

**THE ROLE OF WOMEN IN THE HOUSEHOLD
ECONOMY IN TZADA KERISTIAN RURAL AREA
IN THE CENTRAL ZONE OF ERITREA**



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THE ROLE OF WOMEN IN THE HOUSEHOLD
ECONOMY IN TZADA KERISTIAN RURAL AREA IN
ERITREA

by

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Dated at University of Fort Hare this 31 day of October 2000.



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ABSTRACT

Eritrea gained independence after a 30 year long and bloody war in 1991. During the armed struggle 30-40 percent of the fighters were women. As a result of their great contribution to the country's independence, the new constitution guaranteed women's access to all the available resources. With this in mind this study is conducted to identify the extent to which women are involved in the household economy, apart from their roles as political participants.



Research was conducted in Tzada Keristian suburbs in the sub-province of Berek in the central province of Eritrea. Data was collected through interviews, observation and discussions with relevant people and authorities. A questionnaire survey was also conducted and one hundred and ten (110) women were individually interviewed.

The research indicated that 96 percent of the women were below 60 years of age, 81 percent of the women only worked at home and 68 percent were illiterate. Most of the women (73 percent) were married and 22 percent of the respondents were widowed. Forty percent of the women had no land, and the mean income of the respondents was 600 Nakfa per month (1 US Dollar = 8 Nakfa). Seventy eight percent of the households spent less than 500 Nakfa per month. Sixty five percent of the women's income came from farm production and cash for work.

The women's attitude towards their position in the country is revealed in that 90 percent of the respondents were happy in their present position. However, due to the current war between Ethiopia and Eritrea, 58 percent of the women experience a severe shortage of family labour while 16 percent of the women spoke of conditions worse than before due to a shortage of labour and lack of assistance from their relatives.



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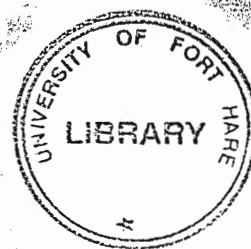
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CHAPTER ONE



1. INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Rural women in developing countries have been suffering for a long time because of cultural biases and attitudes that define their roles and generally assume them to be incapable of and not interested in participation in the social, political and economic life of the community. As a result, women have been struggling with inequalities that have resulted in poverty and made them powerless and unable to have their capabilities recognized and in the social, economic and political life of the world.

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In most developing countries agriculture plays a vital role in the economy of the countries. In Eritrea 80 percent of the people and 50 percent of the gross domestic product (GDP) of the country depends on agriculture (FAO, 1995, p. 3).

Women in Eritrea engage in various tasks due to geographical distribution and religion. In the research area the specific tasks of rural women include child bearing and rearing, cooking, collecting of animal dung, provision of water, grinding grain, artisan work as well as marketing and income generation.

Agriculturally they participate in cultivation, weeding, harvesting, threshing, storing and processing. However, rural women's work, traditionally is undervalued. The following Eritrean proverb “Where is the gain if one marries a woman to give birth to a woman? ”. Clearly, women’s contributions are overlooked. Karl (1991, pp. 82-83) suggests that given women’s essential role in food production and the great amount of work they do, it would appear to make sense that development programmes should be directed at women to help them improve their farming methods, reduce their work load, and give them access to rural services such as water and fuel supplies, credit, training, land and marketing.



Eritrea was involved in an armed struggle with Ethiopia, its southern and much larger neighbour, for 30 years. This war only ended in May 1991 when Eritrea's independence was granted and acknowledged. The country is still in the process of recovering from the war. The war had a domestic effect on everybody in the country.

The position of women in Eritrea has improved. As Selassie (1992, p. 67) has noted, the emergence of the Eritrean People's Liberation Front (EPLF) following the annexation of Eritrea by Ethiopia, can be regarded as a turning point after which many of the backward traditional values and practices that created a gap between the sexes and various social classes in Eritrean society have been uprooted.

According to UNICEF (1996_b, p. 41) the status of women in Eritrea has improved quickly. The exigencies of war and the participation by women in Eritrea's armed struggle for independence has changed the status of women in Eritrean society. By 1990, about 30 percent of the Eritrean People's Liberation Front (EPLF) frontline combatants were women. They died alongside their male compatriots and with their blood earned the right to full partnership with men in the new Eritrea.

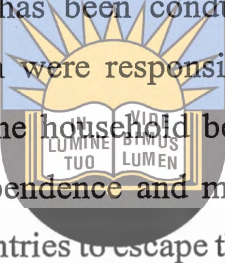
The overwhelming majority of the people are illiterate and among the women it is as high as 90 to 95 percent (Papstain, 1991, p. 21). The World Bank (1997, p. 65) found that after independence, the gross primary school enrolment has increased from 36 percent in 1991 to nearly 50 percent in 1995, and discrimination in schooling on the basis of gender was absent in the cities and the highlands. Overall, the enrollment of girls in primary schools was 44 percent.

Rural women play a vital role in the domestic and agricultural activities for the survival of the household. The time is right to investigate the role of rural women in the household economy among the rural women in Tzada Keristian suburb, in the central zone administration, to establish what their duties and responsibilities are in the house, on the farm and to determine their participation in the decision-making process.

1.2 MOTIVATION FOR THE STUDY

There is a need to study the rural subsistence farming with a special reference to the contribution of rural women to household tasks and agricultural activities. It is also important to study the labour and economic situation in the household economy.

For more than 40 years, very little research has been done in Eritrea and no research has been conducted on social and agricultural activities. Women were responsible for domestic chores and the social affairs of the household because men were engaged in the struggle for independence and many of them were emigrating to neighbouring countries to escape the war. Traditionally the woman's work was not recognized to be of importance.



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It is high time to determine women's contributions to agriculture and domestic survival. This study aims to collect data and to provide the necessary information for policy-makers in order to design strategies by which to integrate women, as a target group, in development projects.

1.3 PROBLEM STATEMENT

Women contribute most significantly to subsistence agriculture, and are also fully responsible for all household tasks. Due to their great contribution to the country's independence, the new constitution guarantees women access to all the available resources and in any formal committee women must be represented by not less than 30 percent. However, women's achievements are not fully recognized because of traditional and cultural influences even though they are involved in many household activities. There is, therefore, a real need to study the extent to which women are involved in the various aspects of the household economy and to assess how their position has improved.



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1.4 OBJECTIVES OF THE STUDY

The main objective of this study is to study the role of women in the rural household economy in Tzada Keristian, in the central zone of Eritrea. Three research tasks present themselves for the purpose:

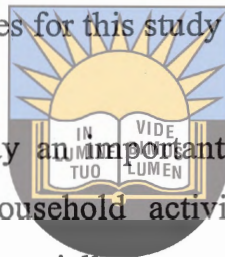
- To investigate the household activities of women and their contribution to the agricultural activities in the household economy.

- To examine the women's exposure to the extension service and to the various sources of information available to them.
- To examine the role of women in decision-making concerning household tasks, household expenditure, income-generating activity and agricultural production.

1.5 FORMULATION OF HYPOTHESES

Relevant hypotheses for this study are the following:

- Women play an important role in the household both as concerns household activities and as concerns farming activities, especially crop management.
- There is grossly insufficient interpersonal and mass media communication between women and the extension service. This constrains the development of agriculture.
- Women play an important role in decision-making concerning all aspects of the household.



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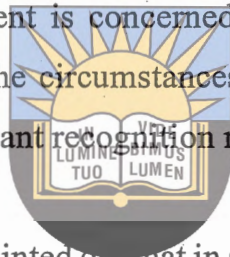
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CHAPTER TWO

2. THEORETICAL BACKGROUND

2.1 INTRODUCTION

Significant changes have taken place during the past number of years with regard to the role that women play in the Eritrean society as far as economic development is concerned. Recognition of this role requires awareness of the circumstances that have occasioned the greater and more important recognition now accorded to them.



The FAO (1998, p. 6) pointed out that in sub-Saharan Africa women contribute 60 to 80 percent of the labour in food production both for household consumption and for sale. They play a major part in sowing, weeding, application of fertilizers and pesticides, harvesting, threshing, food processing, transportation and marketing.

Despite their importance to agricultural production, women have hardly had access to production inputs such as seed, fertilizer, tools, credit, agricultural information and new knowledge and skills which, often, only men are expected to have. Usually women have no access to extension services since extension agents in developing countries are almost exclusively men and so the woman's contribution to agricultural production is underestimated.

2.2 THE DOMESTIC DUTIES OF WOMEN

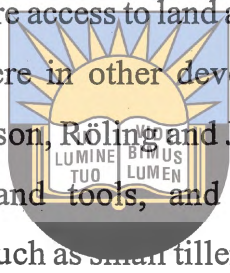
Customs and beliefs control, to a large extent, the activities of women in the social environment. In most of the developing countries women have a heavy workload in sustaining their families. The specific tasks of rural women vary from country to country and within a country itself, since rural settings and cultures differ markedly throughout the rural areas of the developing countries.

Rural women are overloaded with responsibilities for family and social affairs, but their work is underestimated due to cultural views. Taylor (1985, p. 18) indicates that the man is assumed to be "the breadwinner" and expected to be working in the fields. Women, wives and mothers, have a veil of invisibility drawn around them when they fulfill these roles. Just as the woman becomes invisible when she does what the world sees as 'man's work', so the other agricultural work she does becomes invisible and is classed as domestic work: her vegetable plot becomes a 'kitchen garden'; the baskets she weaves to hold harvested grain is 'craft-work'; her hours of pounding and grinding and husking grain is called 'food processing'. As a farmer she simply disappears.

The division of labour in the household is determined in relation to the gender of the household members. "Gender distinction is a common phenomenon in human society. This is based on certain

beliefs about women and their role. Women's status is governed by similar ideas, which are purely cultural and man-made" (Durga and Rao, 1992, p. 113). While there are significant variations by country, women in Africa play a major part in crop production, transportation and marketing (FAO, 1998, p. 6).

Access to land is an important economic factor, but women seldom gain access to land in developing countries. Due to many customary laws in Africa land is usually allocated to husbands and men. Women in Eritrea have more secure access to land and other productive assets than is common elsewhere in other developing countries (World Bank, 1997, p. 65). Swanson, Röling and Jiggins (1984, p. 95) point out that women use hand tools, and seldom have access to mechanized equipment, such as small tillers or tractors. It is unlikely that they will have direct access to input and credit because institutions tend to deny women such access.



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2.3 TECHNOLOGY FOR WOMEN

In most developing countries agricultural activities are still carried on with traditional tools and methods. In Africa, the number of women in agriculture is increasing significantly. This may strengthen their role compared to men, but it also means a greatly increased workload. As a result, farmers produce only slightly more food than what is necessary for their own household consumption.

Saito and Spurling (1992, p. 16) note that the inadequate supply of suitable labour and energy saving farm and household technology for women's activities lowers these women's productivity. It saps the energy and time they might otherwise have for participating in extension and other development programmes.

The technology that is needed to help women must take into consideration the traditional division of labour and the social responsibilities of women. Weijenberg *et al* (1995, p. xv) state that the introduction of new technology must be based on the capacities and expectations of the target groups. Sofranko (1984, p. 68) indicates that developing agriculture by means of substituting new for existing technology involves behavioral change on the part of the farmer. The amount of change involved will depend on the technologies and practices being promoted and the extent to which farmers' current behavior is inconsistent with them.

2.4 WOMEN'S ACCESS TO EDUCATION

Illiteracy still remains a major problem in most developing countries and women constitute a large proportion of the illiterates. According to the United Nations (1995, p. 584) literacy remains the lowest in the world in sub-Saharan Africa, 43 percent of adult women and 67 percent of adult men, and the difference between men's and women's literacy rate is highest.

In developing countries girls are expected to marry early and parents do not perceive a need for them to receive an education. Doss (1991, p. 7) notes that in developing countries girls marry when 12 or 13 years of age and this acts as a barrier to their education. Once a young woman marries she is expected to follow her husband and to raise children, and further schooling becomes unlikely.

Educational coverage in Eritrea is about 52 percent. This indicates that the enrollments of school age children is very low. From a very rough estimate, the number of school age children in the country is about 600 000 from 1st grade up to 1th grade. There is a need for about 20 000 classrooms for the country. The number of teachers that are needed is also about 8000 teachers (Zeggo, 1998, p. 8). Discrimination in schooling on the basis of gender is generally absent in the cities and the highland, the share of girls in primary school enrollment is about 44 percent (World Bank, 1997, p. 65).

2.5 WOMEN TIME MANAGEMENT

Many available studies show that rural women work longer hours than men (Kalabagh, 1992, p. 28). As Nijeholt (1980, p. 78) citing ILO (1997) noted that rural women have very long working days compared to men. In Africa a woman might work 15 hours, which includes food preparation and fieldwork, one hour for eating and 8

hours for sleep. Across the world, rural as well as urban women, work 3 to 4 hours a day more than men in the same society (Kathleen, 1982, p. 28).

Fetching drinking water and fuel for the household is one of the major time-consuming duties of the women. Saito and Spurling (1992, p. xiii) stated that women's time and mobility are constrained by their dual domestic and agricultural roles and the relative inflexibility of domestic chores. In many areas, women spend several hours a day collecting fuel, water and fodder. Cheap available, appropriate transport and other technology are lacking. Kalabagh (1992_a, p. 63) suggests that, since women will benefit greatly if there is inflexibility in the time, duration and place of work, there is a particular need for examining what efforts, if any, have been made by scientific institutions to introduce flexibility in time and place in jobs for women. Such inventories should be part of an on-going dialogue between scientists and users so that research priorities reflect user needs.

2.6 WOMEN AND DECISION-MAKING

Decision-making is crucial to the failure or success of any undertaking. Slocum (1978, pp. 253-255) defines decision-making as the art of making choices on the basis of more or less sound knowledge. Decision-making becomes a problem when there is

concern about a course of action to follow in order to solve a problem, or to accomplish a goal to satisfy a need. On the other hand a "small" decision can have an enormous effect. A decision about when to plant a crop can have a severe effect on the yields.

Rural women in developing countries are confronted with many situations in day-to-day activities which need decisions, and the quality of the decision is determined mainly by their socio-economic condition. Knowledge and education can empower a person to make better decisions. Swaminathan (1992, p. 60) mentions that the involvement of women farmers in the process of modernization of farming practices and village industries is absolutely essential for economically and ecologically sustainable agriculture.




Arnon (1981, p. 155) citing Kamuzora (1980), shows that the division of labour between sexes based on cultural traditions is not immutable and may change in response to economic stimuli. Janelid (1980, p. 92) notes that changes in one element of a social system will initiate changes in other elements, for example, changes in family goals are likely to affect the roles and duties of family members. Changes in social power, for example participation of the rural poor in decision-making, is likely to change status-changes in society.

2.7 AGRICULTURAL EXTENSION FOR WOMEN IN AFRICA

In developing countries women's labour contribution in agricultural production has played a vital role in food production. The World Bank (1989) has indicated that women are responsible for at least 70 percent of the food production in Africa.

Janelid (1980, p. 93) argues that women's major responsibility extends beyond growing food to include its processing and storage. However, women have little access to knowledge and skills in the use of improved methods to prevent pests and diseases which destroy food supplies. As a result, post-harvest losses of food are estimated to be as high as one-third of the production in subsistence agriculture in some African countries.

The logo of the University of Fort Hare, featuring a sun rising over a book with the motto 'LUMINE BIVUS TOTO LUMEN'.

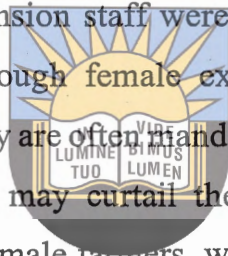
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Although, in Africa, women make a major contribution to food production, they hardly benefit from agricultural extension service. Swanson *et al* (1984, p. 101) has found that where women have had little or no contact with the extension services, the production problems they face are seldom known to the extension system, and so research has not developed technology suited to their needs.

Numerous factors explain why women have not benefited from agricultural extension. Women's access to training is limited by a number of factors, among them a lack of access to membership of

rural organisations that often channel or provide training opportunities. Other limiting factors include gender neutral or gender-blinded agricultural research that gives inadequate attention to women farmers' needs in terms of farming technology (FAO, 1998, p. 10).

Doss (1991, p. 5) mentions that extension workers in Africa have, traditionally, been men. Even in African regions with a long tradition of female farming, only 11 percent of the extension staff and 7 percent of the field extension staff were females during the early 1990's. Moreover, although female extension workers may be trained in agriculture, they are often mandated to give advice only on home economics. This may curtail the delivery of agricultural extension messages to female farmers, who may be restricted from interacting with male extension agents and who prefer to interact with female agents (Quisumbing *et al*, 1998, p. 186).



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2.8 THE STATUS OF WOMEN IN ERITREA

Traditionally Eritrean society is patriarchal. Selassie (1992, p. 67) states that the male is considered the preserver and transmitter of the family line and property, the female being only a subordinate member of the family. For example, a mother who gives birth to a boy is happy and proud to have fulfilled the demand of the husband and the clan, while a woman who gives birth to a girl is humiliated and sad. This attitude towards females is deeply entrenched and

establishes a sense of inferiority in them, while it strengthens the entire society to practice and uphold traditional values that suppress women.

