this study and 94.8 percent of female household heads included in this study derive their livelihoods from crop production.

3.4.2 Livestock Production

Households in Konso raise a limited number of animals. Out of the 110 heads of households interviewed, 64.4 percent raise cattle. In this respect (table 3.4.2a), 40 percent have sheep, 60 percent have goats, 20 percent have cows and 10 percent have oxen. About 70 percent raise chicken.

Table 3.4.2a. Household ownership of livestock (multiple responses possible)

Types of livestock	No of HHs owning	Percent
Sheep	44	40.1
Goats	66	60.3
Cows	23	20.7
Oxen	10	10.2
Chicken	78	70.9

Source: Survey 2001.

Out of the households reported, female household heads are likely to mention sheep, goats and chicken whereas male household heads are likely to mention cows and oxen

in addition to goats and sheep. Limited number of male household heads mentioned chicken (11 percent out of the reported chicken owners).

Table 3.4.2b. Number of livestock households possess

Number of livestock	No of HHs owning	Percent
1-2	12663	92.8
3-5	983	7.2
More than five	-	-
Total	13646	100

Source: FARM Africa 2000.

According to FARM Africa (2000), indicated in table 3.4.2b, 92.8 percent of 13646 households possess one to two cattle on average. To cope with fodder shortages, 28.5 percent of households buy fodder, 40.2 percent move herding from place to place in search of fodder and water, and 31.3 percent de-stock cattle by selling (table 3.4.2c).

Table 3.4.2c. Households' preference of coping with fodder shortages

Coping machanisms	No of HHs reported	Percent
Buy fodder	3889	28.5
Move with the herd	5486	40.2
De-stock by selling	4271	31.3
Total	13646	100

Source: FARM Africa 2000.

Livestock diseases that affect most in the area include A*bagorba, Abasenga*, TB and *Desta.* According to table 3.4.2c, livestock deaths were caused mainly by *Abagorba* (47 percent), by *Abasenga* (49 percent) and by TB and *Desta* (4 percent).

Table 3.4.2d. Number of livestock death by disease type

Type of disease	No of cattle deaths	Percent
Abasenga	852	49
Abagorba	817	47
Desta and TB	70	4
Total	1739	100

Source: FARM Africa 2000.

3.4.3 Marketing

Marketing primarily meets subsistence needs (FARM Africa 2000) and people rely exclusively on markets within their vicinity. Market sources share 36.5 percent of food supply in the survey kebeles. The intensification of petty-trading is a response to food shortages and a supplement to agricultural production (36.5 percent).

Table 3.4.3a Frequency of market visits in the week.

Frequency of visits	Frequency	Percent
1-2	403	21.7
3-4	832	44.9
5-8	620	33.4
Total	1855	100

Source: FARM Africa Survey 2000

Table 3.4.3a showed that 21.7 percent of households interviewed visit markets for at least once a week. Forty five percent of the households interviewed visit markets for three to four times in a week. The remaining 33 percent visit markets for five to eight times a week. About 60 percent of the respondents pointed out that the number and frequency of market days have increased as food from production based activities have steadily decreased.

The intensification of market visits therefore shared their time for involving in production, and non-market-based activities to secure food and cope with food shortage. Hence, their critical role in food processing and provision has also been affected as they are compelled to engage more on market based activities.

3.4.4 Domestic Activities

The table 3.4.4a showed that females perform domestic activities such as fetching water and collecting firewood. Out of the interviewed household heads in this survey study, female household heads (92 percent), other female members (27 percent) and daughters (26 percent) perform these activities, where as husbands (22 percent) and boys (11 percent) perform limited share in domestic activities.

Table 3.4.4a Frequency for Responsibility of Fetching Fuel-Wood and Water.

Responsibility	Frequency	Percent
Female heads	65	91.5
Female members	19	26.8
Daughters	16	25.5
Boys	4	10.8
Husband	8	21.6

Source: Survey 2001

In food processing and provision, females perform much of the domestic activities. Table 3.4.4b showed that female household heads perform milling (98.6 percent), cooking (96 percent), baking (100 percent), providing (100 percent), where as male household heads perform baking (46 percent), and boiling grain (78.4 percent). Therefore, females work is critical in food processing and provision activities than food production (compare with table 5.3.1b).

Table 3.4.4b Female and male heads participation in food processing and provision (multiple responses possible).

Responsibility	No of FHHs	Percent	Noof MHHs	Percent
Milling	70	98.6	4	10.8
Cooking	68	95.8	10	27.9
Baking	71	100	17	46.0
Producing cheqa	71	100	-	-
Boiling grain	65	91.5	29	78.4

Source: Survey 2001

3.4.5 Off-Farm Activities

In addition to crop production, 64.4 percent of the households included in FARM Africa survey are engaged in cattle raising while 7.6 percent produce honey (table 3.4.5a). Ownership in smaller animals is high and animal sale is totally prohibited unless severe risk befalls the family (see table 3.4.2a).

The most important off-farm activities that are used to promote food supply in the area are daily wage labor, handicrafts, trade and migration. Even if it needs extensive investigation, the off-farm activities either directly or indirectly affect the major employment (agriculture). For instance, 67.4 percent of households stated that their agricultural activities were negatively affected due to inevitable visit of markets.

Craftsmanship is another socially degraded but economically important off-farm activity in the area. It produces easily marketable items and is not affected by seasonal and natural factors (FARM Africa 2000) hence those engaged in this activity are not exposed to famine and starvation in serious drought conditions. Craftsmen are integrated into trans-woreda market levels (Konso Woreda Agriculture Office 2000).

Although craftsmen earn better income (from products such as mats, potteries, *shema* and farm implements) than their fellow farmers, they are still poor and unable to expand their activities. They need technical, financial and skill support (FARM Africa 2000). They also need information on better markets as the purchasing power in the vicinity is declining from time to time. Out of the surveyed household heads in this study, 57.7 percent of female heads of households and 89.2 percent of male heads of households produce handicrafts for sale.

3.5 Household Energy

About 83 percent of 13646 households in Konso depend on firewood as a source of household energy, where as 13.5 percent use leaves, branches and dung. Petroleum sources are used by only 0.1 percent of households for lighting purposes. FARM Africa report (2000) also indicated that 49 percent of households use at least one *shekem*[3] of wood a day and 51 percent use more than one *shekem* of wood a day.

[3] A local 'unit' for a bundle of wood, which is equivalent to what one person, can carry at a time.

The majority of households (92.9 percent) use the traditional three stone-unprotected stove for daily cooking purposes and only 6.3 percent of the households use a protected stove made from mud. Out of the households surveyed by FARM Africa (2000), 47.4 percent cook in the open air, 44 percent cook in the main house and 3.4 percent in kitchen. Sixty five percent of households cook more than once and 35 percent once a day (FARM Africa 200). All these have results in energy wastage and intensifies women's labor input in firewood collection.

3.6. Roads and Markets

Konso's capital Karat is situated on the main road to *Jinka* and *Moyale*. It had a population of about 11000 in the year 1999 (Karat Town Administration 2000). It is some times called the smaller '*Shashamanne*' due to its optimal location and prospects as a center of future road network. However, the road is only a dry weather one from *Arbaminch-Gidole* and *Jinka*, which makes traveling impossible in rainy seasons. The only all weather road is from *Moyale* to *Konso*.

Markets are important places in the area where people gather to buy and sell, to share information, to meet with friends and relatives, and serve as places of recreation (FARM Africa 2000). The markets are traditional and are not well developed. There are not many industrial products sold and bought and no surplus agricultural products except ' *cheqa*', the traditional beer.

Table 3.6a Items purchased from and taken to the market by household heads in the area (multiple responses possible).

Items purchased	Frequency	Percent
Salt	632	61.0
Food grain	146	14.1
Local made clothes	126	12.2
Domestic animals	48	4.6
Vegetables/roots	34	3.3
Pulses	50	4.8
Total	1036	100
Items sold or taken to the market		
Wood/grass	160	31.2
Food stuff	151	29.5
Vegetables/roots	146	28.5
Handicrafts	22	4.3
Pottery	9	1.7
Local bed	22	4.3
Local made clothing	2	0.4
Total	512	100

Source: FARM Africa survey 2000.

The major items purchased from these markets include salt (61 percent), food grain (14.1 percent) and locally made clothes (12.2 percent), where as those taken to the market are wood and grass (31.2 percent), food-stuffs (29.5 percent) and vegetables and roots (28.5 percent).

The major markets are *Karat, Turo, Gewada, Kolme, Fasha, Fucuca* and *Gumayde*. There are other minor markets such as *Aba Roba*. The major markets are accessible in all seasons. The minor markets are accessible in dry seasons. All of these markets are weekly markets.

3.7. The Description of the Survey Sites

The survey sites coincided with Konso traditional villages. Konso traditional villages are called *Kentas*. The *kentas* are the locus of (FARM Africa 2000):

- Traditional authority and decision-making
- Community cohesion, consensus and the division of authority
- Community mutual support systems
- Community organization of labor and other inputs into development activities

3.7.1 Kemele Kebele

Kemele Kebele was selected for its low agricultural productivity and climatic instability. It is at the bottom of the poor kebeles in Konso by the wealth ranking of FARM Africa's survey 2000. It has a population of 7856 (3633 males and 4223 females) where 1129 are male-headed households and 260 are female-headed ones.

All surveyed inhabitants of Kemele belong to the Konso ethnic group. The survey covered 22 male heads of households and 44 female heads of households. According to the survey results of this study, more females are illiterate in contrast with males (93 percent of illiterate women as compared to 16.2 percent of illiterate men. Both sexes have not achieved an educational level more than grade six (tables 3.7.1a).

Table 3.7.1a Education level of Kemele kebele household heads.

Educational level	Sex	Frequency	Percent
Illiterate	M	6	16.2
	F	66	93
	T	72*	66.7
Literate	M	28	75.7
	F	3	4.2
	T	31**	33.3
Grade 1-6	M	3	8.1
	F	2***	2.8
	T	5	4.6
Grand total		108	100

Source: Survey results 2001

*Illiterates account for 66.7 percent from the total population

** Literates account for 33.3 percent from the total population

The survey result in this study showed that 63.4 percent of the female household heads were married and 15.4 percent of the female heads are widows. There are about 46.5 percent abandoned female household heads. On the other hand, all male heads were married (table 3.7.1b). This indicates that leading households is difficult for males without females (wives). It confirmed with the survey result of Yared 1999 and Jenden 1994 that households are non-functional without females in rural Ethiopia. Their labor is critical in household livelihood security.

Table 3.7.1b Marital status.

Martial status	Sex	No of HHHs	Recent
Married	M	37	100
	F	45	63.4
Widowed	M	-	-
	F	10	14.1
Abandoned	M		
	F	33	46.5

Source: Survey 2001

3.7.2.Gewada Kebele

Gewada Kebele was selected for its better agricultural productivity and climatic stability. It has population of 5154 (2552 males and 2602 females), where 683 are male-headed households and 129 are female-headed ones. All surveyed inhabitants of Gewada kebele belong to the Gewada ethnic group. The survey covered 16 male household heads and 32 female household heads According to the survey results, all females are illiterate which contrasted with males. About 65.1 percent of female heads are illiterate as compared to 14 percent of illiterate males. Both sexes did not attend schooling more than grade six.

