Amadir

Livelihood and Resource Management in an Eritrean Highland Community

A development baseline

Woldetensae Tewolde
Bissirat Dessalegn

with contributions by:

Robert Burtscher
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Preface

This report comes in support of Eritrea's efforts to promote rural development. It presents the results of a study conducted in 2003 in the village of Amadir near the town of Dbarwa in the Central Highlands of Eritrea. Following the policy of the Sustainable Land Management Programme (SLM) Eritrea, this study has three main objectives: first, the results are intended to serve as a baseline for the initiation of tangible action towards local development; second, the study provides a starting point for long-term local monitoring; and third, it can be used for training and education purposes at institutions of higher learning in Eritrea and abroad as a means to convey a picture of a rural community in Eritrea – a topic which, up to now, is still hardly documented.

The study could not have been carried out without the collaboration of the different partners involved: the local community of Amadir, whose members took the time to discuss development issues despite their numerous other commitments; the local and regional administrations, who provided valuable information; staff and students of the University of Asmara, who worked with great interest in what was for them a window of opportunity to get first-hand field experience. Not to forget our partners at HABEN, a local NGO that has been active in the region for several years prior to this project and was a great help in facilitating and carrying out this study by providing the basic logistics for the study team. HABEN also provided the Tigrinya translation found at the end of the present report.

On behalf of the study team and the SLM Programme, we would like to extend our thanks to all parties above, as well as to all other people who, in one way or another, have contributed to the successful completion of this study. A special thank goes to all those who have made contributions to the present report.

Thomas Kohler
Programme Coordinator
SLM Eritrea

Summary Fact Sheet

Location:	*Kebabi* Amadir, Dbarwa *Sub-Zoba*, *Zoba Debub*
Altitudinal range:	1950 m to 2040 m
Climate:	Rainfall 518 mm, temperature 19°C (annual averages, 6 years of record from Halhale)
Agroclimatic classification:	Central Highland Zone (*Weyna Dega*) with a potential growing period of about 3 months per annum
Mean biomass:	1598 kg of dry matter/hectare[1]
Total number of households:	439
Total population:	2001
Religion:	Predominantly Orthodox Christian
Education:	Amadir primary school established in 1969 (1949)
Health:	Nearest health station at Adi-Bezehannis (6km). The main problems are epidemic/infectious diseases, pneumonia, urinary tract infections (UTI), respiratory diseases, diarrhoea, and malaria
Markets:	Weekly market at Dbarwa (9km)
Rural accessibility:	A dry weather road linking Amadir with Dbarwa
Farming system:	Subsistence, mixed smallholder, ox-plough
Crops:	Wheat, barley, maize, sorghum, taff, peas, millet, beans and some vegetables
Food-self sufficiency:	6.7 months per year on average. Off-farm income, aid and remittances help fill the gap
Livestock:	Cattle, sheep, goats, donkeys, chickens
Draught animals:	319 oxen (= 0.73ox/household) 0 ox = 63% of households 1 ox = 15% of households 2 oxen = 13% of households >2 oxen = 9% of households
Soils:	Vertisols and Fluvisols are common. Most soils have weak structures; as a result erosion is a serious environmental problem
Main problems:	Health, erosion/siltation of dam, water management, roads / transportation (identified by village)

[1] Le Houere and H. Hoste 1977

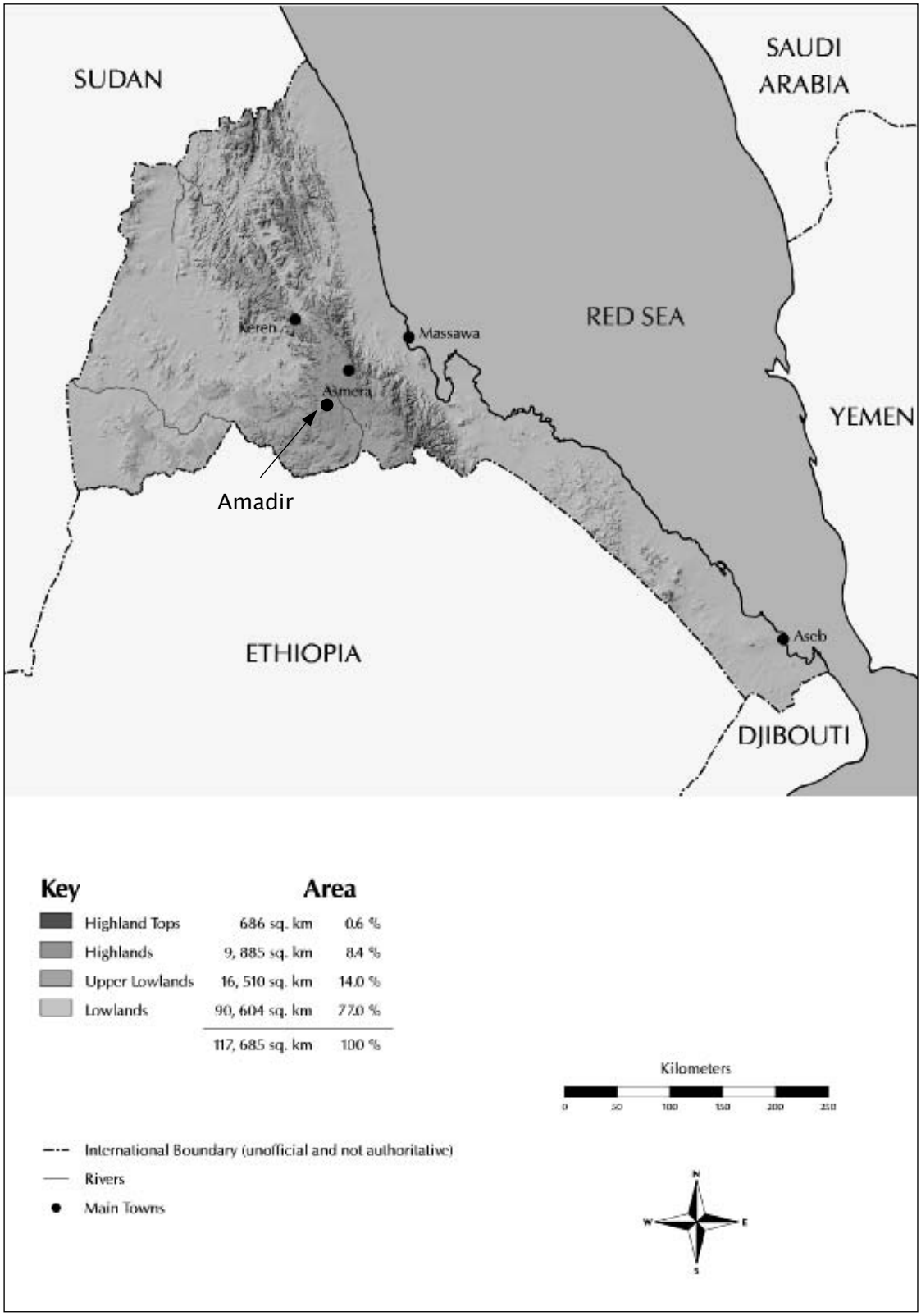

Figure 1 Map of Eritrea and the location of Amadir

Introduction

General

This report presents the results of a study carried out in August and September 2003, in the village of Amadir, a rural community located in the Dbarwa *Sub-Zoba* in the Southern Central Highlands of Eritrea. An extensive summary of the study has been translated into Tigrinya and was presented to the village community and to local and regional administrators in April 2004. This summary, included in the present report, made it possible to discuss the main findings of the study and to establish a common ground for concrete steps in local development.