Traditionally the role of women in rural Eritrea in agricultural production is seen to be of secondary importance to that of men. The role of men was that of clearing land, ploughing and herding livestock. The roles that women play in the domestic sphere and in agricultural production were accorded little significance. The workload of women is extremely arduous, as they have to take full responsibility of all the domestic chores.



Women's rights are now entrenched in the Eritrean constitution which guarantees women equal rights with men. Government policy also is to award them full access to land, education etc. Furthermore, any formal committee, from grassroots level up to parliament must have a membership consisting of at least 30 percent women. The government accepted these policies to guarantee women equal rights; however, the old traditions still constitute a barrier to women's rights. Women are still not allowed to plough a land and to propose a marriage. Such initiatives belong to men only.

2.9 WOMEN'S POLITICAL PARTICIPATION IN ERITREA

In most developing countries women are not active in political affairs. As in other developing countries, Eritrean women, traditionally, were not allowed to participate in politics and were excluded from village discussions and assemblies. As one proverb has it "Just as there is no donkey with horns, so there is no woman with brains". They were not considered to hold opinions of any worth.

During the 1970s women's participation in the armed struggle was on the increase and many backward, traditional and cultural practices were subsequently uprooted. UNICEF (1996, p. 41) has indicated that the exigencies of war and the participation of women in Eritrea's armed struggle for independence has changed the status of women in Eritrean society.

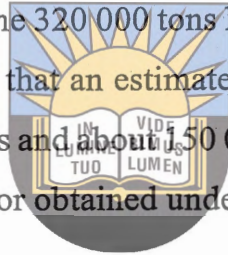


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After Eritrea's independence many women joined the women's association that was established during the armed struggle. A number of conferences were organized by this organization to draw attention to the problems experienced. Gopel and Salim (1999, p. 200) note that the government of Eritrea, since 1991, has started to formulate policies and to enact laws aimed at empowering women socially, economically and politically. In general, women now have a right to vote, to be elected, have full rights to land, equal wages, reasonable maternity leave, education etc.

2.10 FOOD SECURITY IN ERITREA

Eritrean agriculture is based on rainfed farming. The major food crops cultivated are barley, wheat, sorghum, pearl millet, maize, teff, pulses, sesame, groundnuts and other oil seeds. Production statistics are scanty in Eritrea and such as there are based on approximation. These indicate that the total production of food crops in 1992 amounted to 278,500 tons, enough to meet about 60% of the nation's food requirements. In 1993 production was only 86 000 tons, so that a food deficit of some 320 000 tons had to be supplied by donors, as food aid. It appears that an estimated deficit of about 300 000 tons during drought years and about 150 000 tons in other years will have to be imported and/or obtained under food aid (Anon, 1995, p. 8).



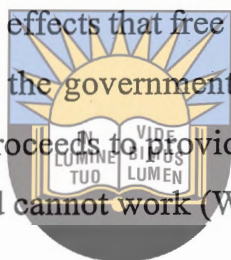
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Eritrea has a long history of food shortages due to the poor climatic conditions that lead to poor harvests. The war has been a further major constraint on food production in the country especially for women and children during the last forty years. The World Bank (1997, p. 65) has stated that drought caused 70 to 80 percent of the households to require food aid. Without it, 69 percent of the population would have been unable to consume even the minimum amount of required food and other essential commodities.

The country is very far from being self-sufficient. In order to increase food production all the necessary support is given to men, while women tend to be excluded even though they are the major

source of labour on the farms. Gender discrimination is the main cause of Africa's famines, because those who feed Africa are not getting the type of assistance that would boost their productivity and halt starvation. Boserup (1980, p. 14) indicates that food produce for sale has increased but little, since it is done by women who are overburdened due to the increasing size of their families and male absenteeism (war, emigration).

Government strategy for food aid distribution has recently changed. Recognizing the negative effects that free food aid had on motivation to produce and to work, the government has decided to monetize food aid and to use the proceeds to provide cash assistance to those who are truly in need and cannot work (World Bank, 1997, p. 67).



2.11 AGRICULTURAL ACTIVITIES IN ERITREA

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Agriculture is the most important sector of the Eritrean economy, accounting for approximately 50 percent of the GDP, 70 percent of exports and providing for the livelihood of 80 percent of the population. Production is based primarily on small-scale peasant cultivators and pastoralists. As a result of the war and recurrent drought, export crop production in Eritrea is now virtually non-existent. Food production has dropped by 40 to 50 percent and the livestock sector has been reduced by two-thirds (MEA, 1993, p. 35).

Eritrea relies primarily on smallholder agriculture for most crop and livestock production. Before the mid-1970, Eritrea had a flourishing commercial agricultural industry which included sizeable dairy activities and the export of significant quantities of fruit and vegetables to Europe (FAO, 1995, p. v).



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Table 2.1 Summary of production and exports in the commercial sub-sector 1962-71, Eritrea.

Vegetables	Average 1962-71 (metric/ton) Production Exports		Highest Annual Level			
			Production metric/ton	Year	Exports metric/ton	Year
Potato	3,952	-	5,802	1971	-	-
Tomato	6,034	1,187	15,258	1971	2,430	1967
Peppers	4,657	1,740	11,408	1971	3,769	1971
Others	4,381	1,510	10,428	1971	2,900	1970
Total Vegetable	19,024	4,437	42896		9099	
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<u>Fruits</u>						
Banana	24,024	17,779	34,196	1970	21,728	1970
Citrus	2,974	1,186	6,001	1971	3,000	1970
Others	1,078	157	978	1971	305	1968
Total fruit	28,876	19,122	41175	-	25033	-
Seed cotton	5,638	-	-	-	-	-
Coffee	68	-	-	-	-	-

Source: FAO (1994_a, p. 19)

As a result of war, drought and general neglect by previous governments, most commercial activities ceased and dependence on imported food increased. At present, up to half the population is entirely dependent upon food aid, with annual requirements of aid ranging from 150 000 tons to 300 000 tons (FAO, 1995, p. v).

2.11.1 Crop production

A large number of women are involved in agricultural activity. “A distinguishing characteristic of sub-Saharan African economies is that both men and women play substantial economic roles. Data compiled by IFPRI (International Food Policy Research Institute) indicate that African women perform about 90 percent of the work of processing food crops and providing household water and fuel, 80 percent of the work of food storage and transport from farm to village, 90 percent of the work of hoeing and weeding, and 60 percent of the work of harvesting and marketing. There are marked sub-regional variations in men’s and women’s shares of work; in much of the Sahel, men predominate in agriculture, including the food sector”(Blackden and Bhanu, 1999, p. xi). The situation in Eritrea is shown in table 2.2.



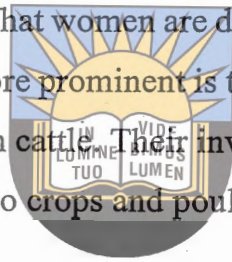
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Table 2.2 Economic activities in Eritrea

Economic sector	Women %	Men %
Agriculture	80	71
Industry	8	11
Service	11	18

Blacken and Bhanu (1999,p. 89) quoted in The Worlds' Women (1995).

The table shows clearly that women are dominant in the agricultural scene. What makes it more prominent is the fact that the women are not allowed to work with cattle. Their involvement in agriculture is therefore solely limited to crops and poultry.



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The agricultural production system in the densely populated central highland zone is fairly homogenous. It is almost entirely dependent on rainfall, which is erratic and is the major factor affecting the productivity of the system (FAO, 1995, p. v). A wide range of rainfed crops are grown due to the different temperature and rainfall patterns. Cereals include teff, barley, wheat, sorghum, maize and various millets. Chickpeas, field peas, field beans, haricot beans, lentils and fenugreek are among the pulses and legumes grown. Oil seeds include a brassica known in the world trade as niger seed (locally called nihug), linseed, castor beans, groundnuts and sesame.

Among the vegetables produced under irrigation, the main ones are tomatoes, onions, pepper, Swiss chard, cabbages, carrots and potatoes (FAO, 1995, p. 4). The FAO/WFP estimated the area planted in 1992 as 320 000 ha. This seems low, reflecting an average yield for all crops of 0.86 ton/ha, a high average for very low input agriculture, despite the good growing season.

A wide range of crops is grown in the highlands, all during the wet season between April and September, specifically from June to September. According to the FAO (1994, p. 33) all rainfed crops are local varieties established by farmers' selection over generations and adapted to the short growing season. The farmers protect themselves against the highly variable and erratic rainfall by sequential planting, i.e. betting on early rains by planting early crops and, in case of failure, later planting in hope of success still. Depending on the arrival of the rain, sorghum is planted from early May to early June. If the rain comes late or the crop fails to germinate or is not growing well, it is replaced with either barley or wheat which is planted in late June and into the first week of July. If there are problems with these cereals, teff is planted from mid-July to the first week of August.



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2.11.1.1 Common features of farming systems

Traditional farming systems in Eritrea have common features, though there are slight variations due to geographical distribution. According to the to FAO (1994, p. 33) the following farming systems are common:

- Land preparation is carried out with the traditional steel tipped wooden plough drawn by a pair of oxen. The furrow drawn by the plough is narrow and the extent of inversion limited. The action is more that of a single tined harrow and to leave uprooted weeds on the surface, rather than to bury them. When land is to be bare-fallowed, up to four ploughings may be required; the first soon after the preceding crop is harvested.

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- For cropping there are usually ploughed three times - not so much to produce suitable tilth but to ensure a good kill of weeds and pests. Traditional sharing arrangements and the exchange of labour for ox-time under a long established formula (2:1) is common, and appears to deal with this problem satisfactorily. Farmers who possess one ox generally combine with a farmer in the same situation and plough each other's land on alternate days.

➤ Seed (wheat, barley, teff etc.) is broadcast by hand and covered by ploughing; line sowing is not practiced in the central highland except for vegetables. Chemical seed treatment is not used, but a local method of treatment with urine is employed commonly and said to work well, although it is doubtful whether this is totally correct. Plant populations appear satisfactory, and are claimed by advocates of broadcasting to be better than those achievable by hand line sowing.

➤ Chemical fertilizers, farmyard manure and compost are rarely used for rainfed crops. Price, supply and most important, the fear of a crop failure during a poor growing season discourages the use of fertilizer except for crops under irrigation. The use of manure and compost as organic fertilizer is realized and understood and a market exists for it, but it is very seldom used by farmers. The reasons are that the quantities of ox and cow dung are very limited, while the little which is available is used for fuel. Crop residues, on the other hand, are fed to the animals.

➤ Weeding is done by hand and, generally, one weeding is sufficient where land has been well prepared.

- Harvesting is done by sickles. The crop is cut close to ground level to maximize straw and stalk yield (after harvest all land is opened to communal grazing), bundled, and stacked in temporary small cocks.

- Threshing (wheat, barley, teff etc.) is done by spreading the cut crop on one of the many small smoothed clay threshing floors located in the village and chasing cattle over it to separate the kernels from the husks. To obtain sufficient oxen farmers join together to thresh their crops. Winnowing is done by hand, and following this the grain is bagged and transported by donkey to the homestead together with the straw and other crop residues.

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2.11.2 Livestock production

Livestock production plays an important role in the life of the rural people. Animals in Eritrea are indigenous and unimproved breeds. The common farm animals are: oxen that are used for ploughing, donkeys for transportation, sheep and goats for sale and home-consumption during religious holidays. Farmers would like to increase the numbers of their animals, but due to lack of animal feed and drought their numbers are decreasing from year to year.

"The pattern of animal production systems is also directly affected by climates, because these can affect the survival and production of different species and types"(Raeburn, 1984, p. 71). A shortage of animal feed is the major constraint to animal production. This is mainly due to frequent droughts, overgrazing and grazing land being changed into agricultural cropping lands. The critical period of feed shortage is usually from January to June. As a result, farmers are often forced to either buy additional feed, reduce their animal numbers or migrate with their animals to the western lowlands (Hail *et al*, 1995, p. 3).



Livestock plays an important role in the typical farm household, but there is no integration of livestock and crop production in the sense of a mixed farming system. The lack of integration of livestock is attributable mainly to the poor management of the grasslands and the consequent low productivity of communal grazing. As most dung is used for fuel, there is hardly any transfer of nutrients from the pastures back to the arable land. Given the common feeding of crop residues to livestock, the transfer is rather in the opposite direction, where it is wasted because of the indifferent management of herds and pasture (FAO 1994, p.34).

2.12. INCOME OF THE HOUSEHOLD

The inhabitants of the area are fully dependent on inputs produced from farming, non-farm activities and food aid from the government.

When food is scarce due to the insufficient farm output the head of the household, usually the husband, is forced to leave the home seasonally.

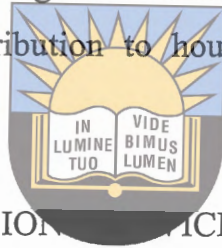
Divorced women and widows with children who have no other source of income get support from their close relatives and the community. A few of these women may go away from home in search of work in the towns, sell local beverages or work as servants.

Nearly all the people in the area are used to getting food grain directly from the government by way of aid or indirectly through food for work programmes. The income of the people in the area is very low and they are extremely poor.

2.13 TIME MANAGEMENT ON THE FARM

The work and management of the household is left entirely to the women living on the farms and they are engaged at work for longer hours than the men.

Women wake up early in the morning and keep themselves busy throughout the day until late evening. Early in the morning they grind grain manually, prepare breakfast and lunch for their children, as well as for their husbands who also participate in farm work. Women on the farm carry their infants on their back and have to look after their children while working on the farm. When they go back home from the fields more toil awaits them such as fetching water from wells, cooking dinner for the family and washing dishes and doing laundry while the husbands rest after having done the farm work and have nothing more to do. The women, therefore, make a much bigger contribution to household management and farm activity.



2.14 THE EXTENSION SERVICE IN THE BEREAK SUB-

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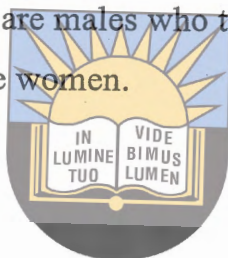
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Women are generally neglected as a target group by the extension services in developing countries, with the possible exception of advice relating to home economics. This neglect is largely the result of deeply rooted attitudes to the role of women in traditional societies (Arnon, 1989, p. 247).

Women are trained in home economics under the supervision of the Ministry of Agriculture by the introduction of topics such as childcare, cooking, modern stoves, tailoring, home improvement and, to a limited extent, home gardens.

Although extension services do function, somewhat, the agent is confined to distributing ploughs, seed, pesticides and fertilizers. They do not serve to motivate the farmers as much as might be expected due to a lack of extension programmes, inadequate budgets, and shortage of manpower. A single agent may be assigned to cater for 40 000 people.

The extension service has a shortage of skilled extension personnel and lacks adequate means of transportation. In addition, extension agents all over the region are males who tend not to do agricultural extension work among the women.



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CHAPTER THREE

3. METHODOLOGY

3.1 CHOICE OF THE STUDY AREA

The research was conducted in the Tzada Kerstian sub-zone situated in the central zone of Eritrea. The area was chosen on the strength of discussions with the Head of Research and the Human Resources Department of the same zone after considering the necessity for a study in the area. The central highland of Eritrea, particularly the research area, is characterized by diverse systems of culture, religion, ethnicity, farming system and use of language, which is Tigrinya.

The urban environment somehow affects the life of these people whose economy is mainly concentrated on farming since the area is situated 20 km from the industrialized city of Asmara, the capital city of Eritrea. Being so close to the city, the men especially flock to the city in search of work during farming off-seasons.

3.2 ORIENTATION AND PLANNING OF THE STUDY

The officials and the Regional officers of the Ministry of Agriculture as well as the officials of the Research Human Resources department suggested the research plan for the study during December 1998. An agreement was reached to commence the study and an appointment was made with members of the extension and home economics department of the region, including the local councils of the area, to discuss the necessity of the study and its objectives.

3.3 INFORMATION SOURCES



Research data were generated mainly from a questionnaire survey as well as field observation by the researcher. General discussions were held with the women before and after the interview as well as with the local women's association.

Reports by the Ministry of Agriculture, by women's associations as well as observation during the period of the study supplements the information gathered by the survey. The FAO (1994, pp. 10-11) states that Eritrea's troubled history has left it in an unusually deprived situation with respect to the availability of data usually required not only for policy-making but even for day-to-day public administration.

Due to the war, as well as other factors, very little research has been done in the area and very little literature is available.

Literature on women in developing countries, particularly African countries, has also been consulted. Other information for the study was obtained from the following: -

- Discussions with relevant authorities and individual women.
- The extension officer and home economists in the study area.
- Observation.
- Records of the population census conducted in 1998-99.
- The Document Centre of the Agriculture Faculty, Fort Hare University.
- Literature collected in various institutions in Eritrea and South Africa.