Table 3.7.2a Level of education of HHHs

Educational level	Sex	No of HHHs	Percent
Illiterate	M	6	14
	F	28	65.1
	T	34*	79.1
Literate	M	9	20.9
	F	-	-
	T	9**	20.9
Grade 1-6	M	-	-
	F	-	-
	T	-	
Grand total		43	100

Source: Survey results 2001

*Illiterates account for 79.1 percent from the total population.

** Literate account for 20.9 percent from the total population.

All the household heads are breadwinners (table 3.7.2b) whose occupation is agriculture (93.3 percent) and petty-trading (82.7 percent). Out of the heads surveyed, only 2.8 percent migrated to other areas in search of off-farm activities to generate additional income.

CHAPTER – FOUR – REVIEW OF THE RELATED LITERATURE

4.1. The Concepts of Food Security/ Insecurity

4.1.1. Definitions and Concepts of Food Security/ Insecurity

The concept of food security of households is a recent development of 1980s. The concept of food security of individuals or household members is an even more recent debate (CRDA 2000). The shift in the concept of food security focussed on access to food (the ability to acquire food) as well as on supply (availability) in the household (FAO 1998). Recent debates on the food security of households emphasized the role of individuals in the household with respect to access to, and availability of food asset creation and management decisions (Goldstein 1994; Smith et al 1996).

The concept of food security involves all aspects of human food system in the household from production, acquisition and asset creation to utilization (Yared 1999). Food security is hence a comprehensive subject that can be adapted to specific household circumstances and members of the household regardless of type and degree of food shortages in the flow. It enables us to examine the strengths and weaknesses of a household's capacity to meet its own needs and to see the role of each member in the household in fulfilling its needs (Siegle 1995; Yared 1999; Webb 1994; Watts 1983; Netting 1993).

Food security is defined, as a situation where both food supply and demand are sufficient to cover food requirements in a continuous and stable manner. Food

insecurity prevails if, at any time either the volume of food supply, or food demand, or both fall short of requirements (FAO 1998).

In the mid-eighties, the World Bank defined a state of food security as being " access by all people at all times to enough food for an active healthy life. Its essential elements are the availability of food and the ability to acquire it". Food security depends on productive capacity of a population, its income levels, the pattern of income distribution and the functioning of the markets (CODESREA 1998). In countries like Ethiopia, food security depends crucially on a viable and vibrant agriculture by which above 85 percent of the population derives its livelihood. In this respect, land, labor, the crops grown, the assets created in the form of cattle or possessions and management of available resources determines household food security.

Conversely, food insecurity is a state of being unable to acquire food and lack of access by all people at all times to enough food for an active and healthy life. There are two kinds of food insecurity: chronic and transitory. Chronic food insecurity is a continuous food inadequacy caused by the inability to acquire food. It affects households that lack the ability either to buy or produce enough food. Transitory food insecurity is a temporary decline in a household's access to enough food. It is a temporary phenomena related to the cropping cycle or to a sudden shortfall in food access or availability (World Bank 1998; Eshetu 1990; Debebe 1995; Dagnew 1995).

As Maxwell (1996) has pointed out " in reality it is very difficult to distinguish between chronic and transitory food insecurity. A household may face conditions of transitory food insecurity with remarkable frequency; very possibly in the lean period before harvest," which turns out to be chronic when the frequency and severity of scarcity extends (Webb et al 1994). If the household suffers two seasons in a row, and is forced to sell some or all of its assets to survive, it turns to be chronic food insecurity (FAO 1998). In the scope of this paper food insecurity is the situation in which household activities to fill the gaps between food supply and demand fail.

A working definition of household food security is that it is the state at which a household is able to sustainably meet its own food needs (Jenden 1994). Conversely household food insecurity refers to the condition in which households are unable to meet or fall short of meeting their own food needs through out the year either in chronic or sudden cases (Siegle 1995; Webb 1994; Jenden 1994).

4.1.2. **The Components of Food Security**

Four components indicate the food security status of rural household members (FAO 1998; CRDA 2000). The first one is asset ownership (size and types of productive assets). The second one is income (sources of income earning activities and employment). The third component is the availability of active family labor that is able to create incomes and assets. The fourth one is changes in consumption pattern, that is,

eating habits or creating strategic mix in feeding pattern to stabilize the availability of food, food stocks and income management (Dessalegn 1987).

FAO (1998) explains the components of food security as availability of food, stability of income and access to food households need in physical (food stock) and economic (purchasing power) terms. Availability refers to own production and capacity to produce enough. Stability of income refers to diversification of income sources and its productivity. The access refers to the stock in the market as well as the purchasing power created by saving money or in the form of assets such as cattle and possessions.

According to Dagnew (1993 and 1994 cited in CRDA 2000), the specific sources of household food security in Ethiopia are summarized into five sets of dimensions. The first set is related to food production mainly based on crop and livestock. The second set is related to cash income from different sources mainly based on marketing and other trade based incomes. The third set is related to reserves of food stock or other assets that would possibly be liquidated. The fourth one is related to institutional assistance from formal and mutual basis. The fifth one is related to different forms of remittances.

Thus, the components of food security allows us to see the role of female and male household heads in production, market and non-market-based activities in describing their roles in increasing food access and availability. It could also show us how

individual household heads strategize for food security and coping insecurity of households, which they are leading as a breadwinner.

4.2.The Concept of Coping Strategy

4.2.1. Definitions and Concepts of Coping Strategy

Coping strategies in the scope of this paper are the activities pursued by households to food shortages and the role of women in these activities. It implies a forward planning approach mainly at a household and individual levels.

According to Dagnew (1993), households define coping strategy as a mechanism by which individual households or members in the household meet their relief and recovery needs, and adjust to risks of food shortages by themselves without outside support. Davies (1993) defines coping strategy as a bundle of poor peoples responses to declining food availability and entitlement in abnormal seasons or years.

Coping strategy is defined as careful forward planning, as fundamental for food security, at the time of food shortages in households (Frankenberger 1994). Practitioners concerned with small households to improve their food security situation must begin with the understanding of the roles of individual household members in coping mechanisms (Dagnew 1994; Sahn 1989).

Household and individual coping strategies to various degrees of food shortages are often based on the following concepts. There are production-based strategies, market-based strategies and non-market-based strategies such as the use of different institutional and societal income transfer systems (Dagnew 1993). Production-based strategies rely on crop and livestock diversification to increase security by own production. The market-based ones include petty-trading, handicrafts, and selling wage labor and others to increase purchasing power. The non-market-based strategies comprise mutual supports and transfers based on trust and reciprocity. Thus revealing individual roles in these activities will show us the difference of role in gender, asset level and income status in the household.

4.2.2. Types of Coping Strategies

In maintaining food security, households employ a variety of coping strategies. In this case, coping strategy is an array of responses pursued for ensuring against food scarcity in their capacity differing in taste and preference (Goldstein 1994).

The strategies at the household level include social adjustment (remittances, transfer and informal arrangements), migration, off-farm employment and asset liquidation (Yared 1999; Martha 2000; Ali 2000). It also includes risk-minimizing activities such as crop mix, asset creation and savings in cash and kind. However, one or a combination of the above strategies is not available for all households.

From analyzing the concepts of production, market and non-market-based activities in coping with the food crisis, females are much more involved in production and non-market-based activities than market-based ones. Thus, their role is critical as food producers, processors, and providers than food purchasers showing their limited purchasing power. Therefore, they are critical in farming and mutual support activities both in securing food and coping with food crisis.

4.2.2.1. Mutual Support Systems

Mutual supports provide greater flexibility to poor households facing food shortages through reciprocal obligation and inter-household transfers (Webb 1994). Mutual supports include gifts, borrowing, and rotating financial groups such as *iqqub* and *idder*. At initial stages of food shortage, mutual support arrangements are essential. Interventions that neglect these aspects fail to improve complementarity between state, and community sponsored mechanisms in household responses to food insecurity (Smith et al. 1994)

According to Streetland (1996), the mutual arrangements (interventions) are important if they fulfill the following conditionality. The first one is that they should be able to diminish risks for individual households and accommodate the effects of seasonality. The second one is that they should be able to reinforce feelings of self-respect and curtail social maltreatment. The third one is that they should be able to strengthen the

endowment base. They should be able to strengthen coping capacity of households and individual household members.

Female household heads create mutual support systems to secure food. Mutual support systems are traditional insurance for bad times. Mutual supports are built on horizontal cultural norms of identity, trust and reciprocity in creating association ties (Ali 2000; Jenden 1994; Getachew 1991; Harris and de Renzio 1997). Therefore, mutual support systems are coming out to be a component of food security as production and purchasing power is becoming exhausted in the face of drought and poverty (Dessalegn 1991; Jenden 1996).

Mutual support systems are frequently exercised among food insecure groups, such as landless and subsistence farmers who are food deficit, low-income farmers (cash/food crop), and drought prone dwellers. These are often households, which are headed by females (Dagnew 1994; FAO 1998).

4.2.2.2. Social Adjustments in the Household

There are four major areas of coping mechanisms made by social adjustment in the time of food insecurity (Bryceson 1999). These are locational separation of the reproductive couple for the sake of income earning, and reduction in the size of the extended families. Others are weakening of the dependency ties on gender and age

lines within the family units and women's efforts to use matrilineal ties to further their material security.

4.2.2.3. Risk Minimizing Activities

Households also cope with food shortages by risk minimizing practices (Frankenberger 1994). Risk minimizing practices are adjustments within the cropping system in terms of maturation periods and ecological diversity (Yared 1999; Goldstein 1994). Households employ crops that mature early. They also introduce a mix to promote production and reduce crop loss.

Risk minimizing responses include those actions taken to reduce the effects of a decline in productive capital, non-productive capital, human capital, income and claims. It can also be a creation of a buffer against natural risks such as drought, disease and pests. Risks from the declining entitlement can also be minimized by diversifying income sources, creating assets in the form of cattle and possessions as well as intensifying the role of able-bodied labor in the household.

4.2.2.4. Seasonal Coping Strategies

The seasonality of agriculture introduces fluctuation in the income and expenditure patterns of households (Dagnew 1994). Peasant households implement seasonal coping strategies that balance the need to maintain their economic and food security. They

ration available food between seasons, preserve stocks for bad times and change the cropping pattern. They give more emphasis for drought resistant crops and those that stay for a long time in store with out damage (Dagnew 1993). They also diversify labor from the main employment (agriculture) to market based and non-agricultural activities (Smith et al 1994).

4.2.3. The Role of Assets and Personal Preferences in Coping Strategies

Household assets and personal preferences of each member of the household to avoid harmful effects of food fluctuations can determine household coping strategies. A reliable access of the household to food depends on their capabilities. It also depends on ability of individual members in creating reliable stock of capital, labor and social resources (Debebe 1995; Dessalegn 1987; Bell and Newby 1971; Scoones 1996). Asset creation results in a reliable stock of capital that enables a household to stabilize income to secure food. Assets also include human labor and skill, finance, material and social capital in the household and the community. Stocks of productive assets such as cattle are buffers against food shortages.