Aims of the study

This study has three aims:

First, it intends to provide a baseline for rural development by presenting basic findings on the environment and on livelihoods in the study area, as well as on the development needs expressed by the local community. It concludes with a series of suggestions for concrete development. It can thus be used to approach authorities and donor agencies that support local development in Eritrea.

Second, the study serves as a baseline for long-term bench-mark monitoring, by providing quantitative and spatially referenced data. This allows monitoring of key environmental, land use and socio-economic parameters in a longer time perspective.

Third, the study can be used for educational purposes at different higher levels, such as teachers' and agricultural colleges, and at the University of Asmara. It presents a picture of a rural community in Eritrea – a subject on which not much is available in written form as yet. The present report is the third prepared by the SLM Programme in a series that aims to help narrow this information gap.

Methodology of the study

The study was carried out with the active involvement of the local community, including the local administration. In line with the aims presented above, it was conducted jointly by three parties, i.e. a local NGO (HABEN), the University of Asmara (Department of Geography), and the SLM Programme. The methodology used for the fieldwork includes both quantitative and qualitative approaches and a wide variety of tools; it is described in greater detail in Appendix 1 of this report.

1. Overview of the study area

Administration, Population

Amadir is one of four villages in the *kebabi* Amadir. A *kebabi* is the smallest administrative unit for local government in Eritrea. The *kebabi* Amadir is one of the twenty-five *kebabi memhedars* (administrations) in the Dbarwa Sub-zone, and is located 9 km to the west of the town of Dbarwa. *Kebabi* Amadir has an estimated total population of 3831. The villages, all located in the same agro-ecological zone, have a relatively homogenous set of human and ecological characteristics reflecting similarities in economic, demographic and community organization. The administrative setting of *kebabi* Amadir is as follows:

Region:	*Zoba* Debub (divided into 11 sub-*zobas*)
Sub-region:	Dbarwa *Sub-zoba* (divided into 25 *kebabis*)
Area administration:	Amadir *kebabi*
Villages:	Amadir, Adi-Harbo, Edaga Dahna and Hurgud

Table 1 *Population characteristics of kebabi Amadir*

Village	Number of households	Total population	Mean household size
Amadir	439	2001	4.55
Adi-Harbo	158	610	3.86
Edaga Dahna	100	300	3.00
Hurgud	300	920	3.06
Total *memhedar*	**997**	**3831**	**3.84**

Source: Kebabi Amadir administration, 2003.

Population characteristics of Amadir village

According to the detailed questionnaire survey carried out during the study (Appendix 3), the mean size of the sample households was 4.1 persons, and the number of persons in a single household varied between 1 and 10. The population can be characterised as young, with 42% below the age of 15. Analysis of the age and sex structures of the study group revealed a deficit of males in the 15-19 to 35-39 age groups (Figure 1). This might be due to periodic migrations to nearby urban areas to look for employment. In addition, many young people from Amadir village were engaged in National Service at the time of fieldwork. The ratio of persons in the dependent age groups to those of economically productive age was 46% (46 dependents for every 100 active persons). The large number of people aged 70 and more is difficult to interpret in the absence of census data from the village and the *sub-zoba*; thus it cannot be excluded that the sample on which the figure is based is biased to some extent. On the other hand, there were children below the minimum age limit who constituted part of the economically active household labour force. Of the total population of sampled households, 24% were aged 5 to 14 years, most

of whom were productive, working as unpaid family members. The true dependency load for the population studied is, therefore, much less than what was revealed by the statistics.

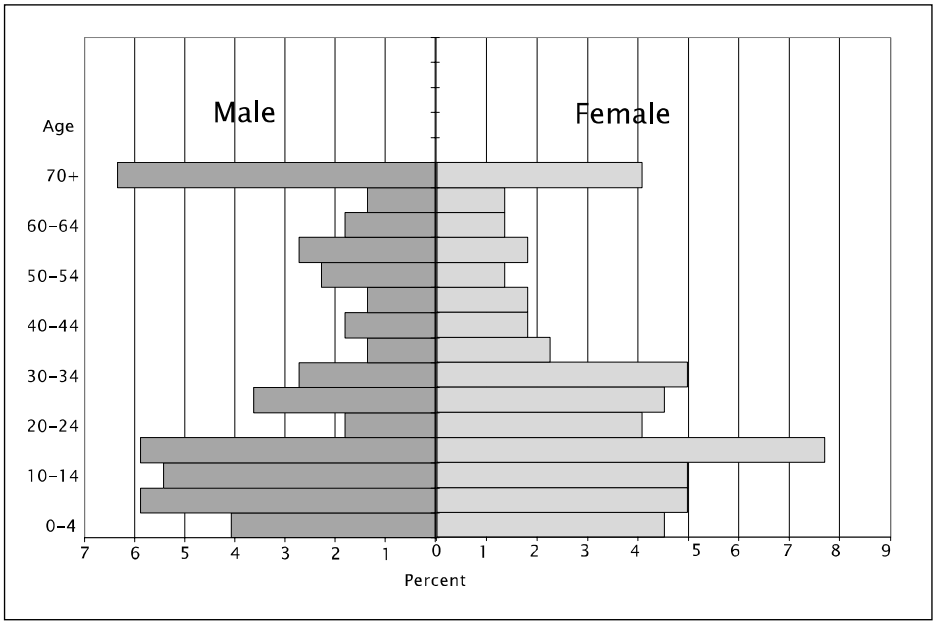

Figure 2 *Population pyramid for Amadir (sample survey)*

Farming and the household

Crop production data

The result of the questionnaire surveys (Appendices 2 and 3) showed that 98% of the sample households derived a livelihood directly from farming. Agriculture is primarily rainfed, with only a small proportion of the respondents (4%) reported to have practiced irrigated agriculture. The average crop output of a household during a normal season was 6.32 quintals, dropping to 1.6 quintals during dry years. Agricultural production was a direct function of production factors (oxen, farm size and labour force). A statistical tool (multivariate regression analysis) was employed to determine the strength of each of these factors in explaining variations in crop yield. The results indicated that crop output was most strongly impacted by possession of oxen. 44% of the households rented out their land to others, as they lacked oxen to plough their plots. The analysis of food self-sufficiency showed that on the average a household sustained itself for only 6.7 months a year, with the gap being made up by purchasing cereals with money generated from wage labour and remittances, and by food aid. In general, the farmers produce barely enough for survival, with no substantial contribution to their economic welfare.