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3.4 QUESTIONNAIRE OBJECTIVE AND DESIGN

In questionnaire based research, the goal may be to learn what the respondents know, what they think, expect, feel, or prefer (beliefs and attitudes), or what they have done (behavior). A questionnaire will generally include questions referring to more than one of these categories, and at times a single question may cover more than one category. However, these distinctions are convenient for discussing the issues involved in selecting content (Judd, Smith and Kidder, 1991, p. 229).

The questionnaires were prepared to obtain as much information as possible concerning the women in the area. The first part of the questionnaire contained questions designed to collect information concerning personal characteristics including marital status, age, ethnic group, status of head of household, size of the family, education, religion, and housing standard. The second part of the questionnaires contained questions about household resources such as furniture, radio, television, local organisations and sources of information. The fourth part focused on the time allocation to household tasks to identify the workload of the rural women. The fifth part concerned the women's responsibility for decision-making with regard to agriculture, income-generating activity, expenditure and household management. The sixth part focuses on income, household expenditure, sources of credit, crop production, and animal production. The final part of the questionnaire focuses on the present position of women in Eritrea.

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The questionnaire was tested to ensure that respondents understand the questions asked, by having seven members of the community, randomly selected complete it. These respondents were not part of the sample group.

3.5 SAMPLING PROCEDURE AND SAMPLE SIZE

The target population for the study consisted of rural women who were involved in household management and decision-making.

A list of the population and the number of households was available from the local government administration. According to the official list of 1999, the research area comprised of 650 households with total population of 2806 people.

In considering the sample size, factors such as cost, resources, time and level of accuracy were taken into consideration. For sampling purposes all the household owners were listed. Each name was given a number and the selection of numbers was carried out at random. A sample of 110 households was randomly taken. This sample was considered large enough since the research area is relatively homogenous in terms of culture, religion, ethnic composition, farming system and use of language which is Tigrinya.

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3.6 INTERVIEWING PROCEDURE

The interviews took place from middle August 1999 to the end of September 1999. All interviews were conducted by the researcher and lasted 45 to 60 minutes per individual. The researcher visited some places in the area at random in order to check the given information by the respondents. In most cases the questionnaires were completed inside the dwelling the respondents in order to appraise their living standard and life style.

The researcher explained the purpose of the study to the interviewee before each interview. Because the researcher and the respondents speak the same Tigrinya language, which is the national language, no communication problems were encountered. The interviews were conducted in a calm and relaxed atmosphere.

3.7 DATA ANALYSIS

The data was coded and then processed by a computer using the Statistical Package for Social Sciences (SPSS) programme.



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CHAPTER FOUR

4. AGRO-ECOLOGY AND INFRASTRUCTURE OF THE AREA

4.1 AGRO-ECOLOGY OF THE AREA

4.1.1 Geographical situation

Eritrea is the latest independent African country and is located in the northeastern part of the continent (Figure 1). It is bounded by the Red Sea to the east with about 1 000 km of coastal line, by Sudan to the west and north, by Ethiopia to the south, and by Djibouti to its southern extreme. It has an area of about 125,717 km² and its population estimated between 3 to 3.5 million (FAO, 1995, p. 3).



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Tzada Keristian administrative area is situated in the sub-province of Berek, in the central zone of Eritrea. It lies between 15°17'N Lat. and 15°16'N Lat. and 38°58'E and 38°59'E long. and is situated approximately 20 km east of the capital city, Asmara. It is bounded to the East by the Asmara administrative area, to the west by Adi Gebru, and to the north by Adi Yacob, and to the south by Adi Musa and Tzada Emba. The location of Tzada Keristian is shown in Figure 3.

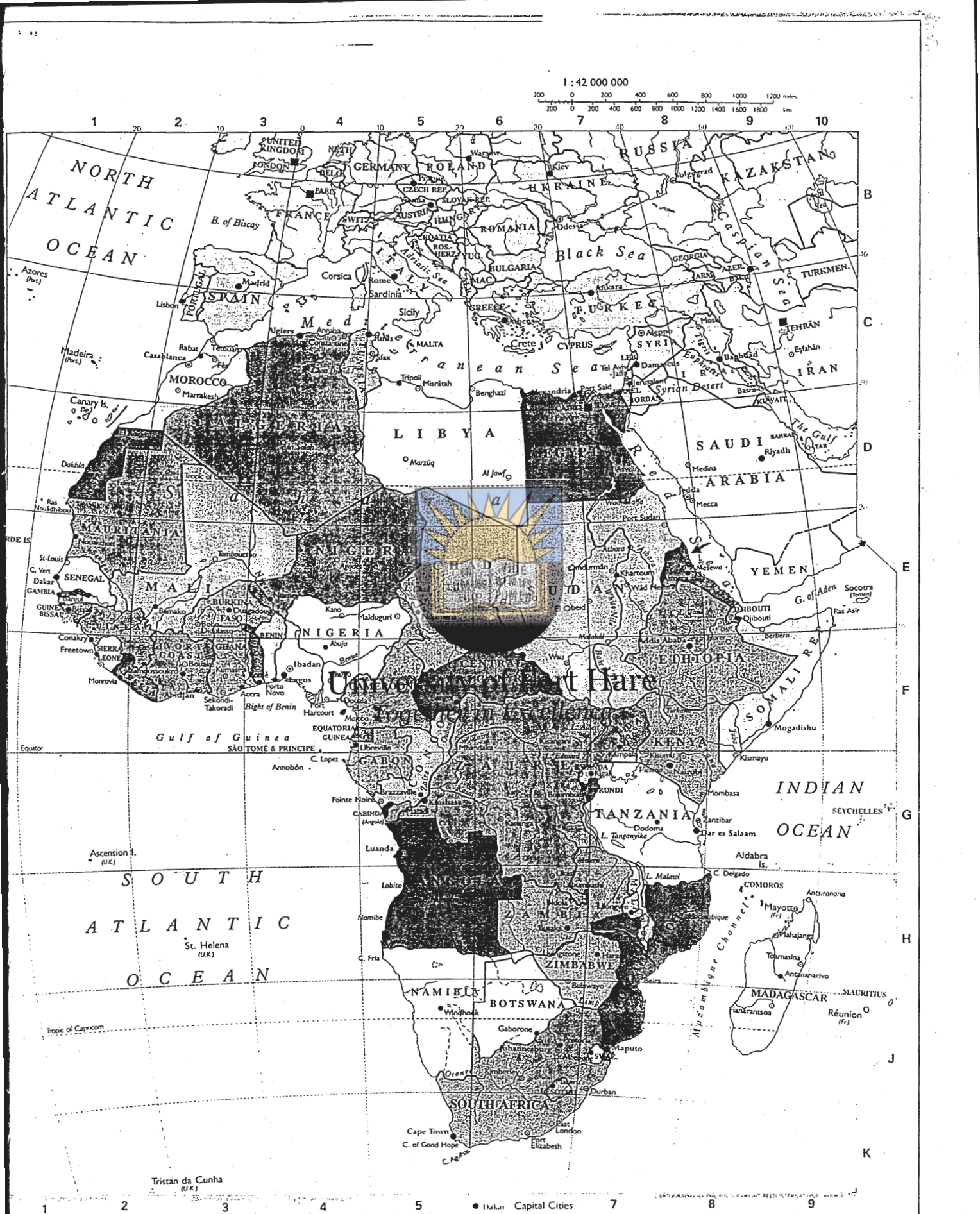


Figure 1: Map of Africa

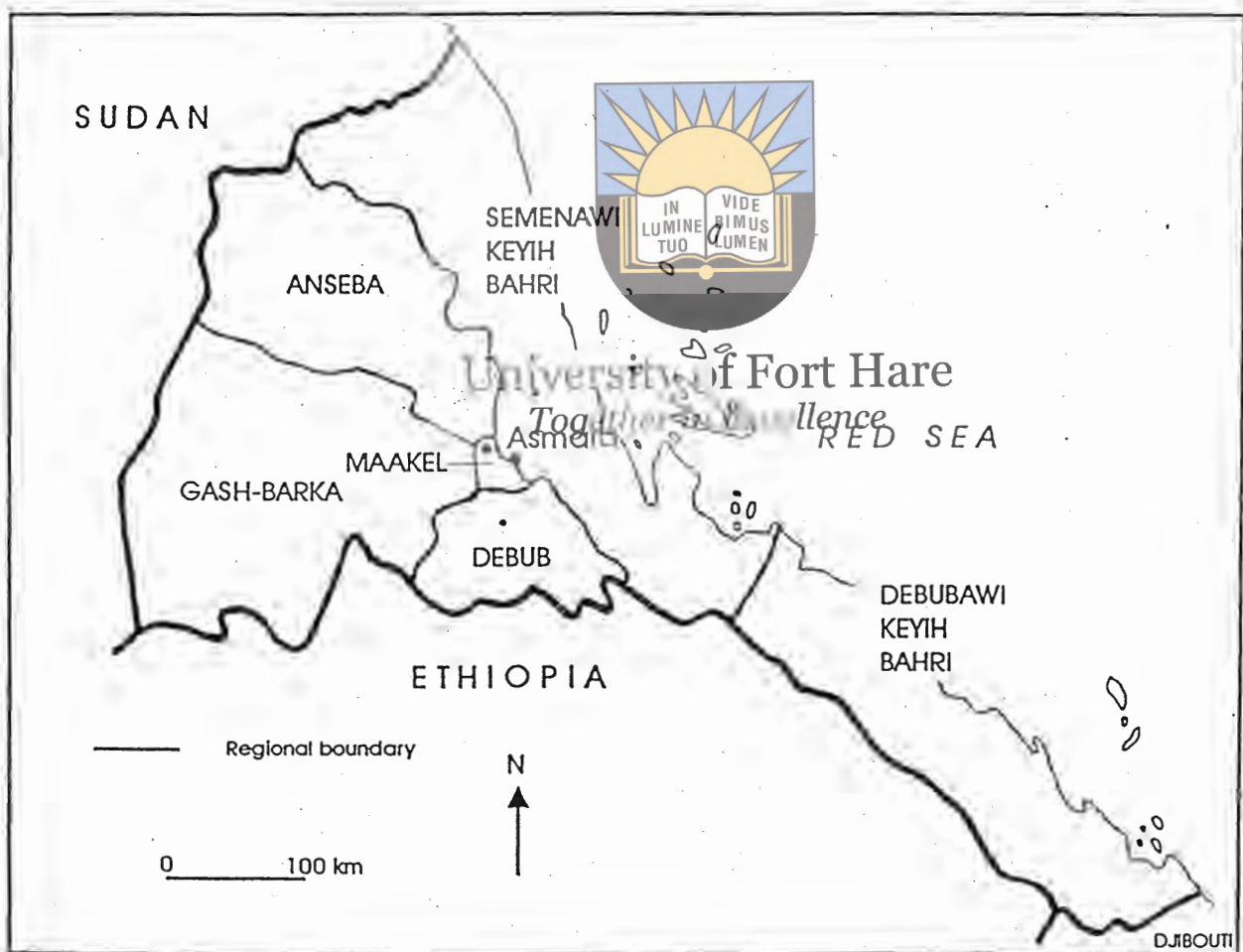


Figure 2 : Map of Eritrea

THE STATE OF ERITREA

ADMINISTRATIVE MAP OF CENTRAL ZONE

39° 00'

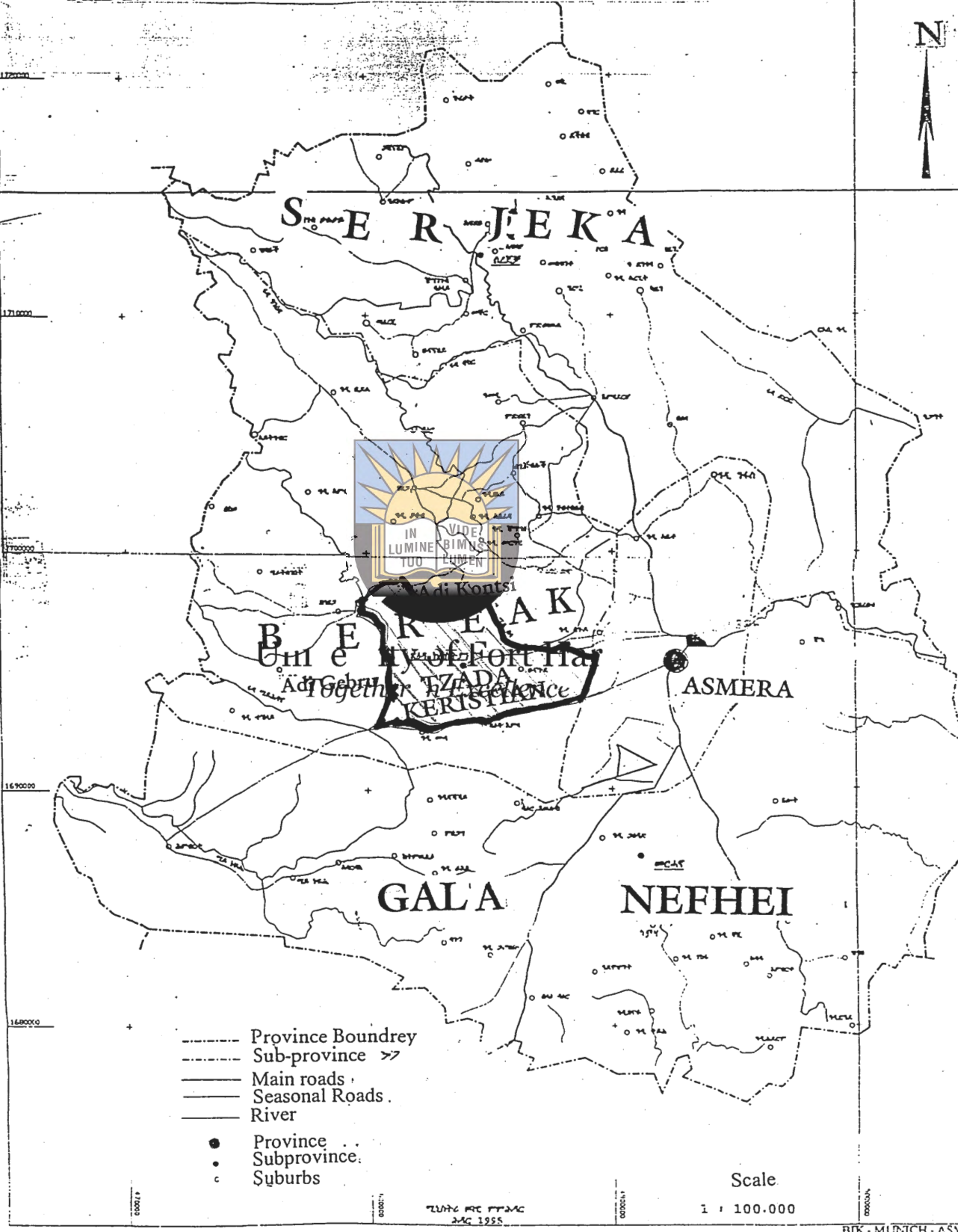


Figure 3 : The map of Berekak sub-province showing the research area

4.1.2 Climate

The climate plays an important role in determining the agricultural potential of any region (Wood and Van Schoor, 1976, p.10). A thorough knowledge of the climate of a region in respect of the total rainfall, its distribution and reliability, the length of the growing season and the occurrence of frost, is important in determining the type of intensity of agriculture which may be practiced in a particular area. Climate further plays a dominant role in the development of soil types, the type of vegetation, and the distribution of the human population in a region (Klages, 1942, p. 55).



4.1.2.1 Rainfall

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The highland areas have two main seasons; a dry and a rainy season. The rainy season occurs during the months of April to August. The total annual rainfall is between 450 and 550 mm. Hail is not uncommon and can cause considerable damage to crops. Rainfall exceeds the potential evapotranspiration only in July and August. The major factor limiting rainfed agricultural production is the high variability of both total rainfall and its distribution (FAO, 1995, p. 34).

Table 4.1 Distribution of annual rainfall (mm) for Tzada Keristian, 1995-1999.

Months	1995	1996	1997	1998	1999
January	-	-	-	-	11
February	-	-	-	-	-
March	-	18	-	3	-
April	28	81	3	33,3	23,3
May	13	42	207	33,5	-
June	-	44	90,2	17,0	22,0
July	144	143	177,1	110	148,1
August	166	102	81	240	60
September	31	-	-	3	-
October	-	-	159	-	-
November	-	37	-	-	-
December	-	-	-	-	-
Total Annual Rainfall	382,0	464,0	717,3	439,8	264,4

Source: MOA (1999).

In Tzada Keristian the annual rainfall of 1995-1999 ranged between 264.4 and 717.3 mm with an annual average of 453.5 mm. The efficiency of the rainfall for summer crop production is less than might be expected. It is very important for farmers to adjust their planting dates to avoid a coincidence of critical growth stages of their crops with the dry spells.