The creation of assets depends on individual abilities and preferences in the household. For example, able-bodied persons seek wage labor in contrast to inactive ones. Educational level, physical and mental readiness and cultural values given to the specific activity affects the ability of individuals in securing food. Socially degraded

jobs are not preferred and jobs are defined in terms of gender division of labor (Teferi 2001).

In a nutshell, the limited level of control over assets as well as low level of assets for females drain their coping capacity at one hand and influence their preference of food security and coping strategies. It compels them to incline to non-market-based strategies such as mutual supports and rationing available food stock in to time by decreasing food intake. Limited control of assets and low level of assets explains lack of adequate pattern of ownership of essential assets (land and larger animals) for females as well as control of incomes from major sources.

4.2.4. Sequences in Coping Strategies

Risk minimizing strategies are employed in the earliest stages of food crisis, which involve a low commitment of domestic resources (Frankenberger 1994). The sequencing of strategies indicates that households first dispose of assets held as stores of value before disposing productive assets (Yared 1999; Frankenberger 1994; Goldstein 1994). As the food crisis persists, households are increasingly forced into a greater commitment of resources just to meet subsistence needs, a strategy that becomes less reversible the longer the crisis persists finally ending in out-migration from the region (Goldstein 1994; Webb 1994; Siegle1995; Yared 1999; Ali 2000).

The first stages in the coping sequence are reduction of consumption levels, harvesting of wild foods, sales of small livestock and household valuables (Goldstein 1994). As households exhaust the strategies that are available in the early stages of food crisis, they begin to dispose productive assets such as draft oxen and land in an attempt to stave off the dissolution of the household unit.

According to Dagnew(1994 in CRDA 2000), the existing food security strategies of households and individuals are sequentially categorized as:

1. Self-insurance or risk minimizing strategies such as changes in the cropping patterns and asset creation for liquidation in the future.
2. Adaptive or income stabilization strategies which include intensifying secondary economic and market-trade based activities
3. Asset disposal strategies such as sales of productive and non-productive assets
4. Distress migration and family separation[4] including the abandonment of child and / or family members as means of survival

Since females have low asset status, they are likely to rely on self-reliance strategies and seeking for assistance outside their local area showing collapse of self-reliance power for female-headed households in the last drought years. Hence, their role has become critical in creating mutual supports and petty-trading in the area of value-added agricultural items.

[4] Women are affected and are left with children. They bear the burden of extreme suffering from

4.2.5. Changes in Coping Strategies

Recent studies have shown that the range of coping strategies pursued by farm households in drought prone areas have been changing over time due to reductions in response flexibility of small farm households (Frankenberger 1994). The changes in household strategies in drought prone areas can be seen from three angles.

1) Risk minimizing agricultural strategies appears to be narrowing in some locations as repeated sales and re-acquisition have depleted domestic and productive asset levels (Webb 1994). In drought prone areas, agricultural cropping strategies are being replaced by strategies that diversify income sources through off–farm employment and non-agricultural activities that overburden women or may be environmentally damaging.

2) Strategies that rely on social (mutual) support and reciprocity for overcoming food deficits are being eroded due to the integration of individual households in markets (Jenden 1994).

3) A shift has been observed in the responsibility for coping with food insecurity from the individual household and local community toward the national government's relief assistance or NGOs (Siegle 1995; Goldstein 1994).

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economic, social, psychological and physical aspects with their children (Dagnew 1993).

4.3 The Role Female Household Heads in Household Food Security

4.3.1 Role in Production and Domestic Activities

Female heads of households play substantial roles in digging, planting, weeding, harvesting, threshing and storing (Yared 1999). They undertake more agricultural work–hours than men (Dejene 1989). Female heads of households are the major producers of food crops, raise livestock and perform most 'domestic' tasks. They perform these by some traditional tools that consume more time and energy. It consumes about 75 percent of their work hours (Dejene 1989; Elsa 1986; Fetene 1989). About 86 percent of rural women regardless of their marital status who are classified as economically active, are engaged in agricultural production, processing and provision in the household (Fanaye 2000).

Female heads of households carry out traditional roles besides agriculture. These include the care of young children, preparation of food, collection of firewood and fetching water including fodder. They care for livestock and household sanitation activities (Fetenu 1989; Fanaye 2000; MOLSA/WAD 1999).

In fact women's roles in domestic production are critical and conflict with coping mechanisms (Boserup 1970: Ostergaard 1994; Sarkar 1999). The domestic tasks of women and girl child for securing food involve food preparation, wood and water collection, house cleaning and grain processing for food preparation (Yared 1999). In

these respects, women are producers, processors and providers of food. These activities are more intensified for female heads of households as they lack male assistance.

It must be indicated that females' critical roles are more visible in food processing and provision activities than production activities. This is because females and males seem to have an equally important role in production activities. It will not be an indifferent argument to say females are more essential in domestic activities than field works in food security and coping strategies.

4.3.2. Role of Female Households Heads in Coping Strategies

Female household heads play an important role in creating assets to stabilize future entitlements to food. They produce and obtain food to create availability and manage food stocks to avoid actual and potential risk of food shortages for members of the household (FAO 1998). They create assets in the form of possessions.

Managing available grain stocks based on prices is also part of women's strategies. This includes petty-trading in poorer households maximizing price differentials in the markets of the same day. Non-agricultural income diversification is carried out by women as a coping mechanism to insecurities created by variability in agricultural income (Yared 1999). Their role in diversifying incomes does not only help in coping mechanisms but also enhance agricultural productivity (Evans 1995).

Female household heads make substantial contribution to the household economy by selling value-added agricultural products such as *cheqa,* bread and boiled grain. They also perform off-farm and non-agricultural activities such as handicrafts and trading (Dessalegn 1987; Jenden 1996).

Female household heads engage in mutual support relations such as gift seeking and borrowing. They adopt innovative approaches for reducing debilitating workloads such as carts made up of local materials to transport items (Dessalegn 1991). Women also participate in local credit groups such as *Iqqub* and *Idder* in order to save money and to invest in assets (Alula Pankhurst 1987). These are non-market-based activities, which are more likely performed by females in the time of severe food crisis.

In the line of coping strategies, females are more important in diversifying incomes by petty-trading. On the other hand, they mix crops outside the conventional cropping pattern (mix of drought resistant and early maturing ones which are not major crops in the conventional cereal groups in the area) that are considered 'women's crops' around the homestead in the area.

4.3.3 Women's Control of Resources in the Household

Women lack access and rights to resources. They gain limited benefit from the fruits of their labor. This situation is clearly understood and indicated by UN mid-decade conference, Copenhagen, 1987.

As a group, women have access to too much fewer resources than men. They work two-third of work hour, constitute substantial work force and receive one-third of the total remuneration. They own only one percent of the world's material goods and their rights to ownership is often far less than those of men. This reality exists in most households and communities.

Opportunities of access to economic resources, political authority and decision-making power change the general status of women in the society (Tsehai 1991). Studies about Garri pastoral communities in South Ethiopia have shown resource scarcity forces women to take additional economic activity such as petty trading and selling wage labor. The control of assets by women brought them independence and control over wealth and prestige. Their economic power brought them recognition, respect and sense of self- sufficiency among the villagers (Getachew 1991. The socialized differences of gender change with control of assets (Alasebu 1991). Control over productive resources such as land, and control of income, marketing of major assets, labor and capital promotes their status and decision-making power (Ostergaard 1994).

The research report of Getachew (1991) further indicated that the food security status as well as the role of women changed with the control of assets. Their role changed from domestic duties to income generating activities, which promoted their purchasing power and stock of asset in the household.

Economically, Konso women are deprived of assets and incomes from most sources. They gain income from selling *cheqa*[5] and manage consumable cereals, roots and vegetables collected and stored at home (Konso Woreda Agriculture Office 1998). They are not allowed to use the grain stored in the field. This would probably explain

their low coping capacity but they play substantial role in creating food availability. This does not mean that their role in diversifying cash income to increase purchasing power (access) is negligible. They perform more roles in production and non-market-based activities than market-based ones.

[5] Konso traditional beer

CHAPTER – FIVE – DISCUSSIONS AND FINDINGS

5.1.Food Security Situation of Konso Households

Households secure adequate food supplies either by producing enough food for them or from generating enough cash to purchase food from the market. Eighty percent of 110 respondents believe that raising agricultural productivity was the best solution to improving food security in Konso for which local capacity and resources appear to be exhausted in this respect.

The local classification of wealth appears to have changed as a result of the progressive deterioration in the food situation of households. In the study area, food security was a criterion for classifying economic status as in other researches (Jenden 1994; Yared 1999). According to the key informants, classification of wealth in the past was based primarily on land, livestock or other forms of asset ownership. Now rich households are those able to feed household members throughout the year. Medium level households are those who sometimes have problems with their daily food supply; and the poor are those who consistently lack the means of getting their daily food. In this respect, poor households who are consistently lacking daily food are those headed by females (table 3.3b).

Food insecurity has close correlation with smaller land size, livestock, asset possession, and labor availability in the household. Because those with smaller land size, livestock number, assets and able-bodied labor confronted food insecurity (see

table 5.7.3b, 5.7.1a and 5.1c). According to this data, smaller land size, livestock, assets and able-bodied labor correlated with female household heads and food insecurity.

A large proportion of households in Konso face extended periods of food shortages a year. Focus group discussions revealed that food shortages are expected every year from October to December (the hungry seasons as well as from March to May). In most marginal and fragile lands where drought occurs frequently, the hungry season can extend from September to February. According to key informants;

> The trend of the drought situation has been adverse. Securing food has become more difficult from year to year, and food shortage prevails for more than six months even after a good harvest. The food shortage is severe especially from October to December, and from March to May.

The food profile survey results of the Disaster Prevention and Preparedness Commission (1999) for Konso indicated that 70 percent of households face food shortages for seven months in a bad harvest year. Out of the households included in this survey study, 69 percent reported lack of infrastructure as a constraint to obtain food from the market sources. At the same time, 82 percent of 110 household heads reported that they have no purchasing power. This indicated that households were constrained by the lack of infrastructure and cash income to procure food from the market sources.

In the hoe-based traditional farming system of the Konso, 80 percent of female heads of households produce six quintals per year in Meher and 75 percent produce four quintals per year in the Belg (FARM Africa 2000). FARM Africa also indicated that the yield per hectare is 4.9 quintals in Meher and 3.14 quintals in Belg. The result is a little more than agricultural sample survey for Konso (1998). The result in this research project showed that female household heads produce 8.28 quintals in Gewada areas and 6 quintals in Kemele areas. The average grain production for the study area is therefore 7.14 quintals/household/year. In the bad years, the grain harvest may decline to less than one quintal or nil.

According to FAO (1998), the yearly minimum food requirement per person is 225-kg/person/year. However, in Gewada, as obtained by the survey result of this study, the production of food stock (all food obtained in grain equivalent) is 8.28quintals per household in a year. When we divide this into an average family size of five persons in Konso, the grain produced per individual is 165.6 kg/person/year.

The food gap per person is therefore 59.4 kg/year/person in Gewada. In other words, only 73.6 percent of the annual grain requirements are met from own production in Gewada. Seventy three percent of all households and 82 percent of female household heads in the sample said that food production (grain stock) is lower in the year of the study than in the previous year.