Livestock data

Local people keep cattle, sheep, goats, donkeys and chickens. Oxen in particular play a crucial role in the social and economic life of the community. A large proportion of the households (63%) owned no oxen. Data obtained from the local administration yielded similar results with regard to animal ownership. According to the taxpayers' list, for example, 63% of the residents were without oxen (Figure 3).

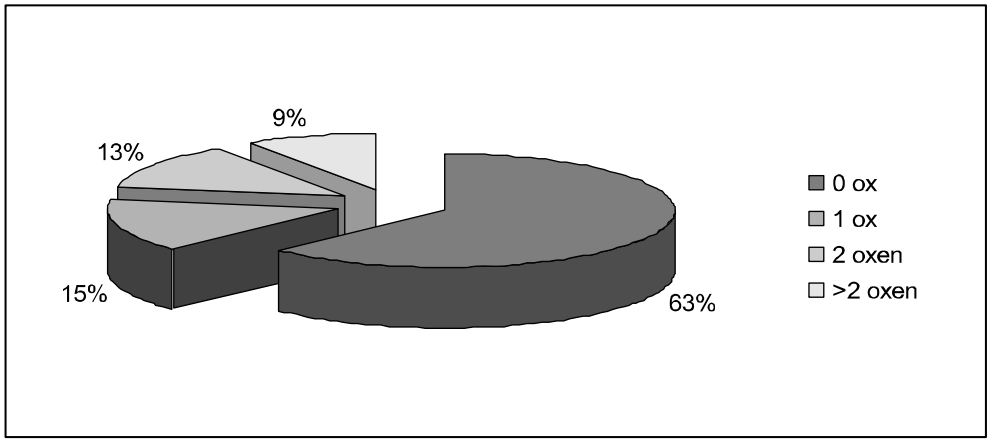

Figure 3 Ownership of oxen by household

Labour input data

Individual households varied in size, as did the composition of labour required for agricultural production. The absolute size of a household was converted into Active Adult Male Equivalents (AAME), based on indices derived by ILRI (1998). This helped to assess available labour input per household. On average, a value of 3.56 AAME was computed for a single household, which was indicative of labour constraints in farming and other activities.

House type

The results of the surveys showed that the proportion of households living in *merebae* (house covered by corrugated iron sheets) and *hidmo* (traditional house) were 22% and 46%, respectively. The remaining 32% had both types. The types of houses in the study area reflect the existing wealth differential among community households. A shift in the material values of the society was also observed, as many people chose *merebae* over *hidmo*; however, the main reason why the construction of *hidmos* has been abandoned in recent years is the lack of adequate timber – a situation that is typical for most of the Eritrean highlands.

Radio ownership

55% of the households in Amadir own radios. This opens up interesting possibilities for reaching farmers and supporting them in their struggle for securing, and improving, livelihood.

The environment

Climate

Amadir is located in the north-western part of the potentially fertile area that is the basaltic Seraye Plateau. According to the agro-ecological zoning system used for the Eritrean highlands, the area is part of the *Weyna Dega* Zone, which has a sub-temperate climate.

There is no climatic station located directly in Amadir. However, the climatic station of the National Agricultural Research Institute (NARI) at Halhale is located at a distance of less than 10 km at the same altitude. This is close enough for a rough climatic description of the area, although not close enough for investigations based on single rainfall events. The station has a record of almost 6 years of data, with gaps for some individual months. The monthly and annual mean values are computed based on a relatively short observation period. Because there are gaps in the data for individual months, the mean annual precipitation was calculated based on the sum of monthly mean values, instead of the commonly used procedure of calculating the mean value from the total annual rainfall amounts for several years (see Appendix 4). According to this procedure, the mean annual rainfall and the average temperature are 518 mm and 19°C respectively. The mean daily temperature variation of 17.8°C, and a difference between the coldest and the warmest months of only 5.6°C, express the tropical radiation conditions of the study area. The absolute minimum temperature measured during the observation period was -0.5°C, whereas the highest temperature measured was 36°C.

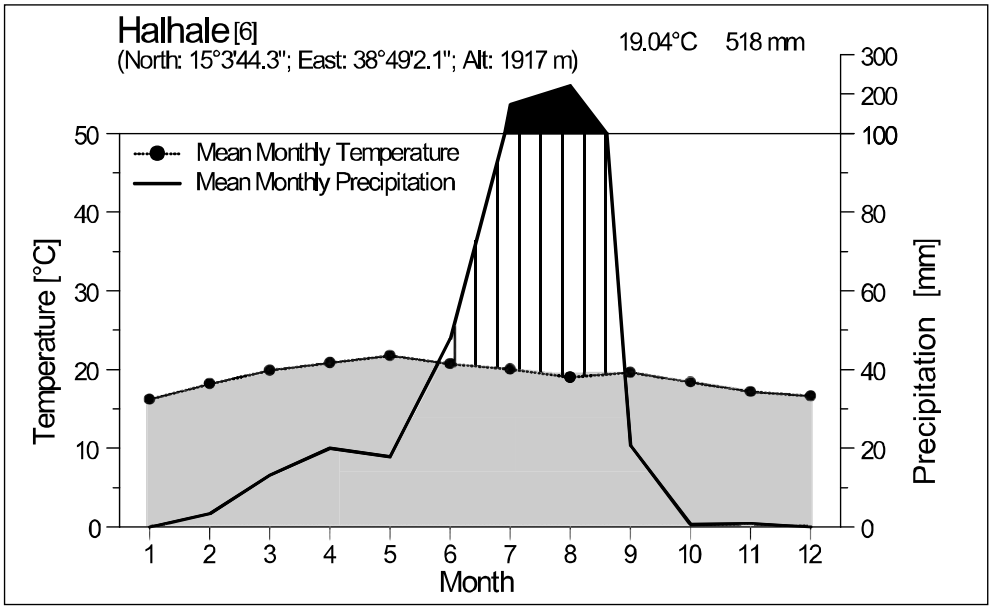

Figure 4 *Rainfall and temperature diagram*

WALTER et. al. (1975) applied a graphic procedure for differentiating relative dry and relative humid months by overlays of temperature curves over precipitation, applying a ratio between temperature [°C] and precipitation [mm] of 1:2 (see Figure 4). Using this ratio, arid periods (shaded areas), relatively humid periods (vertically hatched areas), and

peri-humid periods (black areas) can be identified easily. Figure 4 shows the resulting diagram for the Halhale station, considering the available observation period of 6 years. The peri-humid period (black area) lasts for less than 2 months. Only during this time can runoff be expected. The relatively humid period designated by the vertical hatching is the potential growing period. An adequate amount of moisture is available during this period for growing crops. The diagram shows a potential growing period of about 3 months.