4.1.2.2 Temperature

Temperature is the second most important climatological factor after rainfall. Within the rainfall limits of an area, the temperature determines what crops can be grown there, what type of animal can utilize the natural vegetation and suit the farming system (Whitmore 1957, p. 25). In Eritrea, altitude is a major factor in determining temperature. The mean annual temperature generally drops by approximately 1 °C for every 200m rise in altitude.



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Table 4.2 Temperature regimes for Eritrea

Temperature regimes (Relative)	Elevation Range (m)	Area (sq. km)	Mean Annual Temperature (degrees centigrade)
Very hot	<0 - 500	40,705	29 - 26.5
Hot	500 - 1000	47,454	26.5 - 24
Warm	1000 - 1500	16,982	24 - 21.5
Mild	1500 - 2000	11,623	21.5 - 19
Cool	>2000	5,073	<19

Source: FAO (1995, p. 7)

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For agricultural purposes therefore, minimum, maximum and average temperatures for a particular area are of the utmost importance in decision-making regarding the choice of crops suited to that area (See table 4.3 below).

Table 4.3 Average monthly minimum and maximum temperature for Tzada Keristian, 1961-1998.

Months	Monthly average minimum temp. (°C)	Monthly average maximum temp. (°C)	Monthly average Temp. (°C)
January	4,3	22,5	13,4
February	5,1	23,6	14,35
March	9,5	25,5	17,5
April	8,9	24,6	16,7
May	10,4	25,0	17,7
June	10,6	24,6	17,6
July	11,1	21,6	16,35
August	11,1	21,5	16,3
September	8,8	22,6	15,7
October	8,3	21,8	15,05
November	6,7	21,0	13,85
December	5,0	21,7	13,35

Source: MOA (1999)

The mean annual temperature is less than 16⁰C. Lower temperatures make for less evapotranspiration, but crop-damaging frost occurs in January and February. Frost occurs in many places in the highlands during winter.

The seasons in Eritrea are as follows:

Winter: October, November, December

Spring: January, February, March

Summer: April, May, June

Autumn: July, August, September



4.1.3 Topography

Topographically Tzada Keristian can be described as a broad and flat area with a few hills. The central part of the area is slightly concave. The altitude of the research area is between 1800m to 2000m above sea level. The slope is approximately 2 to 5 percent.

4.1.4 Soil

Unfortunately no detailed soil surveys have been conducted in the area. The only surveys available, were those of FAO (1994), which are vague, used as they were for regional planning. According to their classification the research area's soils consist of combisols, lithsols, regosols and vertisols. Soil fertility is poor to medium and can be regarded as a constraint to agricultural production. According

to FAO (1995, p. 34) much of the rain is in the form of intense storms, which make for poor infiltration and rapid run-off. As a result, cropping lands are exposed to severe erosion. The local people do work on soil and water conservation (soil and stone terracing and afforestation) as they work for the food for work programme which is organized by the local administration and the local council with collaboration of the ministry of agriculture.

4.1.5 Vegetation


The natural vegetation of the country was almost completely destroyed during the three-decade war and the removal of trees without their replacement. UNICEF (1996, p. 4) established that only three percent of the land is covered by vegetation. As a result, Eritrea suffers from an acute shortage of available energy resources. The single main energy source (wood & charcoal) caters for 82 percent of the total energy consumption (Eritrean External Affairs Department, 1993, p. 27).

The natural vegetation in the highlands is too virtually destroyed. This is the consequence of centuries of exploitation without replacement and, more recently, of three decades of war during which rational land use policies could neither be conceived nor implemented. The highlands are virtually treeless except for occasional small woodlots of *Eucalyptus globulus* or *Eucalyptus camaldulensis* (FAO, 1995, p. 2).

The loss of almost all forest and woodland cover has exposed soils to serious erosion and degradation. Wind speeds, surface runoff, evaporation and soil temperatures have increased. The situation is extremely critical and one gets the impression that the country has a harsh climatic condition. This makes it very difficult to farm with livestock and has many negative effects.

4.2 INFRASTRUCTURE

4.2.1 Introduction



Successful general and social development of an area is highly influenced by the quality of its infrastructure. Steyn (1982) states that "a farmer's ability to increase his output depends not only on factors like the structure of his farm and the resources allocated to it; his attitude towards himself and his farm; his willingness to learn new agricultural techniques; the quality of instruction he receives and the internal organisation of the rural community. It depends also on a broad network of factors external to the farm itself - both within and beyond the rural areas that must be organized into a system of assistance to the farmer in his efforts to increase production".

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4.2.2 Transport

4.2.2.1 Roads

Tzada Keristian is situated approximately 20 km from the capital city, Asmara. Gravel and dirt roads connect the area with other nearby rural villages and towns. The condition of the roads during the rainy season from March to October is very poor and erosion channels occur frequently.

Road maintenance is the responsibility of the local council that organizes public campaigns through food for work or cash for work programmes, which are sponsored by the government. The road system is relatively better in comparison with other rural areas in the country.



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4.2.2.2 Bus services

Forms of transportation are an indication of mobility, living standards and stage of social and infrastructural development. No respondents had means of transport of their own and all relied on private and public transport. The cost of transport to the nearest city Asmara is very reasonable at two Nakfa for a return journey.

Buses are the only means of transport in the area. There is one public bus that operates in the morning and afternoon. This makes it possible to complete a trip into town and back in a single day. The bus service is a satisfactory one.

4.2.3 Water resources

Provision of safe and convenient water supplies ensures multiple health, economic and social benefits for women and, more broadly, families. Zeggo (1998, p. 6) points out that in Eritrea the situation as to water supply is also rather bad. The daily per capita consumption of water is about 15 liters in towns and less than 3 liters in the rural areas.

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In rural areas of the country the main sources of water are dams, wells and seasonal rivers. As a result, diseases generally, associated with contaminated water constitute a serious health hazard in Eritrea as they do in many tropical areas. Waterborne diseases include diarrhea infections, skin and eye infections, and malaria. Water supply to the community and for irrigation purposes, is not yet through a system of pipes.

4.2.4 Marketing facilities

"The development of agricultural production and of rural communities is often hampered by an apparent lack of demand for their products. Access to market outlets depends greatly on the existence of efficient agricultural marketing organisations and facilities"(FAO, 1979, p. 25).

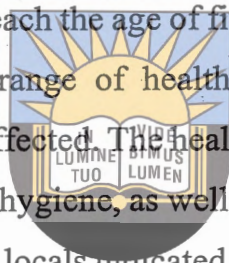
The commodities produced by the households are sold in the nearest city. Tzada Keristian has no markets. There are only a few small shops, two restaurants, and no trading stores. Women have to sell their household products at the nearest market. The market in the city is well organized, the women go directly to the retailers, cattle and small stock exported products for example, barley, eggs and milk are sold in small quantities. Income, generally, only suffices to enable the family to buy groceries such as sugar, tea and coffee. In general it is the women's duty to buy and sell goods except for the purchase and sale of cattle and sheep. There are many places where people can sell produce or manufactured goods.

4.2.5 The health situation

In the research area there is a clinic which was established 15 years ago with 6 beds for emergency patients. There are no qualified doctors, only nurses and health assistants. The clinic is situated in

the central part of Tzada Keristian. Medical services are provided free of charge and the staffs are paid by the government. The necessary equipment and medicine are provided by the government. UNICEF (1996, p. 35) indicates that only 7 in 100 rural inhabitants have access to safe water while less than 1 in 100 rural inhabitants has access to adequate sanitation.

Half of Eritrean's population of 3.5 million are children under the age of 18 years. Between 40 to 70 percent are malnourished and nearly half will die before they reach the age of five years. People in Tzada Keristian suffer from a range of health problems. Women and children are particularly affected. The health problems are related to unclean water and lack of hygiene, as well as to deficiencies in their diet. Information given by locals indicated that malnutrition diseases related to contaminated water diarrhea and amoebas, malaria from mosquitoes, respiratory diseases such as influenza, and tuberculosis from drinking unboiled milk were common (Papstain, 1992, p. 22). The health situation is very poor and the people suffer severely as a consequence.



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4.2.6 Recreational facilities

Recreational facilities are largely non-existent. There is only one soccer field at the high school. Cultural meetings and social gatherings are held in the open air in the nearest space under big trees.

CHAPTER FIVE

5. THE PERSONAL AND SOCIO-ECONOMIC SITUATION OF THE RESPONDENTS

5.1 PERSONAL CHARACTERISTICS OF THE RESPONDENTS

Analysis of information requires consideration of the following demographic characteristics of the respondents: age, household size, marital status, level of education, ethnic grouping, religion and occupation.



5.1.1 Age

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Age statistics are important indicators about labour force and age-dependency. "Little is known about the demographic composition of Eritrea's population except that the share of children below adult age, defined as under 18 years, is fairly high (about 52 percent), consistent with the postulated high population growth rate" (FAO, 1994, p. 12).

Table 5.1 Distribution of respondents according to their age, Tzada Kerstian, 1999. (n=110).

Age Group years	Number	Percent
< 20	2	1.8
20 - 30	46	41.8
31 - 40	17	15.5
41 - 50	28	25.5
51 - 60	12	10.9
> 60	1	4.5
TOTAL	110	100

Fifty nine percent (59.1%) of the women were younger than 40 years of age. Therefore a high proportion of women were still in the reproductive years. It is likely, therefore, that the population will continue to grow at a fast rate given the high birth rates of the past and a continuing high degree of illiteracy.

Only 5 percent were over the age of 60. In other countries it is often found that there is a high proportion of old people. Old people are often a burden on their families due to the care they require. In

Eritrea old age does not seem to pose a problem. The reason might be, as UNICEF (1994) indicated, that the life expectancy at birth in Eritrea is 47.5 years while in other less developed countries it is 52 years. Most of the households had the necessary physical capabilities of carrying out farming operations. At present old age should not be a problem for agricultural work. In the long term, due to lower incomes from farming the age composition of the rural population is likely to change. There is a need to attract younger people into farming.

5.1.2 Household size



In rural areas, large families are important for a farming family that produces food for subsistence, and for all involved in traditional farming systems. Children are also expected to help with the household tasks and farm work. Furthermore, a large family provides security for the parents in their old age as they expect to be supported by their children.

UNICEF (1996_a, p. 2) has pointed out that fertility rates in Eritrea are very high. Women, on average, have six children with the result that Eritrea has a young population with high consumption needs; one in two people is a child under 18, one in five is a child under five. With a population growth rate of about 3 percent per annum, the number of people in the country will double every 23 years.

The number of family members permanently found to be in the household ranged between one and fourteen with an average size of 5.3. The average family size tends to put a lot of stress on women headed households in providing for the basic needs of the family.

5.1.3 Marital status

Marital status is very important in agricultural production because it has a direct bearing on agricultural progress. The presence of a man in the household can enhance farming efficiency in respect of both productivity and earning capacity to provide for farm inputs and family maintenance.



Eritrean communities have an unusually high rate of households headed by women about 45 percent- as a result of many long years of warfare that has killed many able-bodied men. The proportion of female-headed households that are poor is not different from that of male-headed households, partly because women have more secure access to land and other productive assets than is commonly found elsewhere in developing countries. Communities and extended families also provide support. The war of liberation actively involved many women, increasing their independence and level of participation in public and community affairs (World Bank, 1997, p. 65).

Table 5.2 Distribution of respondents according to their marital status, Tzada Kerstian, 1999. (n=110).

Marital status	Number	Percent
Married	80	72.7
Divorced	5	4.5
Widowed	24	21.8
Single	1	1.0
TOTAL	110	100

The majority of the women, almost 75 percent, were married. The number of widows, just more than 20 percent, may be due to the war situation. The community does have a high incidence of female headed households. This may be regarded as a constraint on farming efficiency in respect of both labour and earning capacity to provide for farm inputs and family maintenance. Generally these families seem to be in a very stable position and have no serious social problems. The divorce rate is also very low. Socially the situation is conducive to agricultural production.

5.1.4 Level of education

Illiteracy still remains a major problem in most developing countries and women constitute a large proportion of the illiterates (Kalabagh, 1992, p. 28).

Traditionally women were not educated. Illiteracy handicaps the women in the area. They struggle to adjust to new technology unknown in their traditional or cultural ways of cooking, washing clothes, drawing water from wells and grinding grains.

The current education system is trying to provide the community with the basic skills to eradicate illiteracy and improve the living standard. UNICEF (1996, p. 58) has pointed out that 8 in 10 men and 9 in 10 women are illiterate. Seventy five percent of the children of school going age do not attend primary school although the government has made the first 7 years of primary education compulsory and is free of charge.

Following independence in 1991, access to facilities has improved after years of neglect (not a single school or health clinic was built from 1976 to 91). Gross primary school enrolment has increased from 36 percent in 1991 to nearly 50 percent in 1995. Discrimination in schooling on the basis of gender is generally absent in the cities and the highlands. The average component of girls in the primary schools is 44 percent (World Bank, 1997, p. 65).

In the study area there is a primary, a junior and a high school with all the necessary buildings and classrooms. The school enrolment in 1999 was 315, with 167 male and 148 female pupils.

Table 5.3 Level of education of Tzada Keristians' population, Tzada Keristian, 1998. (n=2806).

No. of school years	Number	Percent
0-4	2014	71.8
5-7	369	13.1
8-12	420	15.0
>12	3	0.10
Total	2806	100

Source: Local Administration (1999)

According to the women's league, 95 % of the women in the whole area can be regarded as illiterate. A person with less than four years schooling is usually considered to be illiterate.

Nearly three quarters of the total population can be regarded as illiterate. The situation of the women in Tzada Keristian is given in table 5.3.

Table 5.4 Women's level of education in, Tzada Keristian, 1998.
(n=487).

No. of school years	Number	percent
0-4	463	95.1
5-7	16	3.3
8-12	5	1.0
10-11	2	0.4
>12		0.2
Total	487	100

Source: Women's League Association (1999)

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Table 5.5 Distribution of respondents according to their level of education, Tzada Kerstian, 1999. (n = 110).

Number of years at school	Number	Percent
0	43	39.1
1 -2	12	10.9
3 - 4	20	18.2
5 - 6	15	13.6
7 -8	17	15.5
>9	3	2.7
TOTAL	110	100

In the study area 68 percent of the women can be regarded as illiterate. Although the situation is slightly better than in the total area, this is still a very high rate of illiteracy and is a constraint to agricultural development.

Nearly one-third (31.6%) of the women attended school beyond standard 5. Of these, only 2.7 percent have more than nine years schooling, which makes them better placed for the adoption and understanding of farm technology and modern farming systems.

5.1.5 The ethnic situation

Eritrea is culturally and linguistically diverse. About 50 % of the people are Tigringia, who live mostly in the highlands, while 31% are Tigre. The Saho and Afar are 5% each. The Hedarib, Beline, Kunama, and Nara comprise about 2% each and Rashida 0.5%. Each of these ethnic groups has its own language. Tigringia and Arabic are the working languages of Eritrea (UNICIF, 1996, p. 10). All the respondents belonged to the Tigringia ethnic group. There is a very good relationship between these different groups and there is no friction which can be regarded as a constraint on agriculture.



5.1.6 Religion

According to the local administration census, there were 2765 Orthodox Christians, 1 Catholic, 8 Protestant and 32 Muslims in the total population of 2806 people. Women usually attend most of the services on Sundays. Women are not allowed to preach and, in general, play a passive role. The relationship between these different religions groups is very good and there is no friction.

There are two Orthodox Christian churches that serve the majority of the people. According to the survey 99 percent of the respondents are followers of the Orthodox Church. The women respect Sundays as a holiday and do not them work on a Sunday.

5.1.7 Occupation

Determination of the women's occupation is very important in order to know how many women are involved in work on and off the farm. It also helps to analyse household income and availability of manpower.

Due to the traditional division of labour, women are involved in a wide variety of different domestic tasks and are usually not expected to go and work outside the house. Women have to do shopping, grinding of grain, cooking, washing clothes, ironing, cleaning houses and house management and maintenance. Furthermore, it is the women's responsibility to take care of the sick, the young and the elderly, while many social duties are also traditionally considered a woman's duty.

Most married women are confined to their domestic housework. Hence, they are financially dependent on their husbands. Widows traditionally receive support from their husband's family. Elderly grandparents live with their sons, who have relatively better living conditions. Eritrea knows, as yet, no social security or pension schemes. The occupational situation of women in the study area is given in Table 5.6.

Table 5.6 Distribution of respondents according to their occupations, Tzada Kerstian, 1999. (n=110).

Occupation	Number	Percent
Working at home	90	81.8
Daily commuter	19	17.3
Weekly commuter	0	0
Monthly Commuter	1	0.9
TOTAL	110	100

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It can be seen that 82 percent of the women were only working at home. They are mostly in their houses looking after their children, cooking, washing etc. These are mainly married women and depend on their husband's income. Only 17 percent of the women were employed or self-employed doing non-farm work. A very large number of women do not bring in any cash into the household and must be very poor. With their low level of education it will be very difficult for them to earn decent salaries.