The food production for Kemele is 6 quintals/household/year. On the average, it is 120 kg/person/year for an individual in the household. The food gap per person is therefore 105 kg/person/year in Kemele. In other words, only 53.3 percent of the annual grain requirements are met from own production in Kemele. On the average, households are food insecure for about 4.4 months of the year.

Table 5.1a Food security status of female and male heads of households.

Food security status	No of MHH	Percent	No of FHH	Percent
Food secure	2	5.1	-	-
Transitory food insecure	13	33.3	16	22.5
Chronic food insecure	24	61.5	55	77.5
Total	39	100	71	100

Source: Survey 2001.

According to the table 5.1a, 77.5 percent of female-headed households face chronic food shortages, 22.5 percent of them face transitory food shortages. Therefore, food insecurity is positively associated with female-headedness, who are more likely to possess poor quality land and small sized plots less than 1 hectare (table 3.1.4a). In this regard, out of 95.8 percent of households that are food insecure, 87.3 percent are female-headed households. In comparison, 62.6 percent of male-headed households face food shortages for more than 3.5 months where as 33.3 percent of male heads have food shortages from 1-2 months as compared to 9.9 percent of female heads (calculated from table 5.1a and 5.1b).

The reason for the vulnerability as well as actual status of food insecurity for female household heads explain their low income, limited assets and asset control as well as their workload in production, market and non-market-based activities.

Table 5.1b Length of food insecure months of the households

Length of food insecure months	No of FHH	Percent	No of MHH	Percent
1-2	7	9.9	12	32.4
3-5	62	87.3	23	62.2
More than 5 months	2	2.8	2	5.4
Total	71	100	37	100

Source: Survey 2001.

Chronic food insecurity occurs when the food shortage occurs repeatedly over a large period or happens frequently during the year. Transitory food insecurity is a food shortage for a limited period. Table 5.1b indicates that female household heads face food shortages for a longer period of time as compared to male heads of households.

Out of the total number of households (table 5.1c), 82.7 percent are in the poor income category, 14.4 percent in the medium category and 2.9 percent are in the rich income category. In the poor category, female household heads are 81.7 percent whereas male household heads are 75.7 percent. In the medium category, female household heads are 15.7 percent whereas male household heads are 21.6 percent. In the rich category, female household heads are 2.8 percent whereas male household heads are 2.7 percent. In the income category, the data (5.1c) showed gender differences in that female household heads were poor than male household heads.

Table 5.1c Income status of female and male heads of households

Income status	No of FHH	Percent	No of MHH	Percent
Rich	2	2.8	1	2.7
Medium	11	15.5	8	21.6
Poor	58	81.7	28	75.7
Total	71	100	37	100

Source: Survey 2001.

5.2. Household Coping Strategies

In context of severe food insecurity and poor income status, households pursue different strategies at initial and later stages of food shortage. Respondents were asked to list strategies they pursued at initial and later stages of food shortages. Household heads interviewed in this survey study reported the following coping strategies at initial and later stages of food shortages.

Table 5.2a Coping mechanisms pursued by households at initial stages of food shortages (multiple responses possible)

Coping mechanisms at initial stages	No of HHHs	Percent
Limiting size and frequency of food	101	93.5
Borrowing and gifts, cash /kind	98	90.7
Food -for -work payment	93	86.1
Selling livestock	78	72.2
Wood, charcoal and grass sales	38	35.2
Off - farm income	27	25
Mutual support arrangements	67	62.0
Relief assistance	23	21.3

Source: Survey 2001

At initial stages of food shortage (table 5.2a), about 93.5 percent of households limited amount and frequency of food consumption, borrowed and accepted gifts (90.7

percent), relied on food-for-work payment (86 percent), sold livestock (72 percent), and relied on mutual supports (62 percent).

Table 5.2b Coping mechanisms pursued by households at later stages of food shortages (multiple responses possible)

Ways of coping at later stages	No of HHHs	Percent
Asset sales	105	97.2
Farm land sales	63	58.3
out migration	88	81.2
Relief assistance	74	65.5
Off - farm income	70	64.8
Wood & charcoal sale	33	30.6
Gifts & mutual support	87	80.6

Source: Survey 2001

In the later stages of food shortages, households relied on asset sales (97 percent), relief assistance (65 percent), off-farm income (64 percent), mutual supports (80 percent) and out-migration (81 percent) from table 5.2b.

There are differences between coping strategies at initial and later stages of food shortages. At initial stages, most households depend on food rationing activities such as limiting food intake, gifts and borrowing, and livestock sales. However, in later stages, strategies pursued by more households showed the exhaustion of available grain stocks and relying on irreversible activities such as asset sales, farmland sales and out migration (tables 5.2a and 5.2b).

5.3. The Role of Female Household Heads in Food Security

Female heads of households in Konso involve in food preparation, collecting wood and fetching water, and house cleaning and grain processing for food provision (table 5.3.1b). Out side domestic duties, they diversify income by marketing value-added agricultural products such as local liquor, bread and boiled grain (81 percent of 110 respondents). They engage in petty trading and sale of handicrafts (65 percent). These activities enhance their purchasing power. They also manage available grain stock in terms of prices and exchange by maximizing price differences between markets of the same day (table 5.3.2a).

The key informants stated;

> In these activities, women manage the available assets, children, market visits and the crop mix around the home besides food preparation, processing and provision. Women possess and control only *calssita*, household utensils and revenues from *cheqa*, *dabo* and *nifro*. They can mobilize revenues from "instant" trading and market visits in the week. Otherwise, assets are under the men's control. These situations make all female heads of households of lower status in the community. These activities are considered low in status and defined as females' jobs.

5.3.1 Female Households Heads in Food Production and Marketing

The main occupation of the surveyed household heads is agriculture followed by petty trading, and non-farm activities (table 5.3.1a). Twenty three percent of the household heads in this survey study migrated to other areas in search of off-farm employment. Females are much less likely to migrate at all because they are expected to maintain the

house, properties and children. In this regard, only 7 percent of females migrated to other areas for one or more reasons.

Table 5.3.1a Occupation of the household heads (multiple responses possible)

Occupation	No of FHHs	Percent	No of MHHs	Percent
Agriculture	69	97.2	36	92.3
Petty-trading	70	98.6	9	23.1
Migration	4	5.6	11	28.2
Total	37	100	71	100

Source: Survey 2001

Table 5.3.1a showed that 97 percent of female household heads are engaged in agriculture as compared to 92 percent of male household heads. On the other hand, 98 percent of female household heads are engaged in petty trading as compared to 23 percent of male household heads. In this regard, petty trading and agriculture are the main sources of food supply for female household heads whereas male household heads supply food for their family from agriculture and selling migrant labor.

Table 5.3.1b Agricultural activities performed by household heads (multiple answers possible).

Agricultural activities	No of FHHs	Percent	No of MHHs	Percent
Digging	69	97.2	35	94.6
Planting	61	85.9	30	81.1
Weeding	70	98.6	25	67.6
Harvesting	67	94.4	36	97.3
Threshing	53	74.6	35	94.6
Storing	59	83.1	35	94.6
Firewood and water collection	71	100	11	29.7
Transporting	70	98.6	30	81.1
total	520	-	237	-

Source: Survey 2001

Ninety seven percent of female household heads in the survey kebeles were surviving by essentially farming and farming is people's occupational identity in the area. In agricultural production, female household heads play substantial roles in digging, planting, and weeding. A greater proportion of female household heads in comparison to male household heads engage in these activities except in harvesting, threshing and storing (Table 5.3.1b). In addition to farming, survey data and focus group discussions in this study indicated that women fetch water and fuel-wood in the evening without any help from their husbands and transport the threshed grain to home area more than men.

The key informants also stated that;

> Women and men participate equally in weeding and planting. Women play an important role in digging, harvesting, cutting grass for cattle and transporting all products harvested to living house. Transporting grass and grain, firewood and water are solely women's duty including food processing, preparation and provision. Male's sole duty is house building, maintenance and highly technical terraces built by basalt.

Ninety seven percent of female household heads produce food from farming (crop and livestock production), 81 percent from marketing value-added agricultural products and 98.6 percent from petty-trading activities (table 5.3.1a).

5.3.2 Female Household Heads in Food Processing and Provision

Women's traditional roles in Konso include the care of young children, preparation of food, collection of firewood and fetching water including fodder. They take care of

livestock and household sanitation activities. In fact, their roles in domestic activities are critical, without which men cannot secure the livelihood of the family.

Table 5.3.2a The role of household heads in major domestic and field activities (multiple answers possible).

Activities	No of FHHs	Percent	No of MHHs	Percent
Threshing	65	91.5	36	97.3
Grinding	69	97.2	10	27.0
Baking	70	98.6	-	-
Providing boiled grain	67	94.4	-	-
Providing *cheqa*	71	100	-	-
Providing water	64	90.1	17	45.9
Child care	69	97.2	21	56.8
Care for livestock	59	83.1	30	81.1
Collecting firewood	63	88.7	12	32.4
Fetching water	68	95.8	8	21.6
Washing clothes	70	98.6	11	30.0
Home cleaning	66	93.0	5	13.5
total	801	-	154	-

Source: survey 2001

The data in table 5.3.2a shows that there are gender differences in food processing, provision and other major household activities. A much greater number of female household heads engage in all domestic and field activities except threshing. Male household heads do not participate in baking, providing *chaqa* and boiled grain. Male household heads participate to a very limited except in fetching water, collecting firewood, and washing clothes and cleaning house in the household.

5.4. Coping Strategies Pursued by Female Heads of Households

Female heads of households are constrained by lacks of land, cattle, and male labor, which enhances the food insecurity of their households. The following are coping

strategies pursued by female household heads in the study area at the time of food shortages.

Table 5.4a Coping and food security strategies of female heads of households (multiple responses possible).

Coping strategies pursued by females	Noof MHHs		Noof FHHH	Percent
Grass and wood sales, collecting wild food	20	55.4	59	83.1
Producing *cheqa* for sale	-	-	68	95.8
Changing cropping strategy	21	56.8	67	94.4
Forming *Iqqub* and *Idder*	17	45.9	66	93
Petty trading	9	23.1	70	98.6
Selling daily labor, food-for-work	32	86.1	50	47.6
Decreasing size and frequency of meal intake	18	48.6	68	95.8

Source: Survey 2001

Table 5.4a showed that male household heads were more likely to engage in selling labor for food-for-work payment (86.1 percent), changing the coping strategy (56.8 percent) and collecting wild foods as well as grass and wood sales (55.4 percent). Female household heads relied more on activities presented in the table except limited reliance on selling daily labor for food-for-work payment. Probably, an investigation of a wife's role in the male headed households could have illuminated food security and coping strategies of households in a good manner. Since the aim of this paper is to investigate how individual household heads strategize and how their strategies differ in level of assets, income and gender in rural households. The former idea will be an interesting line argument for a research in the future.

5.4.1 Mutual Support Arrangements

Female heads of households in Konso establish mutual support relationships to cope with fluctuations in household food and income. They create *iqqub* (rotating credit group) to raise fund in cash and kind. This increases their purchasing power and provides insurance for bad times (table 5.4a).