The Eritrean highlands are usually characterised by the bi-modal nature of the rainy season. There is a short rainy season, known as the Asmara rains in April, and a main rainy season, known as *kremti*, from June to August. However, the peak of the Asmara rains was virtually non-existent during the observation period.

The method of visualising the agro-climatic situation, using this type of diagram, represents an approximation suitable for national, continental and global approaches where longer data records (more than 10 years) are used. This makes it possible to indicate the period suitable for growing crops. However, dry periods within a rainy season in specific years are not reflected, as this requires analysis of rainfall and potential evapotranspiration on a daily basis. Since evapotranspiration measured in Eritrea is not reliable, the above diagram is a useful approximation for interpretation of different agro-climatic seasons.

Besides the problem of temporal variability of rainfall, there is great spatial variability as well. For the rainy season of 2004, rainfall was measured at Halhale as well as Amadir. Comparing the two data sets revealed the great spatial variation of rainfall. This variation can be expressed by showing the daily rainfall totals measured at the two stations on a scatter plot, where the totals measured for each day are plotted as a coordinate pair. The closer the points (coordinate pairs) are along the diagonal in Figure 5, the less the spatial variability of rainfall. The point distribution in Figure 5 expresses extremely high rainfall variability, since almost no points are found close to the diagonal line that represents even distribution; for example, the highest rainfall measured at Halhale (40 mm) did not produce any rainfall in Amadir.

Soil types

The soils in Amadir are deep in many places, resulting from silt accumulation from the mountains. But their depth varies, and soils occupying the lower part of the village territory are believed to be deeper than the rest. The farmers used traditional classification methods to group the soils in their territory into four classes based on colour, texture and water retention capacity:

- *Duka* are the most fertile soils and cover a major portion of the village's territory. They have a deep soil profile and are almost free of stones. The nutrient content of these soils is high, and as a result the main crops are cultivated on these soils.

- *Walaka* are soils with high water storage capacity because of the clay they contain. These are good soils in general, but ploughing them is difficult during dry season. *Hagay taff* and *taff hamle* are crops usually cultivated on these soils.

- *Hutsa* developed mostly along riverbanks. They have better nutrient content and water retention capacity. These soils are useful for the cultivation of maize and sorghum.

- *Baekel* are perceived by farmers as degraded and less fertile. Crops on these soils suffer from water deficiency, but they are still used to grow *beles* and *eucalyptus.*

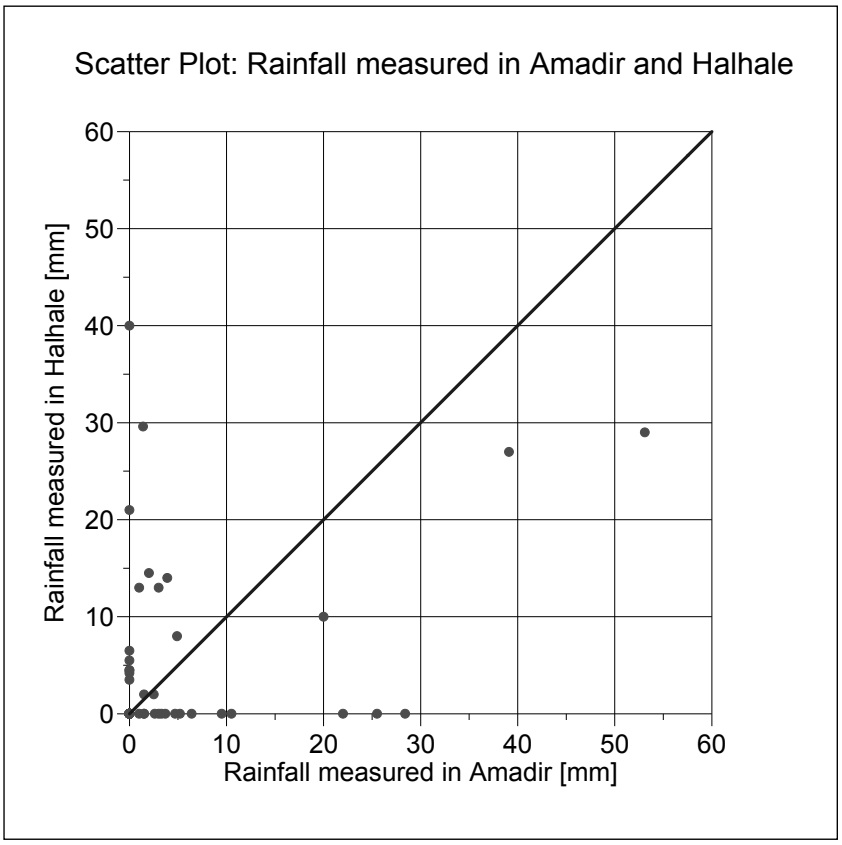

Figure 5 Daily rainfall measurements for Amadir and Halhale, 2004

2. People, assets, livelihoods

Land and livestock

By the villagers' definition, from the time one is married and begins a family, the household thus formed is regarded as an autonomous unit and is expected to be self-sufficient. Possession and rights of ownership are vested in the head of the household. Unless deceased or absent, the head of the household is always a male, i.e. the husband or father. Subsistence farming, the primary source of income, consists almost exclusively of farming and rearing livestock. Consequently, farmland and animals are the basic assets in Amadir.

Farmland is granted equally. Any villager, part-time resident or descendant of either who is at least 18 years old is entitled to own land, once they have fulfilled other government requirements. Farmland is granted only to those who reside in the village. This policy ensures that a household in Amadir comprised of two or more members will receive land for housing and 'full-share' farmland. Full-share farmland is roughly equivalent to 1.4 hectares (see Chapter 4). A single-member household will receive 'half-share' farmland, which is half of the full-share, or 0.7 hectares. A single-member household is one comprised either of a widowed individual without dependent children or an unmarried individual. Individuals in the National Service over the age of 25 for women and 30 for men are also entitled to half-share farmland. The taxpayers[2] (*gebar*) list for the year 2002, obtained while gathering data, showed that of 439 households, 331 (75.4%) owned full-share farmland and 108 (24.6%) half-share.

Photo: Bissirat Dessalegn

Image 1 *Livestock grazing on the fields of Amadir*

[2] A household that owns full-share land pays 18 Nakfa/year land tax, and half this amount for half-share land.