5.2 THE SOCIO-ECONOMIC SITUATION OF THE RESPONDENTS

5.2.1 Housing

Housing conditions can be good indicators of tradition and living standard. In the research area the men construct the houses, while the women furnish them. Women have to plaster the walls and floors and decorate the house. The peasants in the towns and cities live in houses of quite different standards. Poor peasants in rural areas live in small and dirty houses. Males and females are used to living together in one room with the rest of the household. These are the traditional huts, which have a cylindrical structure and stone foundation walls, about 80 cm high, with upper walls built from branches and poles. They are built with a frame of Eucalyptus poles resting on the wall and tied together at the top. This frame is thatched with sisal sprouts and pearl millet and sorghum stalks. These houses are very inadequate and old fashioned. A few farmers with higher income have better dwellings with cement walls and corrugated iron sheets. Most of these people only have one room while a few may have separate rooms. This one room, in which they live, is also used to store the harvest and to process the crop.



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Table 5.7 Distribution of respondents according to housing standard in, Tzada Kerstian, 1999. (n=110).

Type of House	Number	Percent
Traditional huts	2	1.8
Old fashioned	17	15.5
Modern and new	91	82.7
TOTAL	110	100

Only 17 percent of the respondents had old-fashioned houses, while 82.7 percent occupy modern houses, built of cemented walls and corrugated iron sheets. This housing, although slightly better than in some areas, still indicates that the people are very poor as many houses is modern type, almost two-thirds, of them had only one room.

Every human being has a basic need for shelter. In Eritrea, due to 3 decades of war in the country, there is a severe shortage of houses. The total number of homes for a population of approximately 3.5 million people is estimated to be 800,000. At present, however, there are far fewer homes, with too many residents. The number of new houses needed in the near future is estimated to be between 150,000 to 200,000 (NEMP-E, 1995, p. 25).

Table 5.8 Distribution of respondents according to the total number of rooms in dwelling, Tzada Kerstian, 1999. (n=110).

Number of Rooms	Number	Percent
1	66	60
2	38	34.6
3	1	0.9
4	3	2.7
5		1.8
TOTAL	110	100

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The majority of the respondent homes (95 percent) only have 1 or 2 rooms. The farmers in Tzada Keristian do live in houses of quite a different standard. These houses do not have any latrines and bathrooms, hence, they use the fields near the village in place of toilet facilities, and they must bathe in the living room. With such big families, and such small houses, people grow up with very little privacy and this can easily lead to unwanted social problems.

5.2.2 Land

A communal system of land tenure obtains in the area. Land is distributed periodically, usually every 7 years, but now land redistribution has been delayed so that no allocation has been made for the last 10 years.

Traditionally land is distributed among the households of the village on the basis of the size of the family and, for fairness, the land given to a farmer included all land types, depending on location and fertility. A family of between 1 and 3 received 0.75 ha and family of between 4 and 7 members would receive 1.5 hectares. Families with more than 7 members, would receive 2 hectares.

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Women in Eritrea have more secure access to land and other productive assets than is commonly found in other developing countries (World Bank, 1997, p. 65). In 1994 a system of land tenure was introduced granting every adult (men and women) a lifetime right to use of land. Unfortunately this does not guarantee that a woman will be able to work it as certain tasks remain the man's prerogative. Cultural norms may prevent women from clearing and ploughing land - a man is supposed to perform this critical task for her (UNICEF, 1996_b, p. 78).

Table 5.9 Distribution of respondents according to their land holdings, Tzada Kerstian, 1999. (n =110).

Land holding/ ha	Number	Percent
Nil	44	40
0.75	28	25.5
1.5	22	20.0
2.0	16	14.5
TOTAL	110	100

Forty percent of the women had no land. The land tenure system causes severe fragmentation. As the population increases, and land cannot be used as security to obtain credit, since nobody owns it.

The land issue is critical at this stage with 40 percent being without land. Taking other factors into consideration, such as rainfall figures, and soils and vegetation, the land holdings are too small for farmers to make a good living.

5.2.3. Vegetation

In the research area, land is part of a vast plain with some hills that are sparsely afforested with Eucalyptus planted by the government. No bushes are available on either the hills or plains. Women have to walk long distances in search of wood for fuel. Due to the scarcity of wood women are left with no alternative but to use crop residues and animal dung, which has poor fuel efficiency and is harmful to their health. To serve as fuel, animal dung is first dried into cakes.

This use of dung is not only harmful for their health, but also contributes to poor soil fertility since such organic manure could contribute significantly, as fertilizer, to the next satisfactory harvest.

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It has been observed that the land-use policy of the government does not encourage people to have their own afforestation. The government tries to address this problem by establishing nurseries for seedlings in the area and by distributing these to the people free of charge. The study area is badly denuded and very little vegetation is available for use.

5.2.4 Water sources

The provision of water for drinking and household consumption is one of the onerous tasks women face. In the study area there are two sources of water; firstly, the nearest municipality supplies water twice a week. It is carted by truck and sold for 4 Nakfa (1US \$ = 8 Nakfa) a barrel (220 liters). Fetching water is the woman's work. Accordingly, women spend long hours waiting for the truck and walking long distances to and from the distributing centers. The second water source is a dam, which people should rather not use. Only 4 percent of the women used water from the dam for drinking and cooking. The dam is not fenced and animals also use the water. The women who suffer a variety of health problems due to their transport of heavy loads of water. Slipped disks, broken bones, and headaches related to this heavy work, are common.

The water situation is critical and the people have to work very sparingly with water. This has a direct impact on the people's hygiene and may be regarded as a basic cause of many diseases.

5.2.5 Crop production

Owing to the devastating war many people have been displaced from their homeland and have migrated to neighbouring countries and to other parts of the world. Others were incarcerated in jail while many have joined the Patriotic Front to fight for the liberation of the country. Some of the farming land was used for military entrenchments.

For quite a long time there has been no food security for Eritrea. The country is very far from being self-sufficient with respect to food (Zeggo, 1998, p. 7). Even in a good agricultural year about half of the country's food consumption comes from food aid. During drought, 70 to 80 percent of the population receives food aid. Without it, 69 percent of the population would have been unable to consume the minimum basket of food and other essential commodities (World Bank, 1997, pp. 65-66).

The farmers in this particular locality depend entirely on rain for crop production. The main crops produced are barley, wheat, teff, maize, beans and oil crops. Teff, barley and wheat are the most important and most widely grown crops. Traditional cash crops with high yields and high profits are of secondary importance because of the erratic rainfall and scarcity of inputs. The farmers rely on subsistence farming methods using very little manure, no chemical fertilizer or

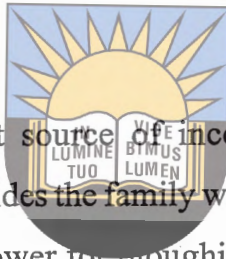
pesticides and make use of animal traction on a very small piece of land. The primary objective of the farmers is to grow crops with a reasonable possibility of getting some returns, against the use of as little manpower as possible. Important criteria for crop preferences are suitability for cooking staple dishes, utility of crop residues for other purposes (like thatching and animal fodder), manpower requirements and workload involved, and resistance to drought, weeds, pests and diseases.

The grains harvested provide the farmers, in the main, with food for home consumption leaving little for them to sell. As has been observed, drought and pests very often cause low yields. The harvest is usually very meager and a farmer often has to depend on grain donated by the government as aid, usually for at least a quarter of the year. Agricultural production is very low everywhere in Eritrea and consequently men cannot earn their living in the rural areas and are forced to resort to seasonal migration to towns in search of work. In consequence most farm activities are left to become a major burden for the women.

Due to the shortage of food, there is an office of ERRA (Eritrean Relief and Rehabilitation Agency) which provides food aid to people in every sub-zone of the country. It was observed during research, that people were receiving free food aid. All the respondents were received 15 kg of sorghum and 0.150 liters of oil per person for the month of August, 1999.

Owing to lack of draught power, farmers have to hire the same or wait for the government to help them plough with tractors. The government rents tractors to farmers who can pay while it assists those who cannot pay free of charge. However this often results in late planting which, again, contributes to low yields. Clearly, reasons the farmers in the area under study are trapped in a situation which does not allow them to produce enough food for their own needs.

5.2.5 Animal production

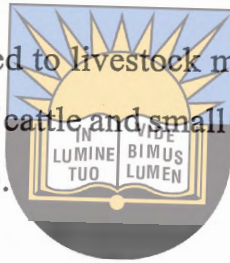


Livestock is an important source of income and security for the household. Livestock provides the family with animal products such as meat, milk, and draught power for ploughing and haulage of manure and kraal compost, important for soil fertility and crop yields and as fuel for home purposes (Theisen, 1975-76, p. 97). In Eritrea, livestock traditionally includes cattle, sheep, goats, horses, mules and camels. They are used for the transportation of goods and people, while hides and skins are also used for the production of leather goods. It is estimated that the number of cattle has declined from 2,5 million in 1972 to 970 000 in 1987 and has since risen to 1,26 million. Correspondingly, the number of sheep and goats as 5 million in 1972, 3 million in 1987 and 5 million in 1992 (FAO, 1995, p. 4). Traditionally cattle were also used as gifts for weddings by the bride's family. However, this kind of dowry is now strictly forbidden.

The people in this particular area are engaged in some dairy and sheep farming. Animals, however, are few. Most have died of or as a result of various diseases.

A contributing cause of decreasing numbers is the communal land tenure system. Large numbers of animals are slaughtered for the very many cultural and religious holidays. In Eritrea there are 7 Christian and 2 Muslim religious holidays. One and all the people celebrate these days by slaughtering cattle, sheep and sometimes goats.

The major task related to livestock management is to feed and water them. The herding of cattle and small livestock is the responsibility of older boys (Figure 4).



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Figure 4: Boys participation after the livestock

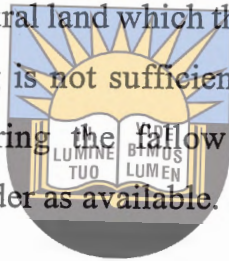
Source: Molobso (1995).

Table 5.10 Distribution of Households according to number of animals owned, 1999. (n=110)

No of animals	Cattle		Sheep		Horses		Donkeys		Chickens	
	No	%	No	%	No	%	No	%	No	%
0	82	74.6	96	87.3	105	95.5	93	84.6	97	88.2
1	16	14.5	1	0.9	4	3.6	15	13.6	3	2.7
2	6	5.5	1	0.9	1	0.9	2	1.8	3	2.7
3	2	1.8	9	8.2	-	-	--	-	-	-
4	1	0.9	0	0	-	-	-	-	-	-
>4	3	2.7	3	2.7	-	-	-	-	7	6.4
Total	110	100	110	100	110	100	110	100	110	100

These data indicate that more than 80 percent of the households did not possess any stock. Very few households owned cattle, sheep, or chickens, while goats were non-existent. The women used donkeys to transport water from the dam, while they also leased them to other farmers for transportation of goods. Traditional culture does not allow women to look after cattle or to work with them.

Livestock fodder sources vary according to what resources are available to the individual farmer. Fodder supplies depend on the amount of agricultural land which the livestock owner has access to. Communal grazing is not sufficient. They must also graze on the farmer's fields during the fallow season, and be fed hay and supplementary fodder as available.



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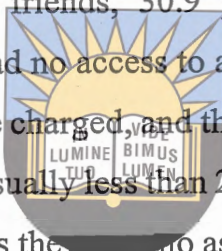
Farmers are free to graze their animals on communal land, but this land is overgrazed and unmanaged to such an extent that very little food is available for the animals. It is very difficult, almost impossible, to keep livestock and this contributes to the people's poverty.

5.2.7 Sources of credit

A major constraint to women's participation in small business projects has been their lack of access to credit and banking facilities. Most women do not have control or ownership of land or other substantial resources which banks generally require as collateral for

loans (Brouwer, Harris and Tanaka, 1998, p. 25). "Rural women have been the beneficiaries of small loans- and have an excellent repayment rate. In Chad the Social Fund Credit programme has given 68 percent of its loans to female entrepreneurs. Most of the loans are for less than \$ 1000 and have benefited the country's poorest women. The repayment rate is 90 percent"(World Bank, 1997, p.39).

Asked what they do when they face a shortage of money for their household and agricultural production, 20 percent of the women said that they borrowed from friends, 30.9 percent borrowed from relatives, and 22 percent had no access to any credit. According to the women no interest were charged, and the amount of money they borrowed was very small usually less than 200 Nakfa. Banks do not provide credit to farmers, as they have no assets which may serve as security; therefore, women cannot borrow money to invest in income generating activities due to lack of capital.



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5.2.8 Sources of household income

Most of the husbands work in the nearest city, Asmara the nation's capital. During the farming season the men come home to do the work traditionally considered as "men's work" such as ploughing. The community is of the opinion that the financial return per unit of labour that it will not suffice to meet the basic needs of their family. The government is aware of the situation and is organizing different schemes to help people earn some income. The purpose of the

schemes in lean seasons is to supplement the farmers' income so as to prevent migration and the provision of free food aid. The opportunities are very linked and the government has taken some initiative to assist the people (see Table 5.11 below).

Table 5.11 Distribution of respondents according to their sources of income, Tzada Kerstian, 1999. (n=110).

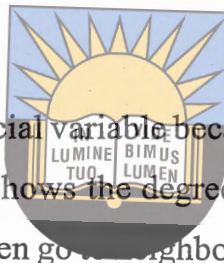
Source of income	Number	Percent
Farm production	35	31.9
Cash for work	37	33.7
Food for work and farm	5	4.5
Cash for work and farm	1	0.9
Business	15	13.6
Remittances from other family	11	10.0
Remittances and farm produce	4	3.6
Permanently on food aid	2	1.8
TOTAL	110	100

The distribution of sources of income among the respondents shows that 31.9 percent of the respondents received income from farm (crop and animal) production, while just more than half (53.8 %) of the

respondents have income from non-farm activities outside their home. The women in businesses, most of them heads of households, were mostly involved in selling alcoholic beverages including the locally brewed beer, and washing clothes.

The people's dependence on agricultural production is decreasing as compared to previous years since the life of this community, traditionally, was based only on agriculture.

5.2.9 Household income



Household income is a crucial variable because income is a measure of relative wellbeing and shows the degree of dependence on farm and non-farm resources. Men go to neighbouring towns or to the city in search of labour for income, while the women are left at home to look after their children and the household. Both spouses tend to work together on the farm when required. Widowed and divorced women depend on relatives to assist with their farming operation.

The sources of household income included farm income, cash for work, remittances, business in some combination or other, but did not include government food aid since it did not always come on a regular basis. The focus was on the income from earnings by husbands and wives, and income from farming and non-farm resources.

Table 5.12 Distribution of respondents according to their monthly household income, Tzada Kerstian, 1999. (n=110).

Amount (Nakfa)	Number	Percent
< 300	34	30.9
300 - 600	43	39.1
601 - 900	15	13.6
901 - 1200	9	8.2
1201 - 1500	5	4.6
> 1500	4	3.64
TOTAL	110	100

1 US Dollar = 8 Nakfa


The mean total monthly income of a household was 600 Nakfa. The range of income was between 50 and 3325 Nakfa. Nearly three-quarters (70 percent) of the respondents fell below the mean of 600 Nakfa. It would appear that more than 70 percent of the households would not be able to live from farm income alone without the support of non-farm resources. The farmers' income is too low to produce even for their basic needs from their fields. The farming situation is very poor and it will be very difficult to transform the area into a highly productive farming region.

5.2.10 Household expenditure

Household expenditure is highly influenced by household income, especially in the rural areas where there are limited sources of credit.

Due to lack of records, the respondents were asked questions about the amount of money they spent per month by probing expenditure on various household items.

Table 5.13 Distribution of respondents' household monthly expenditure, Tzada Kerstian, 1999. (n=110).



Monthly expenditure	Number	Percent
< 250	30	27.3
250 - 500	56	50.9
501 - 750	10	9.1
751 - 1000	11	10.0
1001 - 1250	1	0.9
> 1250	2	1.8
TOTAL	110	100

The average expenditure of the respondents was 402 Nakfa per month. Seventy eight percent of the households spent less than 500 Nakfa per month (in South Africa, an equivalent of R 600). The highest household expenditure was on food and fuel. Education and medical services are provided free of charge by the government of Eritrea. The people in the area are indigent and live in a culture of poverty that is very difficult to change.



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CHAPTER SIX

6. THE EXTENSION SERVICE

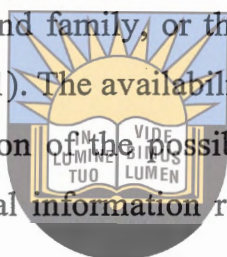
6.1 INTRODUCTION

“Extension is a necessary prerequisite to widespread and sustained agricultural development. It is not possible, even in highly developed countries, to encourage farmers rapidly to adopt new technology and more efficient practices based on continuously advancing research without farmers clearly understanding them. To bring research results and new agricultural techniques to farmers, some one must teach farmers how these practices should be employed and adopted under their own individual farming and resource condition” (Ewang, 1998, p. 32).