The present survey (table 5.4a) indicated that 97.2 percent of female heads of households borrowed grain and cash from neighbors and relatives. About 93 percent reported that they are participants in *iqqub* and *idder,* while 5.6 percent participated in traditional redistribution of available food in the *Kenta*. In this activity of coping, according to key informants, one-third of the available food grain from all individuals who had had a good grain harvest is collected into the hands of community elders in the *Kenta*. After this, the collected grain is distributed among the food insecure households based on traditional trust and reciprocity.

Traditional redistribution of the collected food grain and the initiation in the *Kenta* is predominantly male concern as 89.2 percent of males said that they used it to cope with food shortages (focus group discussions as well as table 5.4.1a). The initiation of the *kenta* elders and leaders as well as a request of a greater number of male household heads in the *kenta* does this.

Respondents were asked, "What coping strategies of mutual support basis they were preferred in time of food insecurity". Male heads of households were much more likely to mention traditional redistribution of available food in the *kenta,* seeking credit from merchants and *Omo* Micro-finance institutions, whereas female household heads were much more likely to mention borrowing and accepting gifts as well as *iqqub* and *idder* (table 5.4.1a).

Table 5.4.1a Household heads preference of coping strategies on mutual basis (multiple answers possible).

Coping strategies based on mutual support	No of FHHs	Percent	No of MHHs	Percent
Borrowed and accepted gifts	69	97.2	9	24.3
Iqqub and *idder*	66	93	17	45.9
Traditional redistribution	-	-	33	89.2
Credit from merchants	3	4.2	26	70.3
Credit from Omo Micro-finance	5	7.1	22	59.5
Total	143	-	107	-

Source: survey 2001

5.4.2 Risk Minimization Activities

The cereal–root crop combination as an agricultural strategy has distinct advantages in Konso households in terms of coping with food insecurity. Inter-cropping of the major root crop (cassava) and vegetable (*aleko*) with sorghum maximizes the availability of food and reduces risk of total crop loss due to their drought resistance in Konso, which is fragile and prone area to incidence of drought. These cropping strategies directed at securing food are mostly female's responsibility in the household (key informants). Ninety four percent of 110 respondents state that females mix the planting of cassava, *aleko*, pigeon pea and sorghum around the homestead. Out of the above respondents,

81.3 percent reported the practice of inter-cropping on farm plots far away from the residential house, and around the *Palewa*.[6]

Table 5.4.2a Risk minimizing activities by heads of households (multiple answers possible).

Risk minimizing activities	No of FHHs	Percent	No of MHHs	Percent
Keeping possessions (farm implements and jewelers)	51	71.8	31	83.8
Keeping sheep and goats (small ruminants)	68	95.8	34	91.9
Keeping cows	10	14.1	28	75.7
Keeping oxen	3	4.2	13	35.1
Keeping pack animals	47	66.2	30	81.1
Intercropping cereals, roots and vegetables	67	94.4	21	56.8
Producing handicrafts	29	40.8	35	94.6
Storing grain for bad times	18	25.4	33	89.2
Total	293	-	225	-

Source: survey 2001

The lack of role in de-investment illuminates the lack of females' control over asset and decision-making power in the household. This affects the risk-minimizing practices that are related with asset formation and income diversification that helps as a buffer to avoid future risk conditions.

Here it is indicated that female household heads rely greatly on keeping possessions, (71.8 percent), small animals (95.8 percent), and some pack animals (66.2 percent), as well as intercropping cereals, roots and vegetables (94.4 percent). In contrast, male household heads rely mainly on keeping possessions (83.8 percent), cows (75.7 percent), producing handicrafts (94.6 percent) and storing grain (89.2 percent). This

[6] See footnote[1] that explains Palewa in the description of the project area.

table (5.4.2a) does not show clearly the gender differences except in larger animals such as keeping oxen and cows as well as handicrafts and storing grain for bad times.

5.4.3 Seasonal Coping Strategies

Seasonal coping strategies are often social adjustments and food rationing practices in the household during the peak food insecure seasons. One strategy is to decrease family size by sending to kin who are food secure but have labor scarcity (74.1 percent). Seasonal strategies also include the creation of maternal links by seeking some food or cash from kin of the mother to stave off seasonal scarcity (66.7 percent of 110 respondents). Experiencing feeding distinction between members in the household (94.4 percent), often the best for smaller children also shows seasonal coping strategy. Changing type of meals, to cheap and wild foods (88.9 percent) and reducing the amount and frequency of meal during the day (78.7 percent) are often seasonal coping strategies (table 5.3.4a).

Table 5.4.3a Seasonal coping strategies pursued by heads of households (multiple answers possible).

Seasonal strategies by food rationing	No of FHHs	Percent	No of MHHs	Percent
Decreasing family size	54	76.1	26	70.3
Seeking support from kin through mothers	61	90.2	11	29.7
Eating cheap and wild foods	68	95.8	28	75.7
Reduce amount and frequency of food per day	62	87.3	18	48.6
Giving better foods to children	70	98.6	32	86.5
Total	315	-	115	-

Source: Survey 2001

There are gender differences in that female household heads were likely to choose decreasing family size, seeking support from kin, eating cheap and wild available food, create feeding distinction and decrease amount and frequency of food intake. Whereas male household heads are likely to choose feeding distinction, and eating cheap and wild foods (table 5.4.3a).

5.5.Changes in Coping Strategies

A change in coping strategy has been seen in crop types. A change is reported from relying on cereal crops to roots and vegetables. Climatic changes and decreasing productivity have created inadequate food reserve that has weakened traditional (conventional) means of coping with food shortage. Even cassava and *aleko* are becoming highly seasonal sources of food due to overexploitation and recurrent drought.

A woman abandoned by her husband stated;

> I cultivate the land (dig, weed, harvest, transport and store,). Since maize and sorghum are becoming unproductive due to drought, I plant pigeon pea with cassava and *aleko*. Some times, I also plant coffee and *chat* as well. I plant cassava and *aleko* around the home and the garden. I visit markets to create additional income by selling *cheqa* and grains from markets of surplus. I often give incomes to my husband and he gives me what he thinks is enough for me to use with my children.

Multi-cropping or inter-cropping farming system comprises cereals (maize, sorghum, pigeon pea), roots (cassava) and vegetables (*aleko*) in the mix. To cope with the recurrent food shortage, the cropping strategy (mix) has been changing towards an expansion to drought resistant root and vegetable crops in comparison to cereals. But as indicated earlier, local means are becoming exhausted, and people are increasingly relying on food-for-work payments (63 percent of 110 respondents) of households in that year and food aid (29.6 percent of 110 respondents) from both government and NGO sources, especially FARM Africa.

In the words of one focus group participant:

> We mix the crops together. If one fails due to drought, the other will survive and we secure our food as well as cope with the recurrent food shortages. Cassava and *aleko* are the most important ones in the mix due to three reasons. First, they conserve moisture on our land and provide shade for other crops. Second, they are resistant to fungus and last without spoiling for many days. Third, they have medicinal value for all kinds of intestinal worms. However, this mix is becoming exhausted in the face of drought and we are changing our hope to government and NGO food assistance. However, female household heads still plant cassava and *aleko* around the living house in the *Kenta*.

The above case study showed that there are changes in the line of reliance on food aid than own production. In this case, female household heads are relying more on food aid than own production. An abandoned woman stated;

> I am 43 years old. I had 10 children from my husband. Three died young. From the remaining five, three are daughters and were married. The two boys cultivate land for me. My husband also helps in cultivating the land. Since he frequently goes to the younger wife, he doesn't share all the woes with me. The grain we harvest has decreased from time to time. The last three years were worst years we have ever seen. We survived on food aid given by Farm Africa and the woreda council. Some times, the Agriculture bureau used to give food-for-work payment. I am becoming weak due to old age and God knows how we would survive in the future. Tell also the officials above the woreda.

Living in traditional society like Konso is difficult for female-headed households. Food shortage and smaller land holding correlated positively with femininity in the survey result of of Fetenu 1989. The survey results of this study showed that 94.8 percent of female household heads own land less than one hectare and those who lack control comprised (47.1 percent). Only 23.9 percent of female heads of households control land by themselves and 22.5 percent jointly with husband. The remaining 54.8 percent reported that land is controlled by men (5.7.1a).

As indicated by case studies, the tradition gives rights to men while in the absence of male child; females are compelled to transfer land to relatives of their husband. Hence, females are compelled to pursue coping strategies that are related to rationing food, social adjustment processes, mutual support arrangements and risk minimizing practices depending on the assets at their hands (appendix 3.1 and 3.2).

5.6. The Role of Assets and Personal Preferences in Coping Strategies of Households

In Konso households, those with better asset level have been observed to have better coping capacity. Out of the households in this survey study, 71 percent of male household heads stave off food shortages by selling small ruminants. On the other hand, 45.1 percent of female household heads sold cattle. This shows that those having saleable assets such as cattle have better coping capacity. It shows gender differences

as well as difference in income level. However, only male boys have the right to sell larger livestock in female-headed households (appendix 2).

There are differences in food security and coping strategies between food secure and insecure heads of households. Foods insecure ones use the sale of productive assets such as cattle and land especially at later stages. They also focus on food rationing (decreasing food intake and changing the feeding distinction such as better food to children and males). However, the food secure ones accumulate assets by purchasing them at low prices. This process creates a wide gap in asset differences between male and female heads of households as well as poorer and richer households. This has gender implications because female heads of households are food insecure as well as poor in the community.

One of the focus groups stated that;

> In drought years, the poorer households are more affected by selling their cattle and possessions at low prices. The richer households buy at low prices. Those households led by females are more affected because the market gives fewer prices for their cattle. The richer households some times exchange their cattle with grain. In good harvest years, the richer households sell their cattle in good prices, which also drain the cash income of the poor.

Personal preferences also change with the extent of food shortage. Respondents were asked the question "what was their preference at initial (when the food shortage begins) and later (when the food shortage becomes critical) stages of food shortages". Seventy three percent of 110 respondents reported that they preferred rationing food

into time by decreasing amount and frequency of food intake. The other 27 percent responded that they preferred collecting wild food and migration for food or cash income. When these sources are exhausted, they start selling assets such as possessions and small animals earlier and selling land and living houses later.

5.7 Constraints on the Role of Female Heads of Households in Food Security

5.7.1.Lack of Control over Resources

Female respondents were asked "what key economic assets they control in the household" and they have reported the following. The answer possessed multiple responses. Since the ownership pattern of key economic assets and products of labor fall in the hands of boy children in the family, female household heads feel deprived of resources even in the absence of husbands showing male domination in resource control and decision-making in the society at large.

Table 5.7.1a Essential economic assets of female heads of households (multiple responses possible)

Key economic assets	No of FHH	Percent
Grain	66	93.0
Household utensils	68	95.8
Cheqa and its revenue	61	86.0
Calssita	67	94.4
Chicken	68	95.8
Farm implements	51	71.8

Source: Survey 2001

Females create household assets together with men. However, their possessions of essential economic assets are limited thus, 23.9 percent of female household heads reported their control over land (table 5.7.1a). The limited possession of key economic

assets for females, especially land and livestock, drained their decision-making power as well as asset utilization in the household. Therefore, they feel poor and deprived despite their role in creating assets, providing food and security of the household.