Livestock is another significant asset. Unlike land, livestock is not an entitlement per se but must be purchased or earned. Therefore, ownership of livestock cannot be calculated by reference to a formula, but varies from household to household. The 2002 taxpayers' list was used to assess animal ownership and distribution. Out of the 439 households, 163 (37.1%) owned cattle[3], 77 (17.5%) owned sheep and/or goats, and 138 (31.4%) owned donkeys (Figure 6).

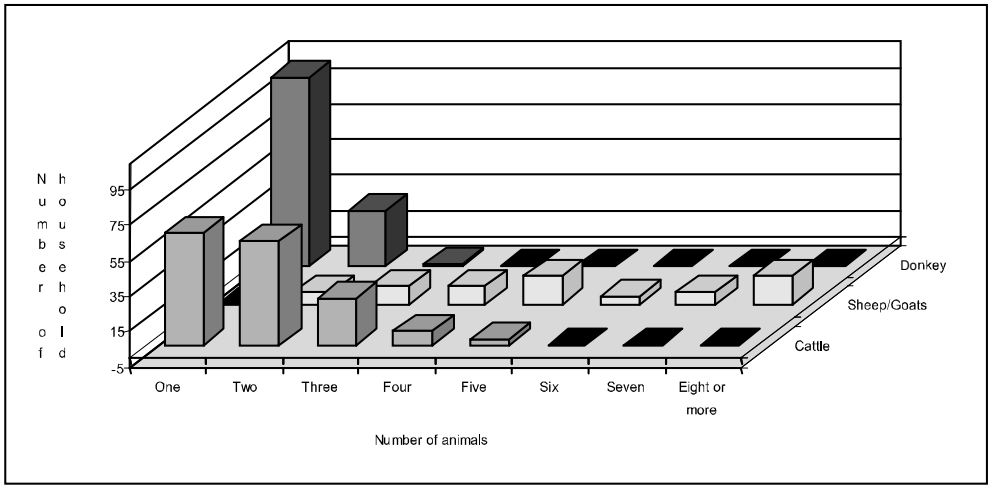

Figure 6 *Animal distribution by household 2002*

The picture looks different, however, if land and livestock assets are examined *in combination* for each household individually. This reveals that two types of endowment deficiency – land and livestock – are combined in many households, making them more vulnerable to crises and shocks of any kind. While equity is thus an issue, the general picture presented by the community is primarily one of very widespread poverty. Figure 7 presents the details.

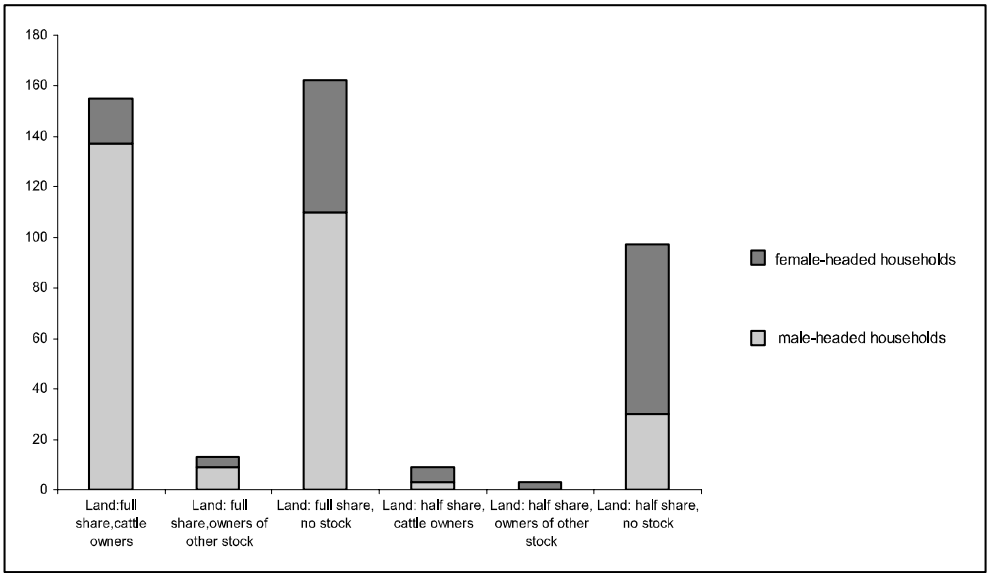

Figure 7 *Household assets – a synoptic view of land and livestock*

[3] Cattle include oxen.

Photo: Bissirat Dessalegn

Image 2 *Donkeys are used primarily for hauling water*

The figure illustrates the following:

- Land and livestock assets are associated in three clearly distinct groups: The *fully endowed* group is made up of households with a full share of land, who also own cattle (155 households, 35%); the *intermediate* group consists of those households with a full share of land but without livestock ownership (162 households, 37%); while the *least endowed* group has only half a share of land and owns no livestock at all (97 households, 22%). Only one third of all households thus have the full range of land and livestock assets that one would typically associate with subsistence farming. This finding is typical for an increasing number of rural communities in the Eritrean highlands.

- The vast majority of households that own livestock are cattle owners; households that own donkeys or small stock only are a small minority. Most cattle owners, on the other hand, also own donkeys, sheep and goats. (Table 2). The more cattle a household owns, the greater the likelihood that it owns other livestock too, and in increasing numbers. Land, and more importantly, livestock are thus not evenly distributed in the community, but show a tendency to accumulate.

- This accumulation must be seen in perspective, though. No household has more than 5 head of cattle. Rather than accumulated wealth, it would be more accurate to speak of different levels of endowment deficiency. For example, as many as 259, or 59% of all households, have no livestock at all. Farmers in Amadir indicated that they had lost a lot of livestock due to drought in the year preceding the fieldwork for this study (drought year 2002). Historically, the region around Amadir and Halhale was reportedly renown for its wealth of livestock.

- Gender is an issue: there are 150 female-headed households, which is 34% of all households in the village. Figure 7 makes it clear that these households generally belong to the poorer groups. Their share increases progressively from 12% in the *fully-endowed*, to 70% in the *least-endowed* group of households. There is thus a clear gender dimension with regard to endowment of land and stock. This is also confirmed by the results of the wealth ranking (see following paragraphs).

Table 2 *Cattle ownership by household*

Cattle owners: **Number of cattle per household**	***Cattle owners:*** **Number of households**	***Cattle owners:*** **Number of households with other livestock**	***Cattle owners*** **with other livestock:**	
			Average number of donkeys	Average number of small stock
1 head of cattle	64	43 (67%)	0.6	1.5
2 head of cattle	58	56 (97%)	0.9	2.3
3–5 head of cattle	38	35 (92%)	1.3	3.5

Wealth ranking

Wealth is more than an indication of the economic well-being of a person or household; particularly in smaller communities, it has important social and political ramifications as well. A wealth ranking method was used to ascertain how the village defines wealth or well-being.