Agricultural extension for women may be defined as a process of spreading knowledge and skills from the sources of new discovery to the appropriate women and motivating them by a combination of different extension methods to make them accept and apply new ideas and methods which will enable them to improve their productivity and quality of life. It is exemplified by a Chinese proverb: "give a hungry man a fish, and he will eat for a day. Show him how to catch fish, and he will eat for the rest of his life”.

6.2. THE RELATIONSHIP BETWEEN THE WOMEN AND EXTENSION SERVICE

"Agricultural extension service often related more specifically to farmers who are usually assumed to be men and their various problems in the utilization and management of farm resources. Conversely, non-agricultural extension programmes are frequently directed toward women and seek to improve the use of resources within the home and family, or the care of the family's children" (FAO, 1985, p. 121). The availability of the extension service in an area is an indication of the possibilities for the dissemination of useful and practical information relative to agriculture and home economics.



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One male extension agent may be assigned more than 40 000 people in a sub-province. According to the extension officer all the services are directed to the men and there are no programmes participating. Women only have access to buy farm inputs such as tools and pesticides, veterinary services and the renting of tractors. Home economics is usually directed at the women by the home economist under the supervision of the Ministry of Agriculture in the area. The objective here is to support and assist the women by introducing them to new systems such as modern stoves, improved childcare, as well as to cooking and to a limited extent home gardening. While women are the most active participants in the farming activities, men

are prioritized by the extension service. This is one of the most important hindrances to cultural change that could ease the situation of the women in society.

It was noted that, in the research area, the extension agent only distributes ploughs, seeds and fertilizer, organizes the renting of tractors, does crop assessment and collects data on rainfall.

The extension service is typical of that in most developing countries. There are very few extension staff members and those there are, overburdened with administrative and regulatory tasks.

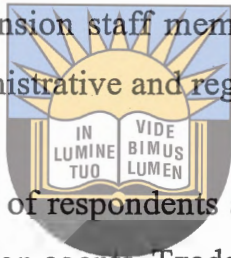


Table 6.1 Distribution of respondents according to their contact with extension agents, Tzada Kerstian, 1999. (n=110).

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Contact frequency	Number	Percent
Always	3	2.7
Sometimes	10	9.1
Never	97	88.2
TOTAL	110	100

The delivery of extension services in the area is extremely poor. Eighty eight percent of the respondents, claimed that they had never

seen any extension agent or service. Just over 10 percent had contact with an extension officer. However, the present agricultural extension service in the research area is weak and unsatisfactory because the people do not participate in the programmes and because there is a shortage of extension staff in the area.

6.2.1 Sources of information

6.2.1.1 Newspapers

Newspapers can be an effective means of distributing a wide range of information to women. It can be a valuable channel for extension news, but then women must not only have access to newspapers but must also be able to read and understand what is written in them.



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Table 6.2 Distribution of respondents according to access to newspapers, Tzada Kerstian, 1999. (n=110).

Extent of access	Number	Percent
Daily	6	5.5
Sometimes	47	42.7
Never	57	51.8
TOTAL	110	100

More than half of the respondents had no access to newspapers, while the rest had access on an irregular basis only. Illiteracy is a major problem which inhibits women from obtaining sound agricultural information. There are many newspapers published daily in the country but for the most part they focus on political affairs. No magazine or newspaper dealing with agriculture or home economics is published in the country at all and women have no opportunity to gain an information about agriculture through newspapers. This is one of the factors that prevents farmers from improving their poor situation.



6.2.1.2 Access to the electronic communication media

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Audio-visual media such as radio, audiocassettes and television are useful communication tools especially for people in the rural areas, and in particular for women since they are not often involved in extension programmes in developing countries.

In Eritrea the television and radio media are owned by the government. Radio broadcasts are transmitted in five local languages. Farmers have the chance to listen to agricultural education programmes on crop and animal production. But the programmes are only of one-hour duration on a daily basis at five o'clock in the afternoon.

There is no adult education programme on television. Only irregularly there are talks about the best farmers. Television is an efficient method for motivating farmers in their work to try and become prize winners.

Table 6.3 Distribution of respondents according to ownership of communication media, Tzada Kerstian, 1999. (n=110).

Communication channel	Number	Percent
Radio	41	37.3
Audio-cassette*	54	49.1
Television		0.9
All three	1	0.9
Nil	13	11.8
TOTAL	110	100

*Audiocassette is a combination of a radio and a sound cassette player.

It is important to take note of the number of women who own instruments necessary to listen to broadcasts for adults on radio or audio-cassette. More than 86.4 percent of the women have access to either radio or audiocassette and can listen to educational

programmes which are broadcast. Ownership of TV's being minimal this means of communication is not relevant for the purposes of the present analysis.

The radio can play a vital role in disseminating information related to farming in the rural areas (think of weather conditions, the occurrence of pests and diseases). Many social groups and individual farmers could be reached. This could well contribute to improving the plight of the women as well. However, women would need to listen and tune in. The broadcasts must come at appropriate times.

Table 6.4 Distribution of respondents according to their frequency of listening to adult education radio broadcasts in Tzada Kerstian, 1999. (n=110).

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Frequency of listening	Number	Percent
Always	20	18.2
Sometimes	48	43.6
Never	42	38.2
TOTAL	110	100

The frequency of listening to adult education broadcasts shows that 61.8 percent of the women have access and do listen to the radio.

They said the timing of relevant broadcasts was not suitable since they are usually broadcast just when they were busy with their children as they returned from school.

The extension officer should contact the radio managers and use the radio to broadcast agricultural information. The radio is an effective and open communication channel even for women who are not highly literate.

6.2.1.3 Mail



Information provided by the respondents indicates that the agent of the central post office provides them with a satisfactory mailing system. The high illiteracy rate, among the women makes use of the mailing system to reach women less attractive.

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6.2.1.4 Meetings

The involvement of women in meetings is an indicator of their level of participation in the community and of their progressiveness. Meetings provide an opportunity for extension agents to introduce themselves and the objectives of their programmes to the farmers.

Table 6.5 Distribution of respondents according to attendance of local meetings, Tzada Kerstian, 1999. (n=110).

Frequency of meeting	Number	Percent
Regularly	32	29.1
Sometimes	16	14.5
Once a while	12	10.9
Never	50	45.5
TOTAL	110	100




Almost thirty percent of the respondents attended meetings on a regular basis. Just less than 45 percent, however, reveal a reluctance to go to meetings. Meetings are not now an effective way of communication, but that could change if meetings are well advertised and come to be known as interesting.

6.2.1.5 Sources of advice

“The adoption process is the mental process/changes that takes place within an individual with regard to an innovation from the moment that he first becomes aware of the innovation until making the decision to use it or not. An innovation could be an idea, method or object which is regarded as new by an individual but which is not

always the result of recent research” (Lategan, 1995, p. 48). The adoption process consists of five distinctive stages: awareness, interest, evaluation, trial, and adoption. An individual goes through each stage within a definable time period. Although, in some instances, the steps in the adoption may not be recognizable, yet the model provides a useful guideline for selecting extension methods in programme delivery (Baker and Campbell, 1997, p. 10).

Table 6.6 Distribution of respondents according to source of advice, Tzada Kerstian, 1999. (n=110).



Source of advice	Number	Percent
Friend	41	37.3
Radio	44	40.0
Newspaper	3	2.7
Local organisation	7	6.4
Extension Agent	2	1.8
No advice	13	11.8
TOTAL	110	100

More than seventy five percent of the respondents regarded a friend or the radio as their most reliable source of information. Very few women perceived the extension agent as a source of advice. The extension service is hardly effective and has very little influence in the rural areas.

The extension service either has poor credibility or is not perceived as being in a position to help. It could be that the women didn't look for any information from the extension service or else the extension agent did not make an effort to contact them. The extension service should rather concentrate on communicating through opinion leaders and through the radio.



6.2.1.6 Participation in organisations

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Participation in organisations such as co-operatives or associations, whose objectives are to support improved farming, are likely to be associated with the adoption of improved practices and farming efficiency (Bembridge, 1972). In Eritrea, according to a radio broadcast in November (1999), the women's league which had been established in the 1980s had 200,000 members.

When the women were asked to which organisations they belonged, 60.9 percent indicated that they belonged to the women's league and 30.9 percent indicated that they belonged to a church, a burial society and to social gatherings. No other organisation was mentioned. The

women said they participated in the women's league because the women association organized training in childcare, sewing, poultry farming and aid for disabled women in co-operation with ministries and non-governmental organisations. This, they hoped, could help to improve the standard of living of the women in the area.

Although there are not many organisations with a large membership, they can be a good channel for the extension workers in order to disseminate valuable information and to help meet the women's needs.



6.3 FUNCTIONING OF THE EXTENSION SERVICE

6.3.1 Extension programming

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“The extension programming is a description and analysis of a given situation with all its problems, solutions and objectives and the drafting of a plan of work to attain the desired objectives”(Lategan, 1995, p. 115). An extension programme should be preceded by a field survey to identify the problems, analyse their causes, and to devise acceptable solutions. The outcome should be a conceived agricultural development plan for the area that will provide the extension worker with a clear programme to follow (Adams, 1982, p. 82).

Women constitute the vast majority of the rural population. They are not a homogenous group, but have different needs and demands as do men. The extension agent should therefore be able to identify his potential clients. A planned extension programme at all levels of the extension department is essential for an effective extension service. The discussion with the extension agent revealed that the agent was unaware of the concept of scientific work programmes. The extension agent admitted that he had no knowledge of scientific principles of extension programme planning. The service simply performed administrative functions. There was no evaluation due to lack of clear objectives and proper planning.



6.3.2 In-service training of the extension workers

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The extension worker should get in-service training because the change agent is directly responsible for imparting knowledge from the source to the women. It is also important that the extension worker should have a comprehensive knowledge of human behavior, and of the institutional and physical environment.

Lele (1975, p. 70) indicates that the training of rural people, whether they be men, women, or children, could also be effective under the following conditions:

- The trainers are technically competent;
- They possess an ability to translate their knowledge in the context of the scientific constraints and potentials which face their target population, and
- They are able to communicate their knowledge effectively to the rural people.

The extension worker was questioned about the frequency of short courses which he had attended since 1998. He mentioned that he attended three courses. One in 1998 on aspects of plant protection and two in 1999 which were about agronomy. This indicates that the training given to the extension agent was very limited and did not serve to keep up to date with the latest information. It is difficult for the extension worker to learn about technical problems which he has to face in his work when there is no formal link between the extension worker and the subject matter specialist.



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6.3.3 Service and working conditions

The importance of motivation in extension work is greatly underestimated. The farmers must be motivated, but it is just as important that the extension staff should be motivated to conduct their work as well as possible in a professional way. Because of the nature of the job, close supervision of the amount of effort put into the work is impossible, and motivation becomes a critical factor. Because of his isolation and individual responsibility, the extension

worker must be self-motivated. A motivation policy which works will ensure that he is as effective as possible. Current thinking on motivation is that it is an important tool to increase the effectiveness of extension services (Bembridge and Williams, 1991, p. 53).

The extension agent in the study area was not well motivated to do effective extension work. He lacked in-service training and the heavy high burden of administrative work and many meetings he has to attend rendered him incapable to attend to the farmers problems, the agent couldn't deal with farmer's problem.

6.3.4 Housing



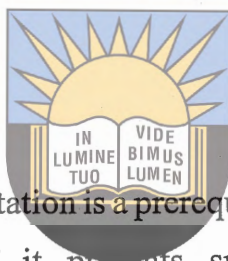
As a rule, extension workers should live in their service area to enhance their availability to their clientele. Since suitable housing is frequently unavailable in villages, it may be necessary for government to build and maintain housing for its field level staff (Claar and Bentz, 1988, p. 180).

All the staff of the Ministry of Agriculture in the sub-province lived outside their work area in the capital city of Asmara. If an extension worker lives in his working area with the community, he can gain credibility by participating in the social life of the community. It has been determined that if he/she is living away from the area, as is the case for our area of study, this could be a contributing factor for the poor performance of the service.

6.3.5 Office accommodation, equipment and records

The Ministry of Agriculture has built all the offices. All the staff had their own fairly well furnished office. The extension agent indicated that he kept records of all the necessary data, but personal observation revealed that the records mostly concerned meteorological data, crop yields, farmers who want to rent a tractor, while much essential information was not on record at all. There was no comprehensive, relevant record keeping for the area as a whole.

6.3.6 Transport



Adequate transportation is a prerequisite for effective extension work and the lack of it presents special problems for extension organisations. All categories of extension staff must be able to travel throughout their respective service areas if the organisation is to fulfil its mission. How an extension organisation can best address this need will depend on local circumstances (Claar and Bentz, 1988, p. 180).

The means of transportation for the extension staff has always been a problem in Eritrea. Motorcycles had been used since they are the only suitable vehicles for this particular area.

The size of the work area which the extension agent has to cover, is too big. The area is mountainous and roads are gravel and dirt roads in poor condition.

6.3.7 Salaries

General satisfaction was expressed by the extension worker concerning the salary. He was well paid by comparison with officials at similar levels in other departments.

6.3.8 Farmers/extension worker ratio

The number of households covered by the extension worker (male) in his area plays an important role because it determines his progress in extension work. The Bereak sub-province consists of 15 suburbs. There was only one extension worker for the whole sub-province.

It is clear that very little positive impact could be expected from extension work. The extension worker did not know how many households/farmers were in his sub-province. According to the local administration in 1999, there were 607 households that consisted of 2806 people in the research area (Tzada Kerstian), and estimates that there are more than 9000 households in the whole sub-province. The women were not considered as farmers and as a result the services directed at the women only related to home economics.

CHAPTER SEVEN

7. ROLE OF WOMEN IN THE HOUSEHOLD

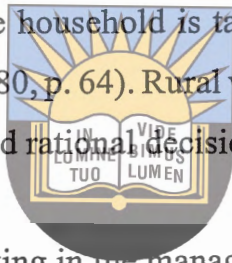
7.1 INTRODUCTION

Decisions concern the future and may be made under conditions of certainty, conditions of risk, or conditions of uncertainty. "Then farmers are not only seeking more technical and sophisticated information about modern agricultural techniques, but they are also becoming cost conscious and business minded and have to make many rational and correct decisions at the right time. If a farmer makes the wrong decisions the whole harvest can be lost. Decision-making, therefore, is crucial and more important in present day agriculture than ever before. This can be achieved only if farmers are given correct and complete information about new farming technology"(Rogers, 1980).

Decisions need to be made wisely under varying circumstances with different amounts of knowledge about alternatives and consequences. They consists of several steps (Waldron, Vsanthak mar and Arulraj, 1997, p.180):

- Identifying and defining the problem
- Developing various alternatives
- Evaluating alternatives
- Selecting an alternative
- Implementing the alternatives
- Evaluating both the actual decision and the decision making process.

Individual and household choices are for all practical purposes interchangeable, and the household is taken as the basic decision-making unit (Rogers, 1980, p. 64). Rural women are confronted with many situations that need rational decision-making.



7.1.1 Women's decision-making in the management of the household

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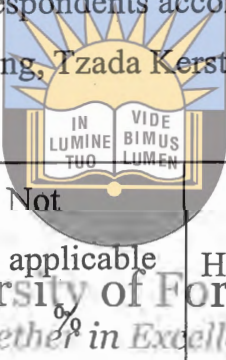
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In the central highland of Eritrea, which is predominately Christian, the household management is mainly the woman's responsibility. Women allocate the household resources among the family members and distribute household duties among the household members according to their ages and gender; accordingly boys look after livestock and girls fetch water and wash dishes and clothes.

In order to know the women's role in the house, they were asked concerning their time allocation and duties. Forty-five (45) percent of the women indicated that they spent four to six hours daily working in the house when there is no farm work. Twenty-six (26)

percent worked two to four hours in the house while ten (10) per cent did so six to eight hours. The nature of the work is more or less the same. They wake up early in the morning and keep themselves busy throughout the day until the late evening. Early in the morning they grind some grain manually, prepare breakfast as well as lunch for the family. The women carry their infants on their back and have to look after their children while doing their housework. The decision-making responsibility is indicated in Table 7.1.

Table 7.1 Distribution of respondents according to household management decision-making, Tzada Kerstian, 1999. (n=110).



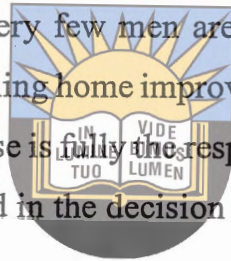
Type of Decision	Not applicable %	Husband %	Wife %	Both %
Allocation of tasks	2.7	3.6	46.4	47.3
Family size	5.5	0.9	21.8	71.8
Marriage of children	63.6	0.9	21.8	13.6
Disciplining children	7.3	0.9	55.4	36.4

Forty six percent of the respondents said that they, mainly, made the decisions about the division of labour in the household among the members of the family, while 47 percent of the women said they shared the decision with their husbands. Regarding family size, 72

percent of the women said the size of the family was decided jointly with their husbands. The relationship between the women and their husbands seems to be more cooperative than in other underdeveloped countries, where women's rights are abused and undervalued and where the men play a dominant role.