Table 5.7.1a showed that females have no indication of control over land that drains their decision-making power and income control. In this regard, about 89 percent of 110 female household heads reported the implementation of policies said to empower females did not ensure control over land during the last eight years. As the result of lack of control patterns and support from formal policies, female heads of households stayed vulnerable to food insecurity (see appendix 3.1, p.114).

However, female household heads reported that they decide together for mobilizing resources but the focus group discussion, case studies and key informants indicated no asset control right for women except from sale of *cheqa* and *calssita.*[7] The key informants indicated that, currently, male-children are selling and mortgaging land without their mothers' knowledge with the assumption that land does not concern mothers. This might also be an indication of differences in assets among female heads as well as male and female heads of households (appendix 3.1, p.114).

Female heads of households are the most insecure members in Konso households as in Ostergaard 1994. Food insecurity and decline in decision-making power in resource scarcity positively correlates with femininity in Konso confirming with the result of

[7] Traditional hide -made equipment used by females for carrying items.

Jenden 1994 in Kindo Koisha, Wollaita. Jenden (1994) and FAO (1998) relate this aspect with entitlement and biased asset distribution to male.

The land size and quality of land that the households possess is critical that determines production potential and the availability of food in the area. The present survey showed that 76.5 percent of female household heads rate their plot of land as poor that manifest itself in low productivity of grain and food shortage frequently. Out of this, 92.1 percent of 71 female household heads possess land less than one hectare. These shows that the main resource base (land) in the area is under male control which force women's asset base to decline and compel to coping sources other than farming.

5.7.2 The Effect of Marriage and Divorce on Women

As focus group interviews and case studies in this study indicated, both marriage and divorce have negative consequences on female heads of households. At divorce, they loose household resources such as land, living house, and cattle including their children. Sixty nine percent of female household heads reported that marriage and divorce negatively affect women's access and control over resources. They are allowed to take *calssita* and money incomes from value-added agricultural products such as preparing *cheqa* for sale and market visit.

Marriage practices also negatively affect the lives of the newly married couple in that the husband is asked to give a large bride wealth to the parents of the girl. In the case

of Gewada, the new wife takes the responsibility of re-stocking the cattle sold for the bride wealth. In the time of divorce, she is asked to repay in some cases.

Therefore, the bride wealth affects the resource base of the new family and diminishes their economic status for a certain period. In this situation, both genders experience unfavorable living conditions at least for a short period.

The bride wealth was collected in the form of cattle usually numbering from 2-5 cattle. In many cases, it was in the form of ornaments and clothing for the girl according to the resource status of the family of the boy. There are also cases where the bride wealth in the form of cattle becomes mandatory regardless of the asset base of the boy (focus group discussions).

Married women cannot criticize their husbands. In their parent's house, girls perform all activities (agricultural and non-agricultural), usually getting prepared for the life they are expected to lead in their husband's house. However, at times they marry, they engage in the responsibility of repaying the bride wealth and other costs incurred in the ceremony by agricultural and non-agricultural income generating activities. Out of the female household heads, 89.2 percent reported that they felt marriage was a commitment to perform additional workload and responsibility while having no asset control rights. On the other hand, 91 percent of male household heads reported that they felt marriage drained their resources but allowed repayment in labor from the coming wife. Regarding divorce, females loose both access and control over resources

including children (87 percent of the 71 female household heads) with negative repercussions for female household heads possibly for leading an independent life.

5.7.3. Recurrent Drought and Land Deterioration

The distribution of land size (table 3.2a) shows that the land is so fragmented and 94.8 percent of the respondents possess land less than one hectare. The respondents were asked to rate the quality of land in terms of productivity in grain. The result has shown that 76.5 percent of the land that the households possess was poor and 20.4 percent was good irrespective of sex. But 3.1 percent of the male respondents rated their land plot as very good (plain, fertile, near water shore and productive that is better than others. They also use irrigation in traditional ways). Out of the surveyed households, ninety five percent of female household heads reported that they possess land less than one hectare (table 3.4a). On the other hand, respondents were asked, "what were the causes of soil depletion in the area according to their views" and their multiple report was as follows.

Table 5.7.3a Causes of soil deterioration as reported by heads of households (Possess multiple answers).

Causes of soil depletion	No of FHHs	Percent	No of MHHs	Percent
Deforestation	66	93.0	35	94.6
Erosion	68	95.4	32	86.5
Over-cultivation	61	90.2	28	75.7
Recurrent drought	69	97.2	36	97.3
Total	258	-	132	-

Source: Survey 2001

In this regard, 94.5 percent of the sampled households in this study reported that female-headed households possess smaller and infertile plots. About 92 percent of female heads reported that they possess marginal land; fragmented and infertile which is susceptible to erosion. The female household heads also obtain limited grain from this land; and are subject to food insecurity from year to year (table 5.7.3a). Even if they cultivate every year, they are compelled to opt for market-based and non-agricultural options (79.9 percent of female household heads). This adds extra burden on women in terms of workload as compared to men.

Table 5.7.3b Crosstabulation of land size as a proxy to land scarcity and food security status of household heads as reported by heads of households (Possess multiple answers).

Food security status of household heads	Land holding of households in hectares			
	<1 hectare	1-1.5 hectares	>1.5 hectares	Total
Food secure	-	-	4	4
Transitory food insecure	26	6	-	31
Chronic food insecure	65	7	-	72
Total	91	13	4	108

Source: Survey 2001

The frequencies of food shortages seem to correlate positively with land size and quality. The table (5.7.3b) shows that most households fall under the category of chronic and transitory food insecurity as well as land size less than one hectare (table 5.1a).

The recurrent drought also affected the agricultural production of female heads of households. About 86 percent of female household heads reported that the recurrent drought of the last three years further degraded their land. Due to the drought, their

land was exposed to sheet and galley erosion. This forced female household heads to intensify market-based activities and compelled them to divert from the main occupation (agriculture) to others (Case study of widow woman).

5.7.4. Low Participation in Formal Institutions

As has been indicated in the background, Konso females have limited access to education, which has resulted in substantial females' illiteracy. Out of the interviewed household heads, 84.6 percent of female household heads were illiterate and 15.4 percent attended formal education below grade 6. But all male household heads attended at least formal education below grade 6 (table 3.7.1a.)

The participation of female household heads in public meetings is appreciable (75.8 percent of 71 female household heads) but only 2.8 percent participated in the extension packages. One can infer that the lack of participation in economically beneficial programs further weakens their capacity to change their poor economic status.

The extension criteria do not consider the economic status of female heads of households. The poor economic status of female heads of households forbids them from participating in the extension package. They cannot pay the down payment for inputs. They have no oxen. They do not have larger plots to plough with oxen. Since

the extension package needs land, oxen and a down payment, females are unintentionally neglected in the package.

Out of the surveyed households in this study, 80 percent of the respondents do not participate in extension package. Only 19.6 percent of respondents participated in extension package in which females are only two in number.

Regarding access to credit, female household heads accessed to community sources of credit. Males accessed to market sources of credit. Hence, female household heads accessed credit from friends and relatives (65.4 percent) and merchants (5.6 percent). While male household heads have accessed to merchants (62.2 percent) and to friends and relatives (37.8 percent). Only one female household head accessed credit from formal institutions. However, 35.1 percent of male household heads accessed credit from formal institutions (table 5.7.4a). This explains that in the changing relations of individuals in the market, female's reliance on informal (traditional) sources may result in diminishing trends in purchasing power and possibility of expansion for activities which they are financing with the credit they have been offered.

Table 5.7.4a Access to credit sources pursued by household heads (possess multiple answers)

Credit Sources	No of FHHs	Percent	No of MHHs	Percent
Formal institutions other than bank	1	1.4	13	35.1
Friends and relatives	46	65.4	14	37.8
Merchants	4	5.6	23	62.2
Never seek credit (It is men's duty)	20	27.6	-	-

Source: survey 2001

Even if it needs an investigation by its own, it throws light on the productivity of production and market-based activities pursued by household heads in the area.

On the other hand, the participation of female household heads in the health and family planning practices is low. The survey result showed that only 2 percent of female household heads attended family planning services, 15 percent of them heard about the program and below 1 percent took birth control who attended formal education below grade 5.

About 73.5 percent of household heads in this study believe that the food security status of households increased with participation in credit and extension package. Since male heads of households had better participation in these institutions, female household heads lacked these opportunities. This negatively affected the capacity of female household heads to produce and create assets, which would have an indirect impact on their role in household food security. It was also the result of low level of female education in the area.

CHAPTER – SIX – CONCLUSION AND RECOMMENDATIONS.

6.1.Conclusion

The Konso woreda faced crisis conditions such as recurrent drought, population pressure, farmland scarcity and insufficient food supply from own production. The causes of limited food supply are land scarcity and loss of soil fertility. Land has become scarce due to fragmentation as the population increases. Loss of soil fertility is fatal due to over-cultivation and deforestation. In some places, it is irreversible.

There has been recurrent drought from year to year. As a result, farmlands have become marginal due to overexploitation, loss of soil fertility and drought. The land outside the traditional villages is becoming out of use. The land under the *palewa (traditional Konso village comprising up to 10 households)* is more productive due to conservation practices and organic items applied daily on it. The deterioration of land outside the traditional villages has led to the depletion of wild animals and forests on the common lands. Despite the conservation practices that have begun 500 *kelta (traditional Konso calendar, one Kelta is equivalent to eight years)* ago, Konso soils are prone to extreme deterioration.

People in Konso are predominantly engaged in farming. They also practice handicrafts, trade, wage labor and participate in civil services. The crops that grow in the woreda include maize, sorghum, pigeon pea, cassava, *aleko* and *chat*. The largest proportion of households in the area depends on farming, food aid and the market for their food

supply, because income from own production does not satisfy the household for more than seven months.Regarding farming, a great proportion of crops produced were damaged by pests, weeds and wild animals. Shortages of fodder and animal diseases have affected raising livestock. Handicrafts and market visits are becoming more important in the food security. Poorer families engage in petty trading by maximizing price differentials between markets on the same day and richer families accumulate assets as food shortages persist.

Concerning household energy, people use unprotected traditional stone stoves, which wastes at least half of the energy. These stoves use more *shekems (a local unit of measure for a bundle of wood)* of wood per day exacerbating the workload on women as well as depleting the meager forest, which remained at 0.84 percent of the total land area.

Food insecurity is severe and recurrent in the area. The survey kebeles have indicated that most of the households are food insecure for 4.4 months of the year. It has indicated that the coping strategies pursued by households reveal gender differences. Female household heads are likely to rely on mutual support basis whereas male household heads rely more on asset sale indicating asset control differences by gender. Policy actions did not promote women's asset control patterns especially land.

Recently, coping strategies are changing. The change is from the exhaustion of self-reliant coping strategies and agricultural based (the main occupation) to reliance on external assistance, as the drought situations become more severe.

The study found that there was a high level of female illiteracy in comparison to males, which is closely, correlated to food crisis and asset control patterns in the area. Formal institutions disregard females that are actually exacerbating their social, economic and intellectual readiness in the society to decline.

Both marriage and divorce negatively affect women in the society. They bear the burden of re-stocking property that is given by the husband as a bride wealth. They gain nothing from their family in which they have labored until marriage, except a "*calssita*", *(a hide specially prepared for carrying items and used only by females) that* is used for carrying items in the husband's house. This also indicates the cultural position of females in the community who are expected to marry to labor for the new husband. They gain nothing in the time of divorce other than *calssita* and revenues from sales of *cheqa*.