Fifty households were randomly selected from the village household list. The villagers nominated four women and four men to act as resource persons. These persons were divided by sex on the assumption that women participate and express themselves more candidly when they are on their own. The activity thus included two resource teams or groups, though at least three teams are preferable for wealth ranking. The ranking exercise began with a careful and thorough explanation of the information sought and the purpose for which it would be used. Each team was then asked to rank the fifty sample households, with the first wealth category being the wealthiest (most well-off), and the last being the poorest (least well-off). The results are described below.

In the female group, the four women immediately agreed on six wealth categories and adhered to the same criteria throughout. The male group initially identified eight wealth categories, which they eventually reduced to four (see Table 3).

Photo: Bissirat Dessalegn

Image 3 *Interior of a typical house*

Table 3 Wealth categories according to resource groups

Wealth category	Resource group 1 (women)	Wealth category	Resource group 2 (men)
1	Owns two or more oxen Shop owner Contractor Owns irrigated land Twelve months' food supply	1	Economically independent and self-sufficient Owns irrigated land Receives contribution[4] Owns more than two oxen Owns other livestock, e.g. sheep
2	Owns one or more oxen Cultivates own land Twelve months' food supply	2	Ability to engage in business in addition to farming Not as well-off as Category 1, in general
3	Periodic contributions from family and/or relatives in Asmara Adequate supply of labour in the household Twelve months' food supply	3	Wage labourer, shop owner, animal trader Performing national/military service Twelve months' food supply
4	Owns one ox Six months' food supply		
5	Rents out land Receives support from Ministry of Defence (MoD). Female-headed households (FHHs) Eight months' food supply		
6	Does not own oxen or other livestock Disabled Rents out land Four months' food supply	4	Dependent on family and/or others for survival Can't help themselves Disabled Orphans Elderly

Interpretation of wealth categories

During the interview sessions, two households were eliminated from the original fifty. One household consisted of an elderly woman living with her son in Asmara; the other consisted of a student living in his parents' house.

The scores for the two groups were combined, and an average score for each of the forty-eight households was calculated, with the following result:

Category 1 = Well-off households: 8 (7 male-headed, 1 female-headed)
Category 2 = Less well-off households: 10 (8 male-headed, 2 female-headed)
Category 3 = Better-off than the very poor: 16 (11 male-headed, 5 female-headed)
Category 4 = Very poor households: 14 (6 male-headed, 8 female-headed).

[4] Men spoke of contributions in general terms and may have meant to include contribution from abroad.

The characteristics of the above categories match the following descriptions:

Wealthy

Category 1 16.7 % of the total: 12.5% female and 87.5% male-headed,
- Own two or more oxen
- Own irrigated land
- Have at least 12 months' food supply
- May receive periodic contributions from friends and/or relatives
- Own shops or construction business

Less wealthy

Category 2 20.8% of the total: 20% female- and 80% male-headed,
- Own one or more oxen
- Cultivate their own land
- Able to engage in other business in addition to farming
- Have at least 12 months' food supply

Poor

Category 3 33.3% of the total: 31.3% female- and 68.7% male-headed,
- Have approximately six months' food supply
- Many FHHs whose husbands are in National Service
- Rent out their land
- May receive periodic contributions from friends and/or relatives in Asmara and/or have sufficient household labour available

Very poor

Category 4 29.2% of the total: 57% female and 43% male-headed,
- Do not own oxen or other livestock
- Rent out their land
- Are disabled, elderly, orphans
- Dependent on relatives or other aid for survival
- Have approximately four months' food supply.

Photo: Bissirat Dessalegn

Image 4 *Two typical local crops: efun (maize) and sighem (barley)*

Women and men ranked four of the forty-eight households differently. The difference in ranking and possible explanations for it are presented in Table 4.

Table 4 *Households ranked differently by resource groups*

Household head	Ranking given by women's group	Ranking given by men's group	Possible explanation for difference in ranking
Male	First among six possible rankings (Wealthy)	Third among four possible rankings	Possibly a shop owner or contractor, regarded as wealthy by women and poor by men.
Male	Fifth among six possible rankings	First among four possible rankings (Wealthy)	Possibly a household that receives periodic monetary contributions from abroad, regarded by the male group as wealthy and poor by the women's group because it is female-headed.
Female	Third among six possible rankings	Fourth among four possible rankings (Very poor)	Possibly a household consisting of disabled persons, orphans or elderly. It receives periodic monetary contributions from Asmara; the women's group ranked it higher than the men's group.
Female	Third among six possible rankings	Fourth among four possible rankings (Very poor)	Possibly a household consisting of disabled persons, orphans or elderly. It receives periodic monetary contributions from Asmara; the women's group ranked it higher than the men's group.

From these categories and observations during the discussions, we can conclude that the number of oxen is one of the most important wealth criteria. Both groups placed a premium on possession of oxen as an important indication of wealth. Although the men mentioned oxen in the first category only, this is a significant statement on its own. Oxen are possibly the single most important item in a farming society where modern farming machinery is not available. Ownership of at least two oxen is especially important, as a pair of oxen is used for ploughing fields. Consequently, households that own two oxen are considered well off. Nevertheless, a household that owns at least one ox is also better off than one without oxen, as it can make a sharing agreement with other households that also own only one ox. As the majority of households do not own oxen, and a large number own only one ox, sharing agreements, in which oxen are shared or exchanged for labour or crops, are common.

The women assigned a higher ranking to shop owners and contractors than the men. Through observations and further discussion with interviewees and a shop owner, it became clear that significant capital is required to open a shop. This is beyond the means of most people, whose livelihoods depend on subsistence farming. These shops sell almost everything one can find in the small shops of Asmara. Most of the shop owners purchase their goods from Dbarwa.

Both groups mentioned periodic monetary contributions, or remittances. The women referred to remittances from Asmara, while the men spoke of remittances in more general terms. In the discussions, women refused to include remittances from abroad, which made it difficult to assess the value they placed on such remittances. The women insisted they did not know who receives this money and how much a household would benefit from it. Yet it was clear a number of households benefit from money sent by family members and relatives who reside abroad.

62.5% of the total sample households were in the third and fourth categories, i.e. the poor and very poor households. These households rented out their land, were dependent on labour in or outside the household to farm their land, and heavily dependent on financial support from outside the household. The results also reveal that as status in terms of wealth decreases, the number of female-headed households (FHHs) increases (Figure 8). In Category 3, male-headed households comprise the highest percentage (68.7%), even though one of the criteria agreed on by both men and women in this category is FHHs. One explanation may be that a large number of the MHHs (male-headed households) are actually FHHs[5] in which the male figure is absent. FHHs were selected from the 2002 taxpayers list acquired from the village administration office. Female names selected from the list are female heads of a household who were either divorced, widowed or unmarried.

[5] These are female-headed households registered under their husband's name. In most such cases the male, usually the husband, was in the National Service.