7.1.2 Women's decision-making in the household expenditure

It is traditionally the woman's duty to buy all the household needs from the market while very few men are involved in the activity. Decision-making concerning home improvement is taken jointly, but the building of a new house is fully the responsibility of the husband. Women are only involved in the decision to build the house.



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Table 7.2. Distribution of respondents according to household expenditure decision-making, Tzada Kerstian, 1999. (n=110).

Type of Decision	Not applicable %	Husband %	Wife %	Both %
Food	0	4.5	80	15.5
Clothing	0	8.1	52.7	39.2
Home improvement	0	38.1	44.6	17.3
Children's schooling	10.9	7.2	51	30.9
Medical care	0	7.2	77.2	15.5
Stimulants	0	5.4	82.7	11.7

Eighty percent of the women were entirely responsible for decision-making in the household as to expenditure for food. Due to the low income of the household, clothes were only bought once a year. Fifty three percent of the respondents said it is their responsibility to make decisions regarding clothing for themselves and their children. A medical facility in this rural part of the country is available at the public clinic, where service is free. Seventy seven percent of the women said they preferred to buy medicine from the chemist if the clinic referred them to the chemist.

7.1.3 Women's decision-making in income-generating activities

In subsistence farming there is hardly surplus produce to be marketed. Too little produce is generated from agricultural production for the purpose. A small amount of cash for the household is generated from such activities as petty trading in handcrafts, cotton waves, milk, grain and sheep. Women take the lead in choosing activities by which to generate income as well as in the use of the income generating.

Table 7.3 Distribution of respondents' decision-making according to income-generating activities, Tzada Kerstian, 1999. (n=110).



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Type of Decision	applicable %	Husband %	Wife %	Both %
Choice of activity	45.5	3.6	36.4	14.5
Purchase of inputs	45.5	3.6	36.4	14.5
Sale of products	46.4	0.9	38.2	14.5
Control of earnings	44.5	5.4	33.7	16.4
Decision of work wages	45.5	0.9	37.3	16.4

The people who live in the study area are very often engaged in some form of labour. Only about half (55%) the women were involved in income-generating activities. More than 90 percent of the respondents who were involved in income generating activities, were allowed to make their own decisions concerning the choice of activity, purchasing of inputs, selling of products and control of earnings. According to the tradition of the community it is the women's duty to get involved in self-employed jobs at home. The main problem is that credit facilities are not available or subsidized in any way. The Ministry of Agriculture has recently started a scheme whereby poultry and sheep production is promoted amongst the widows and divorced women by giving them animals free of charge or on credit.



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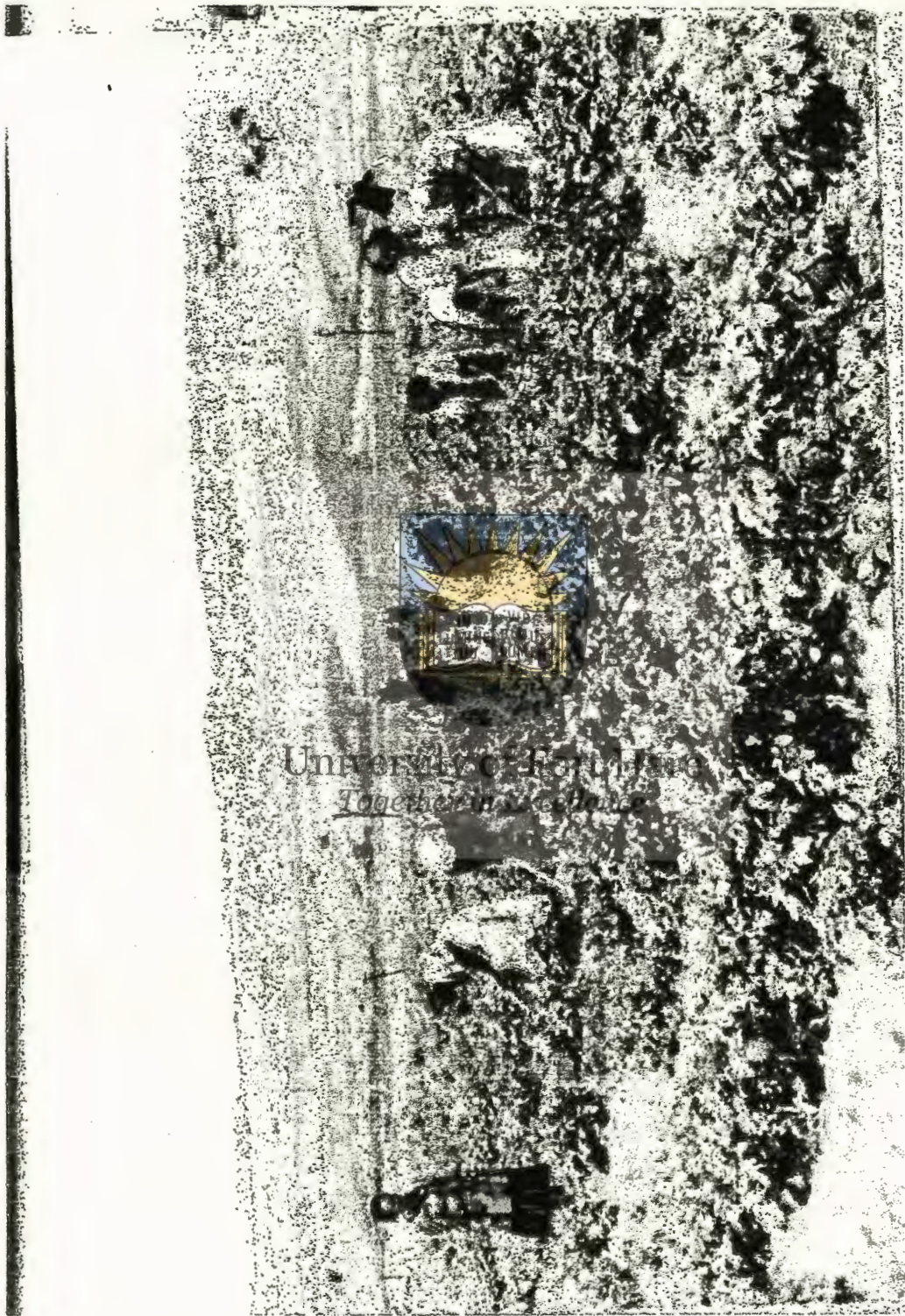


Figure 5: Women's participation in income-generating activity

7.1.4 Women's decision-making on the farm

In most of the less developed countries subsistence agriculture dominates the economy. In order to achieve progress, changes in agriculture are essential. A change from subsistence is needed if diets are to be improved, if a surplus has to be produced for sale and if agriculture has to enter a stage of self-sustained growth. A change is needed not only to increase production, but also to liberate households from poverty, the drudgery of manual labour, ill health and early death (Adams, 1982, p. 7).

Women play an important role in crop production. They were questioned about their time allocation and duties. Forty percent of the women had no land and were not involved in any farm activity. Of the respondents who had land and worked on the farm, 70 percent indicated that they spent three to four hours per day in the operation of the farm. The rest of the women indicated that they spent four to eight hours in farming. All the farm activities were done manually. In general, women play an important role in the decision-making on the farm.



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The agricultural production is usually so low that they do not even harvest enough for their basic needs. The men usually go to the nearest town in search of labour to supplement the income from the land while the women are left at home to look after their farm and the household as a whole.

Table 7.4 Distribution of respondents according to the decision-making on the farm, Tzada Kerstian, 1999 (n=110)

Type of Decision	Not applicable No response %	Husband %	Wife %	Both %
Land allocation to food crops	43.6	4.5	16.4	35.5
Purchase of inputs	41.8	8.2	21.8	28.2
Hired labour recruitment	42.8	16.2	25.5	15.5
Participation in local organization	41.8	1.8	45.5	10.9
Sale of products	60.9	0.9	9.1	29.1
Place of purchase and sale	40.9	0.9	28.2	30.0

More than 25 % of the women said they were allowed to make decisions concerning farm activities. The men make very few decisions alone. The women are allowed to make many decisions, while almost the same number of decisions were made jointly.

On the farm, spouses usually work together, but the women are not traditionally allowed to plough. More than three-quarters of the respondents shared the decision-making with their husbands or acted it on their own.

In *de jure* women households (one third of the respondents) women took decisions alone or in consultation with their relatives. In *de facto* women households, the men will come back to assist as required, usually during the ploughing time. Men usually leave again after ploughing, and it is the woman's responsibility to carry on farming and to take the necessary decisions.



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Figure 6: Women's participation in harvesting



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Figure 7: Women' participation in collecting harvest



Figure 8: Women's participation in threshing



figure 9: Women's participation in threshing

7.2 THE PRIVILEGES OF WOMEN IN TZADA KERISTIAN

Presently the rights and privileges of women are taken more seriously than before independence. These privileges have been obtained as a result of the struggle for freedom. In Eritrea women have full access to land, education, jobs and resources generally. Women are allowed active participation in politics. According to the constitution women should be represented by at least 30 percent in any formal committee, including the parliament.

When the women were asked what their attitude was towards their position in Eritrea today, 90 percent indicated that they were happy with the present position, while 8,2 percent indicated that they did not see any changes as compared to 10 years ago. The women were happy in their current position and can play their part in any household development programme and in the community generally. It seems as if there is a much better chance now for women to overcome many of their social, economic and psychological problems that could lead to a general improvement in their overall situation.



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Figure 10: Women's Participation in the military national service

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Figure 11: Women's participation in the Military national service.



Figure 12: Women's participation in the construction of dams.

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7.3 EFFECTS OF THE WAR

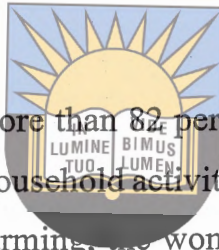
Warfare was intense from 1962 to 1991 and it destroyed most of the infrastructure and the economy of the country. The hardship of war and droughts weighed heavily, especially on Eritrean children and women. As a result hundreds of thousands of people were displaced and forced to migrate to neighbouring countries. The Eritrean Ministry of External Affairs (1993, p. 23) states that beyond the cyclical and long-term effects, the human toll was enormous; over 60 000 combatants gave their lives for independence. An estimated 40 000 civilians were killed, 10 000 men and women combatants were disabled and 90 000 orphans were left without a father and mother. Since May 6, 1998 the country is again engaged in war due to the boundary conflict with Ethiopia. Men and women between the age of 18 and 50 joined military service in response to the call of the motherland.

When the women were asked how the war affected them, 58 percent said they had a shortage of family labour because one or more family members have joined the war, 16.4 percent said it affected them negatively because they couldn't get labour either from relatives or hired labour. One individual did not want to comment, while 24.5 percent said that the war did not have a direct impact on their living. Due to the current war, progress in the country and in the study area

is severely affected. Available manpower has decreased and all the farm work is left to the women. This situation has affected living standards negatively.

7.4 ACCEPTANCE OF THE HYPOTHESES

The hypotheses started in chapter one are confirmed by the research findings.



- The study shows that more than 82 percent of the women were mainly involved in the household activities (see table 5.6). As for their involvement in farming, the women were involved in all activities except ploughing.

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- More than a quarter of the women regarded the radio and friends as their main source of advice rather than the extension agent (see table 6.6). Less than a quarter of the respondents had contact with extension agents (see table 6.1). Therefore the proposed hypothesis is accepted.

- Concerning the women's involvement in all aspects of household decision-making, the women had full participation in all decision-making in the household.

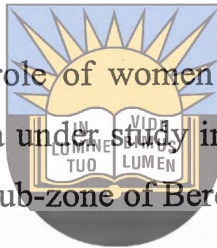
CHAPTER EIGHT

8. SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter draws some conclusions from the discussions in the previous chapters. It also make recommendations on how to improve the woman role and position in the household economy.

8.1 SUMMARY

This study surveyed the role of women in the household economy in Tzada Keristian. The area under study in this research is located in the vicinity of Asmara in the sub-zone of Bereak.

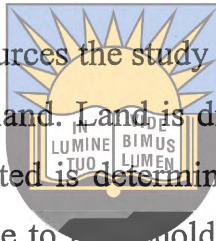


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The questionnaires were used to obtain empirical data that would confirm or disprove the hypotheses. The questionnaire contained a well-balanced variety of closed and open-ended questions. The sample comprised a total of 110 women, resident in Tzada Keristian suburbs in the Bereak sub-zone.

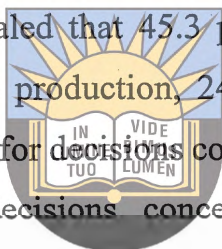
- The demographic data revealed that more than half 72.7 percent of the women were married and 27.2 of these women were widowed, divorced and single women. Their age ranges from 18 to 70 years. Ninety-five (95.5) percent of the sample are less than 60 years of age and their family size ranged between 1 and 14 family members per household with an average family size of 5.3.

- More than half (68.2 percent) of the women had less than 4 years schooling while 31.8 percent of the women had more than 5 years of schooling. There is a very high rate of illiteracy.
- Eighty two percent of the women do not work and are permanently at home while 17.3 percent of the working groups are daily commuters.
- All the respondents are Christians. All of them are of the Tigrinya ethnic group and they speak the same language Tigrinya.
- As to household resources the study revealed that 40 percent of the women do not have land. Land is distributed periodically and the size of the land allotted is determined by size of family and soil type. Land accessible to households ranges from 0.75 ha to 2ha. As to housing, 82.7 percent of the women live in modern and new houses, while 17.3 percent still live in traditional and old-fashioned houses. Sixty percent of the women have only one room, which is used for all purposes. There is a severe shortage of accommodation.
- The monthly income of the women ranged from 50 Nakfa per month to 3325 Nakfa per month. Seventy percent of the women earn less than 600 Nakfa per month. The main sources of income were cash for work (33.6 percent) and farm production (31.8 percent).



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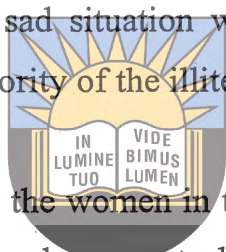
- The chief sources of information were radio, newspaper and friends. Reliance on radio as source of information holds good for 40 percent of the women while 37.3 percent rely on friends for information.
- Eighty eight percent of the women had no contact with the extension agent at all, and 9.1 percent had occasional contact with the agent.
- The survey revealed that 45.3 percent of the women are not involved in crop production, 24.4 percent of the women are fully responsible for decisions concerning crop production; 24.9 percent share decisions concerning the decision on crop production with their husband.
- Forty five percent of the women are not involved in decisions concerning income generation, while 36.4 percent make such decisions themselves. Decision-making concerning household expenditure, are the responsibility of 64.7 percent of the women while 21.7 percent of the women share the responsibility with their husbands.



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8.2 CONCLUSIONS

- The study shows that the majority of the women experience conditions of poverty. Although the government has done much to improve the infrastructure and the living standard of the people, significant progress or improvement in their living has not been achieved, largely because of poor communication with the extension service, and insufficient participation by rural women in policy shaping and implementation.
- Both the data from this study and that available to the local administration, reveals a sad situation with regard to female literacy. Women constitute the majority of the illiterates.
- Illiteracy has handicapped the women in the area so that they are unable to adjust themselves to advanced technologies. This confines to traditional cultural ways of doing things like cooking, washing clothes, and grinding grains.
- As has been mentioned earlier the study area's economy is primarily agrarian, the only employment available in the village economy being agriculture. However, agriculture due to poor rainfall, shortage of labour, pests and disease, and lack of oxen does not suffice to meet even the basic needs of the people. Therefore the government provides 15 kgs of sorghum per month to an individual during the lean season, usually from July to November in order to retain the inhabitants and were they are to control the cost of commodities required. Clearly the standard of living is very low.



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- Lack of insufficient income forced male farmers to go to urban areas to earn a better living by which to support their families in the villages leaving the elders and women overburdened and causing in lower productivity. Most of the female-headed households depend on food aid and support by relatives.

- The rural women have to walk long distances to obtain drinking water from the distribution centers or the dam. The water brought from the dam is unhygienic, being accessible to humans and animals both for lack of fencing. Most of the houses in the study area have no sanitary latrines and bathrooms. Fields serve as latrines, and bathing is done in all living rooms. Most of the houses have no kitchen for preparing family meals. Hence the women must use the living room for household tasks. Most of the rural houses have electricity; however, they use it only for lighting, because electricity is very expensive. Moreover, due to the shortage of wood they cannot boil or cook their meals; instead, they use animal dung as cook or boil their meals. The normal method of use of animal dung is fuel, not fertilizer, which could result in improved soils for grazing and crop production.