Unintentionally, formal institutions are more likely to benefit males. For example, the criteria for extension service do not consider the asset base of female household heads. It needs down payment, oxen and land. However, most female household heads do not possess and control these assets.

The food grain and other food stock of the households were not enough throughout the year. Therefore, the food gap was filled by strategies in the production system as well as outside the production system such as external aids, mutual support systems and social adjustments in the family such as limiting the family size as well as creating links with kin who are food secure.There were also risk minimizing strategies such as asset creation and seasonal coping strategies such as rationing available food stock into time by decreasing food intake. The coping strategies are also changing from mutual support based activities such as gifts and borrowing to market relations (cash crops).

Coping strategies also have sequential patterns. Households first sell small ruminants and household valuables, which are reversible to recover. Second to reversible activities, they sell land and living houses, which are irreversible activities. Therefore, coping strategy has sequences and stages based on personal preferences and asset differences. Those having possessions like ornaments or those having sufficient animal stock sell some and buy grain. Some household heads prefer to commit credit and collect wild foods.

Coping strategies also illuminate gender differences in that female household heads mostly engage in mutual based strategies whereas male household heads mostly engage in market valued strategies. For instance, male household heads in this survey study mostly pursued credit and sold cattle whereas female household heads pursued *iqqub* and *idder* in cash and kind as well as borrowed and accepted gifts from neighbors and relatives.

6.2. Recommendations

1.The crisis of food has been frequent due to soil deterioration caused by deforestation and pressure of population on the land. Actions to replace forests thereby protecting soil deterioration and family planning services to stave-off population pressure need immediate intervention in the area with caution that interventions based on payment must not divert, peoples' daily activity (terracing) into payment oriented external job. This would initiate the diversification of production capacity of females and the productivity of the soil including better food allocation and distribution. In this regard, the government and NGOs should target resource rehabilitation practices as well as family planning services.

2.The cropping strategy (the mix of drought resistant crops) should be promoted by allowing credit thereby diversify income by petty trading that create assets in the hands of females to develop control aspects. Since better asset (land size, quality and education level) correlates with better food income, actions should stress on women education, allowing better land and skill to use and control the land. Because women with better assets have shown better coping capacity. Provision of adequate inputs and credit services by NGOs and the government to improve agricultural food production would stave off the food crisis situation of female-headed households and enhance their roles in coping crisis.

3.Most female-headed households cope food shortage by food rationing and mutual support basis. The development of improved storage capacity needs attention to better allocate and ration food along time dimensions and management of grain.

4.Since employment opportunities are nil in the area, as local capacity to cope food shortage is exhausted, interventions need to promote employment opportunities for women, infrastructure and energy saving equipment. This action would promote purchasing power, better food exchange between drought prone and food surplus areas as well as enhance the capacity of female-headed households to cope food crisis by intensifying their labor input on activities other than firewood collection.

Certainly, female household heads need a viable employment option for the hungry seasons targeted for them. Therefore, local employment opportunities for food insecure seasons are needed as well as target female heads of households who are observed poor and in most cases feel deprived in the area.

5.Handicraft is practiced by women and is easily marketable as well as not affected by drought as such. Activities that introduce technical, financial and skill support is needed separately for women thereby promoting access to better market and quality as well as enhancing the purchasing power of the female headed households. Intensive awareness creation activities are also needed to promote social valuation for handcraftsmanship.

6.Recently, women's participation in labor sale has increased. Labor intensive and environmental rehabilitation actions should be intensified, taking care of payments for working on terraces that are culturally people's daily activities.

7.Activities that target female-headed households on one hand and developing soil fertility on the other are needed to secure food in the area. It should promote the mechanism of crop mix. Therefore, agricultural policies should incorporate this aspect in the area.

8.Increasing family size to increase able-bodied household member and to intensify labor on different jobs at household levels to cope food crisis may exacerbate the depletion of the resource base (land deterioration and fragmentation by enhancing population pressure). It may also disintegrate the family, as the food crisis becomes persistent draining conventional coping mechanisms. Therefore, family planning services should be intensively provided for females by health institutions and NGOs.

9.The basic cause of female headedness is polygamy as well as marriage patterns that allow young girls to old males. Since it negatively affects women showing gender differences, it needs basic education for females and public awareness. Hence, women need affirmative actions by formal institutions besides interventions that create public awareness.

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APPENDICES

Appendix-1. Summary of Key Informants

The trend of the drought situation has been adverse. Securing food has come short from year to year, and food shortage prevails for more than four months even at good harvest. The food shortage is severe especially from October to December, and form March to May.

Women and men participate equally in weeding and planting. Women play an important role in digging, harvesting, cutting grass for cattle and transporting all products harvested to the living house. Transporting grass and grain, firewood and water are solely women's duty including food processing, preparation and provision. Male's sole duty is house building, maintenance and highly technical terraces built by basalt.

Households and its members pursue various coping mechanisms in times of food shortage. The coping mechanisms have long and short-term time dimensions. At short-term strategy, available food is allocated into time (rationed by skipping meal or decreasing frequency of meal per day). They also collect wild food, start wild foods, sell labor to buy grain and borrow or seek gifts from neighbors and relatives. As a long-term strategy, they mix roots, cereals and vegetables that resist drought and create mutual support systems (*idder* and *iqqub* in cash and kind, village (*kenta)* elder's committee for redistributing the available food in the *kenta*), intensify petty-trading and migrant income to re-stock assets for future disposal.

In these activities, women manage the available assets, children, market visits and the crop mix around the home besides food preparation, processing and provision. Women possess and control only *calssita*, household utensils and revenues from *cheqa*, bread and boiled grain. They can mobilize revenues from petty-trading and market visits in a

week. Otherwise, assets are under men's control. These situations make female heads of households to have a lower status in the community.

At the time all means of coping food shortage exhaust, mutual support at relative and neighbors level change to the level of *kenta* (traditional village). At this level, as a last resort, elders or elder's committee from different *kentas* gather together and register the available grain in different households and redistribute equally into food insecure and secure households. Households that had a good harvest contribute one-third of the grain stock at their hand. The exciting fact is that the redistribution is on the basis of traditional trust and reciprocity than market orientation because they believe that once upon a time, the food secure would fall into food insecure. But all believe that as drought became severe and recurrent, mutual support systems are decreasing as well as changing people rely more on seeking aid from government and NGOs.

Females share nothing during spousal death unless she is proved to be generous for all relatives and families of the spouse. In these circumstances, she can be permitted to live by marrying a brother of the husband. Otherwise, she goes back to her family without any share of property including a breastfeeding child if any. The only property she can take is her clothing and *calssita*; a hide given by her family which is used for carrying and transporting grain, water pots and others in the case she remarries or at her father's house.

Appendix-2. Summary of Focus Group Discussions

The recurrent drought in the past three years affected our cattle, crop and our health. It was unprecedented. Our land is small, and lost its fertility. The forests are depleted. Our government and aid organizations provided us with wheat, edible oil and food for children for the last three drought years. Food aid is good; but extension package is bad. It immersed us into unutterable debt. *The extension agents do not know what we want and what we know, but they tell us what they know.* Their knowledge did not help us because they do not know our environment lacks rain. Extension crops and fertilizers need more rain water. We lost cattle and capacity to re-stock let alone to pay the extension debt.

Due to drought, we have no grain stock that satisfies more than 7 months. We loos our assets are lost. We have much few cattle. We have no employment other than agriculture. Our '*bulliko'* and ' *hadaya*' (off -farm produces) are not sold due to lack of markets and income for the people at large. Wild foods are dried as forests depleted. Due to loss of food to obtain, we know before, we are hoping to sources of government aid, church aid and FARM Africa. Those women who lead families are affected since they can't go out of the vicinity to collect food and money. Those women abandoned and widowed are more affected, and they possess unutterably little capacity to feed their family.

Terraces are important to protect our soils. It is believed by our fathers to be started around the *Palewa* as water become scarce in the past 500 *kelta* ago. It was widely practiced as it was seen protecting the soil. Primarily, terracing was females' duty to accumulate water for animals, but later on all able-bodied person started creating basalt terraces. Recently terraces are constructed by *debo* to make better use of time, skill, material and resources. Without terraces, we know that, "our soils are lost".

We mix the crops together. If one fails due to drought, the other will survive and we secure our food as well as cope the recurrent food shortages. Cassava and *aleko* are the most important ones in the mix due to three reasons. First, they keep moisture for our land and a shade for other crops. Second, they avoid fungus from boiled food and preserve without spoiling for many days. Third, they have medicinal value for all kinds of intestinal worms. But this mix has becoming exhaustive in the face of drought and we are changing our hope to government and NGO food assistance. But still women plant cassava and *aleko* around the living house in the *Kenta.*

Appendix-3. Summary of the Case studies of Three Female-Headed Households

Appendix-3.1. Widow Woman

I am 48 years old. I have eight children. My daughters and I worked for up to 10pm at night and must prepare food on stone-mill until the morning for the next day. This is our culture and we know that it is our duty. Females brave is justified by their excellence in fulfilling this duty and my daughters are to learn my food steps. I know that I fulfil intensive job and the harvest is justifiably high with intensified females job for long hours. I am brave doing so and so are my daughters. When my husband was alive, I did the same job and responsibility but I feel alone with his death. I am deprived. But I was prohibited from using cash incomes and quintals of sorghum for sale and use unless he permitted. Now I do it. I have three plots of land. One of the plots was sold without my knowledge by one of my sons. It is sad for me. Since he is male, he claims his father's land. **(Sooro Safine, Gewada,)**

Appendix-3.2. Abandoned Woman

I am 27 years old. My parents gave me to an old husband. I had to accept. My mother has shown respect and obedience to my father. So I do for my husband. In our culture women respect men and they won't defend or argue against men. Our duty is to make the home going as the husbands lead. We discuss what to cultivate, saw or sell. Since my husband gave dowry to my family, my tie is with my husband. I cultivate the land (dig, weed, harvest, transport and store). Since maize and sorghum are becoming unproductive due to drought, we mix pigeon pea inside cassava and *aleko.* Some times, we also plant coffee and *chat* as well. We cultivate, plant cassava and *aleko* around the home and the garden. We look after children, cattle and visit markets to create additional income with *cheqa* and grains from markets of surplus. I often give incomes

to my husband and he gives me what he thinks enough for me to use with my children. However, our income collapsed due to drought and we relied much on government aid and FARM Africa for the last three drought years. My husband lives with his first wife, and recently he does not look after me. So life is becoming fierce with my three children. **(Kalle Kalsho, Kemele).**

Appendix-3.3. Married Woman

I am 43 years old. I had 10 children from my husband. Three died young. I have three daughters and were married. The two boys cultivate land for me. My husband also helps in cultivating the land. Since he frequently goes to the younger wife, he doesn't share all the woes with me. The grain harvest has decreased from time to time. The last three years were the worst we have ever seen. We survived by food aid given by FARM Africa and the woreda council. Some times, the Agriculture bureau used to give food-for-work payment. I am becoming weak due to old age and God knows how we would survive in the future. Tell also for the officials above the woreda. **(Kanasa Karbe, Kemele).**

APPENDIX - 5 - **DATA INSTRUMENTS**

Instruction: The instrument contains four parts. It begins with structured questionnaire. The instrument also contains interview guides for Key Informants, Focus Group Discussions, and Household Case Studies.