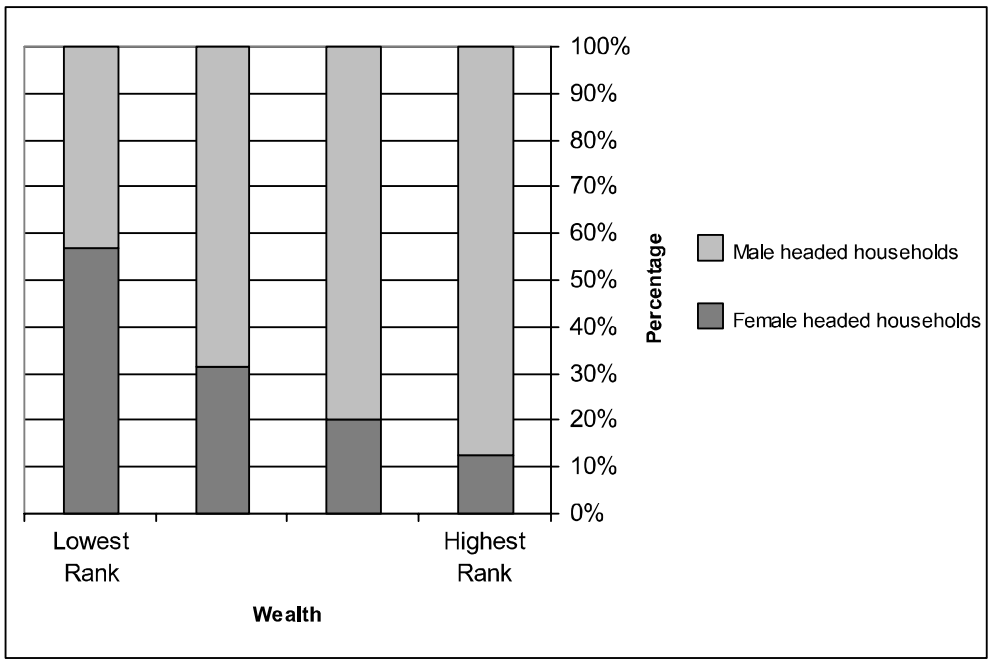

Figure 8 *Wealth ranking of female-headed and male-headed households*

Livelihood in perspective

A Participatory Rural Appraisal (PRA) approach was used to obtain information about the bases of livelihood in the village. Villagers were keen to present and enthusiastic to learn from the processes and results of this activity. 18 villagers (six women and twelve men) participated in this activity. They made pie charts to show the sources of livelihood in the village. (Figure 9).

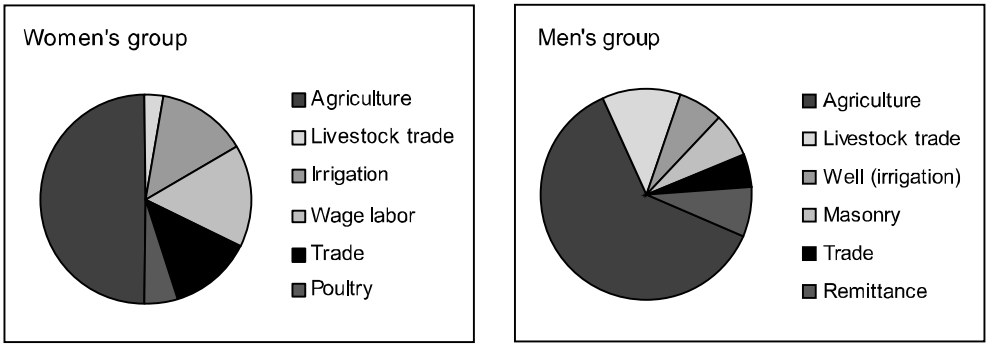

Figure 9 *Pie charts made by villagers to show sources of livelihood*

The results can be summarised as follows:

- Both groups named agriculture as the main source of livelihood.
- Only three households engage in livestock trade (cattle and oxen) as a main source of income.

- By irrigation, villagers meant the income earned from selling vegetables grown with irrigation. At the time the field research was carried out, only a few households were making use of irrigation channels, but a number of households also owned wells (see Chapter 4).

- "Trade" includes petty trade, shops, and sale of bottled beer (practiced by one female headed household).

- Interestingly enough, while the women named poultry, the men mentioned remittances from abroad.

Photo: Robert Burtscher

Image 5 *A PRA activity in practice*

Farming is the basis of livelihood for the majority of the villagers. Consequently, access to land is essential to the villagers' subsistence. The annual harvest is mainly rainfed crops intended for household consumption. In the wealth ranking exercise, owners of irrigated land were considered wealthy. The conclusion that mere access to land constituted the basis of this ranking could alternatively be recast in terms of access to other resources. People with land near irrigation channels enjoy freer and greater access to water, a scarce and valuable commodity, than others. The perception that irrigated land connotes wealth was also strengthened in other ways. Village-owned irrigated land is rented out to two individuals as a source of income for the village. Further information obtained during the survey indicated only a few villagers have access to irrigation (see Chapter 4). Those who owned irrigated land were able to grow vegetables to sell in Dbarwa. The villagers believed this practice to be very profitable.

In order to check the reliability of the data relating to the ownership of oxen the three types of data gathered during the survey – the taxpayers' list for 2002, the results of the wealth ranking and the basic questionnaire survey (N=100 households; see Appendix 2) – were compared. The following points show that these three sources provide similar results:

- 100% of the households ranked as the poorest (no oxen) in the wealth ranking activity were also identified as households with no oxen in the questionnaire survey.

- 94.4% of the households ranked as the poorest (no oxen) in the wealth ranking activity were also registered as households with no oxen on the taxpayers' list for 2002. Since cattle are not differentiated on the taxpayers' list, it is possible that the remaining 5.6% are households with cows or heifers, but no oxen.

- Except for one household identified as having one ox in the questionnaire survey, all households categorised as wealthy, and thus having more than two oxen in the wealth ranking activity, were also identified as households that owned two oxen in the survey. On the taxpayers' list, this particular household had two cattle, which could mean cows, heifers, or oxen.

- Except for one household, all households identified as having two oxen in the survey were also registered as having two or more cattle on the taxpayers' list for 2002.

Photo: Bissirat Dessalegn

Image 6 *A shop in Amadir*

Data type		Results
Wealth ranking	=	62.5% (poor and very poor) owned no oxen
	=	16.7 owned two or more oxen
Taxpayers' list	=	61% owned no oxen
(2002)	=	23% owned two or more oxen (the higher percentage could be a result of the number of cattle included on the list)
questionnaire survey	=	59.2% owned no oxen
(N=100)	=	14.3 % owned two oxen

There are six shops owned by six different families. Except for vegetables and bread, which are periodically unavailable, most of these shops are well equipped.