- Due to the traditional land tenure system (see section 5.2.2) land holding is highly fragmented, so that farmers have to plough and sow the same field every year without intervals. Because of all the basic reasons mentioned above the anticipated harvest is decreased annually and that does not suffice to support the farmers to the next harvest season.

➤ Ineffective in extension services keep the extension needs hidden. Extension services are unsatisfactory because the people do not know of its existence in their area. The extension service is also handicapped by a shortage of staff. For example, one extension agent is assigned for the whole sub-province, which consists of more than 40000 people. The extension agent is overburdened by unmanageable numbers of farmers. The size of his area is too large; obviously the extension agent will find it difficult to keep in contact with farmers. The greatest constraints the extension services are: lack of qualified staff, transport, housing, recording, farmers/extension worker ratio, size of work area and lack of communication with research stations.



➤ There are women's and youth associations as well as a local council in the area. Their activities focus on politics rather than other activities. One can hardly expect rural women to manage their organization effectively on their own because of their low level of literacy, and the conditions of suffering and poverty over a long time.

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8.3 RECOMMENDATIONS

Below is a list of recommendations that has emerged from fieldwork and from discussions with people living in the study area. The following recommendations are suggested: -

8.3.1 Promote accessibility to fuel supplies

Awareness of efficient use of wood should be promoted, but it is also important to give people develop viable alternatives. Any sustainable and locally adaptable technology should be welcomed, although the scope for improvements through foreign technology is probably limited. The fuel problems can be solved by convincing and motivating the local people through extension programmes plant trees in their compounds to and motivate them to promote agroforestry on their farms.



8.3.2 Promote accessibility of clean water supplies

Water supplies through closed systems operated by hand pumps are needed to ensure clean water. Communities should be partly responsible for the purchase, installment, and maintenance of these pumps; and the women who are the ones who will use them most should be involved in making decisions regarding their location to ensure an equitable supply of water.

8.3.3 Develop strategies for food security

Particular attention should be paid to the provision of clean water and to improved nutrition and food security. The most important contribution to improved food security would be to increase food production, to diversify farming and to encourage the development of household vegetable gardens.

8.3.4 Introduce improved technology

The introduction of improved technology would help to reduce the household burdens of the rural women; for example, biogas could minimize cost and increase the availability of fuel, how one of the most expensive resources in the area. Modern stoves, electrical appliances and improved storage methods are also of paramount importance. Electricity is used only for lighting purposes. However, were electricity subsidized by the government, it could be more productive and favour the use of modern technology. Certainly, improved technology, through the provision of technical support could help people to have better financial incentives and other provisions.

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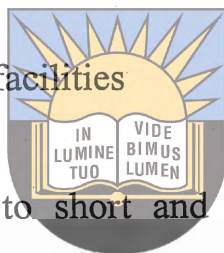
8.3.5 Create income-generating occupations

The creation of income-generating occupations is the most crucial need in view of the people's poor harvests. Female-headed households are in particularly dire straits. Therefore the women should be trained in tailoring, weaving, poultry rearing, animal husbandry and other than farming skills in order to increase income for meeting basic needs.

8.3.6 Introduce educational and training programmes

Introducing change among a rural target group requires sound and relevant training and education for them. The content of the education must be directly related to their needs and problems and must be timely. Most of the women have radios. This may serve to spread adult education to farmers. It would be effective if the programme or subject matter can draw interests so that they benefit from it.

8.3.7 Introduce local credit facilities



It is clear that access to short and long-term credit can play a significant role in the life of the women. Credit schemes particularly developed to meet the needs of female-headed households should be developed. The focus should be on the development of small industries and the provision of loans to buy small ruminants, poultry and other small industry inputs.. Credit can serve as a very important means for poor people to improve and protect their food security. Credit should be provided to selected women who participate in agricultural extension programmes have the managerial ability to effectively benefit from it.

8.3.8 Reinforce local organisations

It would be valuable for the extension staff to focus on enhancing co-operation among women, the local council, and youth associations to

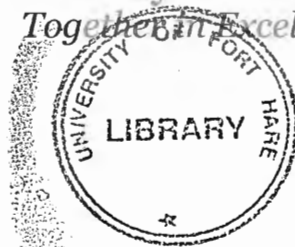
establish communication feed systems to ensure that information meets local needs and is communicated efficiently through local networks as well as in the more traditional ways, such as visits. Short courses in leadership, group formation and organisation management should be provided by extension programme.

8.3.9 Promote and improve the extension service

There is a need for extension worker to attend in-service training programmes in order to upgrade his skills and to enable him to give farmers advice on their farming enterprise. The extension department must provide more staff and provide staff with fortnightly or monthly training. Office equipment, transportation, housing and morale boosts in the form of improved employment conditions and opportunities for advancement.

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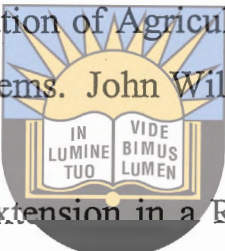
9 REFERENCES

ADAMS, M.E., 1995. *Agricultural Extension in Developing Countries*. Intermediate Tropical Agricultural Series. Longman. Essex.

ANONYMOUS, 1995. *Eritrea: National Livestock Development Project*. Ministry of Agriculture, Asmara.

ARNON, I., 1980. *Modernization of Agriculture in Developing Countries: Resources, Potential and Problems*. John Wiley and Sons Ltd., New York.

BEMBRIDGE, T.J., 1972. *Extension in a Rhodesia Purchase Land Area*. M.Sc (Agric) thesis, University of Reading, Reading.

The logo of the University of Fort Hare, featuring a shield with a sunburst at the top, an open book in the center, and the Latin motto 'IN LUMINE TUO VIDE BIMUS LUMEN' on either side of the book. Below the shield is the text 'University of Fort Hare' and the motto 'Together in Excellence'.

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BEMBRIDGE, T.J. & WILLIAMS, J.L.H., 1991. *An Evaluation of the KwaNdebele Extension Service*. University of Fort Hare, Alice.

BLACKDEN, G. M. & BHANU, C.C., 1999. *Gender, Growth and Poverty Reduction: Special Program of Assistance for Africa*. World Bank Technical paper 428, Washington D.C.

BOSERUP, E., 1980. *The Position of Women in Economic Production and in the Household with Special Reference to Africa*. In C. Presvelou, and S. Spijkers-Zwartt (eds). *The Household, Women and Agriculture Development 'Symposium Papers'*. Development Home Economic Agricultural University, Wageningen.

BROUWER, E.C., HARRIS, B.M. AND TANAKA, S., 1998. Gender Analysis in Papua New Guinea. The World Bank, Washington D.C.

CLAAR, J.B AND BENTZ, R.P., 1984. Organisational Design and Extension Administration. In B.E. Swanson (ed.). Agricultural Extension: A Reference Manual. Food and Agricultural Organisation of the United Nations, Rome.

DOSS, C.R., 1991. African Professional Women in Agriculture: An Analysis of Two Round Table Discussions. Development Studies Paper Series, Winsock International Institute for Agricultural Development, Morritton.



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Together in Excellence

DURGA, V.K. & RAO, D.L.P., 1992. Gender Ideology: Comparative Analysis of Tribal and Non-Tribal Women. In C. Kalabagh (ed.). Women and Development: Women's Struggles for Equality and Emancipation (Vol.V). Discovery Publishing House, New Delhi.

EWANG, P.N., 1998. Agricultural Extension Systems: A Global Perspective. Agricultural Extension Delivery System: Training Courses. University of Fort Hare , Alice.

FOOD AND AGRICULTURAL ORGANISATION, 1985. Guide to the Extension Training. Food and Agricultural Organisation of the United Nations, Rome.

FOOD AND AGRICULTURAL ORGANISATION, 1997. The Role of the Agricultural Services Division in the Work of FAO. Food and Agricultural Organisation of the United Nations, Rome.

FOOD & AGRICULTURAL ORGANISATION, 1994. Eritrea: Agricultural Sector Review and Project Identification. (vol.I). Food and Agricultural Organisation of the United Nations, Rome.

FOOD AND AGRICULTURAL ORGANISATION, 1995. Eritrea: Central Highland Irrigated Horticulture Development Project: Preparation Report. Food and Agriculture of the United Nations, Rome.



FOOD AND AGRICULTURAL ORGANISATION, 1998. Rural Women and Food Security: Current Situation and Perspectives. Food and Agricultural Organisation of the United Nations, Rome.

University of Fort Hare
Together in Excellence

HAIL, K.A., ARAIZ, W., HAIROMER, M., OGBAZGHI, W. and TEWOLDE, M., 1995. Diagnostic Farming Systems. Survey Western Hamassine Province. College of Agricultural and Aquatic Science, Asmara.

GOPAL, G. AND SALIM, M., 1999. Gender and Law Eastern Africa Speakers: Conference Organized by the World Bank and the Economic Commission for Africa (Ethiopia: 1997). The World Bank, Addis Abeba.

INTERNATIONAL LABOUR OFFICE, 1977. Women at work. Bi-annual News Bulletin. International Labour Office, Geneva.

JANELID, I., 1980. Rural Development Programmes and the Farm Household as a Unit of Observation and Action. In C. Presvelou and S. Spijkers-Zwartt (eds). The Household, Women and Agricultural Development 'Symposium Papers'. Development Home Economic Agricultural University, Wageningen.

JUDD, C.M., SMITH, E.R. AND KIDDER, H.L., 1991. Research Method in Social Relations. (Sixth Edition). Saunders College, Florida.

KALABAGH, C., 1992_a. Women, Employment and the Work Place. Discovery Publishing House, New Delhi.



KALABAGH, C., 1992_b. Policies and Plan Strategies for Women's Development. Discovery Publishing House, New Delhi.

University of Fort Hare
Together in Excellence

KAMUZORA, C. L., 1980. Constraints to Labour Time Availability in African Smallholder Agriculture: The Cost of Bukoba District, Tanzania. Development and Change, Bukoba.

KARL, M., 1991. Income Generation for Women. In L. Mackie and X. Charnes (eds). Women in Development: Resource Guide for Organisation and Action. International Women Information and Communication Service, London.

KATHLEEN, C., 1982. Women's Productivity in Agricultural Systems: Considerations for Projects Design. International Agricultural Economics Meetings, Jakarta.

KLAGES, K.H.W., 1942. Ecological Crop Geography. MacMillan Printing Co., New York.

LATEGAN, F.S., 1995. The Need for Agricultural Extension Programmes. In Agricultural Extension Delivery System: Training Courses. University of Fort Hare, Alice.



LELE, U., 1975. The Design of Rural Development. Lessons from Africa. The John Hopkins University Press. Baltimore.

University of Fort Hare
MINISTRY OF AGRICULTURE ERITREA, 1999. Eritrea: Agrometrology Document, Asmara.
Together in Excellence

MINISTRY OF EXTERNAL AFFAIRS ERITREA, 1993. Eritrea: Birth of a Nation. The Government of Eritrea. Department of External Affairs, Asmara.

MINISTRY OF LOCAL GOVERNMENT, 1999. Eritrea: Socio-economic Document, Ministry of Local Government Bereak sub-Province, Tzada Keristian.

NATIONAL ENVIRONMENTAL MANAGEMENT PLAN FOR ERITREA, 1995. Mechanisms to Optimise Resource Use and Sustain Human Development. Government of Eritrea for the People of Eritrea, Asmara.

NIJEHOLT, G.T., 1980. The Household, A Woman's cage?. A Policy Household as a Unit of Observation and Action. In C. Presvelous and S. Spijkers-Zwartt (eds). The Household, Woman and Agriculture Development 'Symposium Papers', Development Home Economic Agricultural University, Wageningen.



PAPSTAIN, R., 1991. Eritrea: Revolution at Dusk. The Red Sea Press, New Jersey.

University of Fort Hare
Together in Excellence

QUISUMBING, A .R., BROWN, L.R., HADDAD, L. & MEINZEN-DICK, R., 1998. The Importance of Gender Issues for Environmentally and Socially Sustainable Rural Development. In E. Lutz (ed.). Agriculture and the Environment: Perspectives on Sustainable Rural Development. World Bank Symposium Paper. Washington D.C.

RAEBURN, J. R., 1984. Agriculture: Foundations, Principles and Development. John Wiley and Sons Ltd., New York.

ROGERS, R., 1980. The Domestication of Women Discrimination in Developing Countries. Tavistock Publication Ltd., London.

SAITO, K.A. & SPURLING, D., 1992. Developing Agricultural Extension for Women Farmers. World Bank Discussion Paper 156, The World Bank, Washington D.C.

SELASSIE, W.W., 1992. The Changing Position of Eritrean Women: An Overview of Women's Participation in the EPLF. In M. Doornbos, L. Cliffe, A.G.M. Ahmed and J. Markakis (eds). In Beyond Conflict in the Horn: The Prospects for Peace, Recovery and Development in Ethiopia, Somalia, Eritrea and Sudan. Institute of Social Studies. The Hague.

SLOCUM, W., 1978. Agricultural Sociology. University of Microfilms International, London.



SOFRANKO, A.J., 1984. *Introducing Technology Change: The Social Settings*. In B.E. Swanson (ed.). *Agricultural Extension: A Reference Manual (Second Edition)*. Food and Agriculture of the United Nations, Rome.

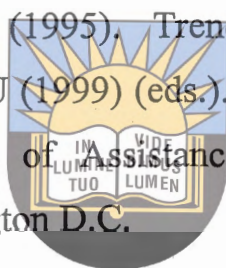
STEYN, G., 1982. *Livestock Production in the Amatola Basin*. Unpublished MSc. (Agric.) Thesis, University of Fort Hare, Alice.

SWANSON, B.E, RÖLING, N. & JIGGINS, J., 1984. *Extension Strategies for Technology Utilization*. In B.E. Swanson (ed.). *Agricultural Extension: A Reference Manual (Second Edition)*. Food and Agriculture of the United Nations, Rome.

SWAMINATHAN, M., 1992. Education and Research in Enhancing Rural Women's Income and Household Happening. In C. Kalabagh (ed.). Women, Employment and the Work Place. Discovery Publishing House, New Delhi.

TAYLOR, D., 1985. Women: A World Report: A New International Book. Hazell Watson & Viney Limited, Oxford.

THE WORLDS WOMEN (1995). Trends and Statistics. In G.M. BLACKDEN & C.C. BHANU (1999) (eds.). Gender, Growth and Poverty Reduction: Special Program of Assistance for Africa. World Bank Technical paper 428, Washington D.C.



University of Fort Hare

THEISEN, R. J., 1975-76. Development in Rural communities. Research Report, Zambia.

UNITED NATIONS, 1995. "Overview of the World Women in 1995" from the World Women 1995: Trends and Statistical (Extract), Document 119. The United Nations, Geneva.

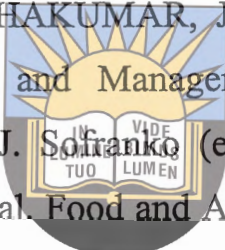
UNICEF, 1994. The Study on Socio-Economic and Health Assessment of the Underprivileged Urban Sections of Asmara, United Nations International Children Emergency Fund, Asmara.

UNICEF, 1996_a. Children and Women in Eritrea: 1996, an update. United Nations International Children's Emergency Fund, Asmara.

UNICEF, 1996. Basic Indicators and Facts about Eritrea: 1995. United Nations International Children's Emergency Fund, Asmara.

WEIJENBERG, J., DAGG, M., KAMPEN, J., KALUNDA, M., MAILU, A.M., KETEMA, S., NAVARRO, L. & NOOR, M. A., 1995. Strengthening National Agricultural Research Systems in Eastern and Central Africa: A Framework for Action. World Bank Technical paper 290, Washington D.C.

WALDRON, M.W., VSANTHAKUMAR, J. AND ARULRAJ, S., 1997. Improving the Organisation and Management of Extension. In B.E. Swanson, R.P. Bentz and A.J. Sofranko (eds.). Improving Agricultural Extension: A Reference Manual. Food and Agricultural Organisation of the United Nations, Rome.

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WHITMORE, J.S., 1957. Handbook for Farmers in South Africa (vol.I). The Government Printer, Pretoria.

WOMEN'S LEAGUE ASSOCIATION, 1999. Document of the League. Tzada Keristian Women's League Association, Tzada Keristian.

WOMEN'S LEAGUE ASSOCIATION, 1999. The 20th Year of the Association Celebration. Radio Broadcast by the Voice of the Mass on November 1999, Asmara.

WOOD, P.C. & VAN SCHOOR, A.M., 1976. Agricultural Potential of the Transkei. Unpublished Government Report. Republic of Transkei.

WORLD BANK, 1989. Kenya: The Role of Women in Economic Development. The World Bank Study, Washington D.C.

WORLD BANK, 1997. Poverty Reduction and The World Bank: Progress in Fiscal 1996 and 1997. The World Bank, Washington D.C.

ZEGGO, T., 1998. The United Nations Special Initiative on Africa: A Concept Paper. United Nations Development Programme, Asmara.



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