Part 1 Survey Instrument (Questionnaire): This questionnaire is set into 11 subsections. It is aimed at producing data on the role of women in household food security and coping strategies to food insecurity. It is for academic purpose. Complete (respond to) the questionnaire.

1. QUESTIONS RELATED WITH DEMOGRAPHIC ASPECTS

___1. Name of the PA _____ and name of the respondent_____

___2) Age

1) 15-25
2) 26-35
3) 36-45
4) 46-55
5) 56 and above

___3) Educational status

1) illiterate
2) literate
3) 1-6
4) 7-12
5) above 12

___4) Sex

1) Male
2) Female

___5) Ethnicity

1) Konso
2) Amhara
3) Other_____

___6) Marital status

1) single
2) married
3) widowed
4) divorced

___7) Are you the head of the household

1) yes
2) no

___8) Are you the breadwinner of the household?

1) yes
2) no

___9). What is the main occupation of the breadwinner?
1) agriculture
2) petty trading
3) non-farm activities
4) off-form employment
5) others, specify _____

___10. Did you migrate to other places due to recent food crisis?
1) yes
2) no

___11. How many of your family members migrated other than you?_____

2. QUESTIONS RELATED WITH SOCIO-ECONOMIC ASPECTS

___12) Does marriage and divorce affect your livelihood situation?
1) yes
2) no

___13) If yes, for question '12', how?_____
_____
_____

___14) On what basis do you think the community classify rich and poor in the area?
1) by the ability to feed the household through the year
2) by assets at disposal (land and livestock).
3) by the ability to purchase modern possessions
4) other specify _____

___15) Do you considcr yourself as:
1) rich
2) medium
3) poor
4) why

_____
_____
_____

___16. Whose labor is more important during food crisis?
1) women
2) men
3) children

3. QUESTIONS RELATED WITH ECONOMIC ASPECTS

___17). What are your key economic assets in the household?
1) _____
2) _____
3) _____
4) _____

___18. If you possess land, how much is your landholding?_____(*temad or gemed*)

___19. How do you rate your plot of land in terms of quality?

1) very good
2) good
3) poor
4) very poor

4. QUESTIONS RELATED WITH AVAILABILITY OF FOOD

___20). In which family is food shortage frequent?

1) femaleheaded
2) maleheaded
3) family in which able-bodied labor lacks

___21. What are the causes of food shortage in your household?

1) _____
2) _____
3) _____
4) _____

___22. How many quintals did you produce last year from all types of crops in local measures? (_____ Qunna; _____ madebaria)

___23. Was the produce enough for your household through out the year?

1) yes
2) no

___24. For how many months were food shortages critical in the last year?

1. 1-2 months
2. 2-3 months
3. 4-6 months
4. over 6 months

5. QUESTIONS RELATED WITH INCOME SOURCES

___25) What are your key sources of income last year?

1) _____
2) _____
3) _____
4) _____

___26. How much income did you or your family accrues from migrant labor in sum?

1) In cash _____
2) In kind _____

___27. Did you receive food aid in times of serious food shortage?

1) yes
2) no

___28. How did you see food aid in solving your food shortage?

1) very important

2) fairly important
3) not important as such

___29. How has your income changed over the last three drought periods?
1) decreased
2) increased
3) unchanged

1. QUESTIONS RELATED WITH FOOD MANAGEMENT AND FUTURE VIABILITY DECISIONS

___30. How has your household expenditure on basic needs (food, clothing, health, education) changed over the last three drought years?
1) decreased
2) increased
3) unchanged

___31. How did you manage available income through out the year? Please rank.
1) decrease the number of family size
2) create maternal link with kin
3) change types of meal intake
4) reduce frequency and size of meal per day
5) create feeding distinction
6) others_____

___32. How did you manage feeding distinction?
1) more and better to head/husband
2) more and better for younger children
3) others , specify _____

7. QUESTIONS RELATED WITH FEMALES STATUS AND DECISION MAKING IN THE HOUSEHOLD

___33. Who controls/possesses major assets in your family?
1) husband
2) myself
3) jointly(husband and myself)

___35. What can you decide on in your household?
1) _____
2) _____
3) _____
4) _____
5) _____

___36. If you become richer owning resources, do you think your social status changes?
1) yes
2) no

___37. If 'yes; how?
1) my status and recognition increases
2) my negotiating and decision power increase in the household

3) my social prestige increase in the community
4) others , specify_____

8. QUESTIONS RELATED WITH FEMALES PARTICIPATION IN FORMAL INSTITUTIONS

___38. Do you participate in Kebele meetings?
1) yes
2) no

___39. What are the criteria to participate in extension services?
1) possess oxen, land and down payment
2) being household head
1) others , specify _____
___40. Did you participate in extension package last year?
2) yes
3) no
___41).If 'No' for question '40', what prevents you from participating in the extension service?
1) _____
2) _____
3) _____
4) _____
___42). What sources do you get credit from?
1) Formal institutions
2) Bank
3) Friends and relatives
4) Merchants
5) Others_____
___43. What leadership positions do you occupy in the traditional and formal organizations?
1) Formal organizations_____
2) Traditional organizations_____

9. QUESTIONS RELATED WITH FEMALES ACTIVITIES IN THE HOUSEHOLD

___44). What are the activities you pursue to secure food in your household?
1) _____
2) _____
3) _____
4) _____
___45. Did you switch role during seasonal variations of food insecurity?
1) yes
2) no
___46. Does switch in role affect your possessions on resources?
1) yes
2) no

	Coping Mechanism		Code for 51
	At initial stages of food shortage	At later stage of food shortage	
)	Rank	Rank	
	1._____ 2._____ 3._____ 4._____ 5._____ 6._____	1._____ 2._____ 3._____ 4._____ 5._____ 6._____	1) limiting the size of the meal (skipping it) 2) borrowing food or cash 3) gifts from relatives and neighbors 4) food-for-work payment 5) relief assistance 6) selling livestock 7) off- farm income 8) wood, charcoal and grass sales 9) out or seasonal migration 10) asset sales 11) farm land sales 12) mutual support arrangement 13) collecting wild food 14) Petty trading

L. Questions for the Interviewer

___52. Was the interviewee cooperative in responding to questions?
1) yes
2) no

___53. How could you categorize this household?
1) food secure
2) food insecure(chronic)
3) food insecure(transitory)

___54. How could you classify this household in terms of economic status?
1) high
2) medium
3) low

___55. How could you classify the income status of this household?
1) rich
2) medium
3) poor

Thank you very much

PART TWO_INTERVIEW GUIDES.

A- Interview guide for key informants

1. What were trends of food security in the past three years?
2. What were important coping strategies to food insecurity in the area?
3. What are coping strategies pursued by females in the area?
4. What is women's role in food production? Explain and rank at last four of them.
5. What is women's role in food processing? Explain and rank at least four?
2. What is women's role in household expenditure? Explain and rank three of them.
3. What is women's role in marketing? Explain and rank three
4. What are the constraints and problems of female-headed households in maintaining food security in the household?
5. What are women's properties in the household? Explain at least four of them and rank in terms of men's possessions.

11. Do women inherit land and larger animals? How?
12. What are women given during marriage from their family and the prospect husband?
13. How are resources and children divided at divorce or spousal death? Explain at least four and rank.
14. Who is affected or benefited in marriage and divorce patterns in the household?

Thank you very much

B. Interview guide for focus group discussions

1. What were main good or bad events occurred in the last three drought years (please rank)

- Their effects on food security, coping strategies and women's role in the household
- Activities which are very important for food security and coping with insecurity during the drought years
    - Crop production
    - Livestock production
    - Non-agricultural activities
    - Remittances from migrant labor or others
- Constraints for agricultural and non-agricultural activities, women's role and asset control patterns in the household
- An estimated income earned from each activity
- Enhancing or constraining factors for women in performing the tasks of food security as well as coping with insecurity

2. What is the status of women in Konso households?

- Norms and values related with status of women in the household and the community at large
- Marriage and divorce patterns related to control of assets, labor division and decision-making in the household
- Inheritances of land, livestock and other assets as well as share of assets during divorce

Thank you very much

C.2. Household Experience

1. What were your experience at marriage, divorce as compared to spouse in resource control, residence changes and status?
2. What are your status in your household vis-à-vis husband?
3. What is your experience of household resource control?
4. On which resources do you decide in the household? (sales, purchases, expenditure)
5. What power relations do you exercise in the household?
6. What were the causes of food insecurity in your household?
7. What have you done to cope with your household's food insecurity? List and rank them.
8. What constraints have you faced in doing so?
9. What types of economic activities does your household pursue?(crop, livestock, marketing, off-farm).
10. What constraints did your household face in performing these activities?
11. In which development programs did your family participate in the past? (types, level and constraints)

Thank you very much

Appendix – 5 - Primary Sources

5.1 Key Informants

Eleven key informants were selected from leaders of customary institutions, community leaders, rural workers such as teachers and health workers, and female heads of households. It also included officials of government at different levels, the community members, NGO staff and leaders of civil society associations. They were selected using purposive and availability sampling.

The key informants were interviewed about trends in household food security. Data was collected from these sources about the role of female and male household heads in household food security, production and marketing. They were interviewed about control, access to resources and decision-making power with in the household as well as coping strategies. The coping strategies are mutual support systems, risk minimizing activities and seasonal coping activities. They were also interviewed about personal preferences on coping strategies.

5.2 Focus Groups

Focus groups were utilized to discuss important events in the area and their impacts on household food security including natural events and government interventions. They discussed agricultural activities (crops, livestock, and constraints) and the role of household heads in such activities as well as coping mechanisms. In addition, the

10. The impact of marriage and divorce on their role in coping mechanisms and food security in the household.

The data was collected on the above issues by interviews, observations and conversations from Kemele amd Gewada kebeles. The Gewada kebele is found among Gewada ethnic group and Kemele kebele is found among Konso ethnic group. There were 381 female household heads, out of which 76 were selected randomly. Out of the 71 female heads of households, two were selected by lottery method after stratifying the widows and the abandoned ones. The other one was selected purposefully from the married women based on her husband's position in the traditional institutions.

5.4 Survey Method

The survey was used to collect data on household characteristics such as age, marital status, education levels and sex. It also focused on the activities of household heads and essential economic assets in the household. Social aspects such as income, economic classification (poor, medium and rich) and decision-making power in the household were included.

In addition, data was collected on the role of female heads of households on food security and coping mechanisms. These are mutual support arrangements, production-based activities and social adjustments such as decreasing family size and creating family links to obtain food income.

There were 19 kentas in the two kebeles from each of which two male heads of households and four female heads of households were selected randomly. Totally, 114 household heads were sampled and were used as observation units. Out of these, 38 were male-headed and 76 were female-headed. They were selected from 1883 households in the two kebeles of the research site.

In the time of the interview, four female household heads and one male household head were absent around the home. Therefore, 71 female household heads and 37 male household heads were interviewed.