A substantial number of households, especially those of the elderly, depend heavily on children residing in Asmara or other towns in the country, or abroad, for financial support. Although children, siblings or relatives migrate to the towns, ties to families left behind in the villages remain close.

In conclusion, the data on livelihoods in Amadir confirm the general situation found in the rural areas of Eritrea. According to recent regional and country-wide surveys, the poor constitute about two third of the rural population (Amadir: 62.5%), and as many as 23-38% of households are female-headed (Amadir: 34%) (ICCO 2004). These data illustrate the precarious livelihoods of the majority of rural households in present day Eritrea and their vulnerability to disruption and shock.

Photo: Bissirat Dessalegn

Image 7 *An elderly mother helping out at home*

The poorest sectors of the population are usually the elderly, the disabled, and orphans. Those considered better off than the poorest are able to lead better lives because they can engage in off-farm activities. Off-farm activities such as petty trade and wage labour constitute an essential aspect of subsistence. During the non-farming seasons, most men

migrate in search of wage labour. Many of them work as day labourers at construction sites or wait in coffee shops or public places in the nearby towns. This time is difficult for women, as they stay at home to tend their children and their homes. Some women raise chickens to compensate for this periodic decline in income.

For generations, many women have raised chickens to earn income from the sale of eggs and poultry. This is considered to be primarily a woman's business.

Photo: Bissirat Dessalegn

Image 8 *A woman raising chickens donated by the NUEW*

A year ago, twenty-seven women received twenty-five chicks apiece from the National Union of Eritrean Women (NUEW) (see Chapter 3). 'So far it has been very good for me' says one woman. She went on to say, 'money saved from eggs sold is an earned piece of furniture'. Even though the cost of maintaining the chickens is high[8] , the women were satisfied with the income they earned, and all of them reported a net profit.

Unless food is replenished or supplemented in some fashion, the poorest group has a cushion of only four months before exhausting their supply. The two types of assistance currently offered are food aid and financial assistance. Food aid was previously given only to a sector of the population considered the poorest. However, those who received this aid felt that inequitable distribution jeopardised their survival strategy. In bad times the very poor survive by borrowing or asking for assistance from neighbours, relatives or friends. This has been part of their historic survival strategy. Consequently, at their request, food aid allocated to the village is now shared by, and distributed to, all households. Financial assistance is given to single/female-headed households whose husbands are in the military or National Service. This is a monthly or bi-monthly payment granted to cover expenses that would otherwise be paid out of the absent husband's earnings.

"Money saved from eggs sold is an earned piece of furniture."
Young housewife from Amadir

[8] A sack of chick feed, which lasts two weeks, costs 400 Nakfa per kg.

3. Institutions and their significance

Institutions have a profound influence on people's lives and livelihoods, not only in Amadir. In terms of organisational structure and function, the institutions mentioned by the villagers, and therefore listed in this study, were grouped into governmental institutions, religious institutions (the church), local mutual support institutions, and commercial institutions.

A Participatory Rural Appraisal (PRA) approach using a 'Venn Diagram'[9] was used to identify institutions and their relative significance to the villagers. Two groups from the village – one female group consisting of ten women aged 30–60 years, and one male group consisting of 20 men aged 20–70 years – participated in the activity. In general, the villagers mentioned the local (government) administration, school, church, PFDJ (People's Front for Democracy and Justice), *tessa* (Land for Housing Committee), *zera'o* (Land Guards), NUEYS (National Union of Eritrean Youth and Students), NUEW (National Union of Eritrean Women), *keleta, wofera, equb*, the mill, and *dagna* as the relevant institutions in the village. All these will be dealt with in the following paragraphs. The two groups also made the following observations:

- Education in school is important to everyone.
- Institutions not located in the village but still important to the villagers are the health centre, the court, the secondary school, and the market.
- Women felt that *arako* (peacemakers) are ineffective and might as well not be present in the village.

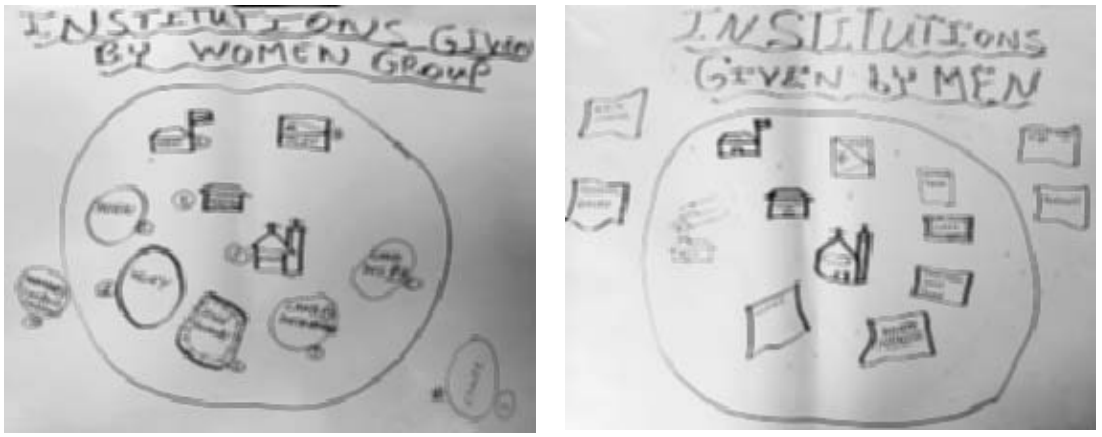

Photo: Robert Burtscher

Image 9 *Venn diagrams used to identify institutions in the village*

It is worth noting here that, despite a thorough explanation to the villagers of the purpose of the activity, they tended to interpret the term 'interest' differently than the research team. While the researchers wanted to gauge the necessity, frequency of use and perceived utility of these institutions to the village, the villagers probably focused instead on whether an institution was suffering from a lack of financing and therefore in need of assistance.

[9] A Venn diagram uses circles to identify and compare the relevance of particular elements in field research.

The government

Local administration

Government institutions are closely linked so that the national and village institutions are very well integrated. The Ministry of Local Government (MoLG) is the primary representative of the central government at the village level. Other government institutions and ministries not operating at the village level are represented by the administrative office or at another level.

The Area Administration office, the *memhedar kebabi*, is located in Amadir. The villages of Amadir, Hurgud, Adi Harbo and Edaga Dahna belong to one *memhedar kebabi*— the Amadir *memhedar kebabi*, or Area Administration, which is the smallest unit of government at village level, and the centre for dealing with official matters.

With one administrator and one vice-administrator – who are responsible for writing, documentation, holding and attending frequent meetings in and outside the village, writing permission letters and attending to visitors – the office is very busy.

Photo: Bissirat Dessalegn

Image 10
Sticks of village representatives who attend a meeting

The *memhedar kebabi* office works closely with the villagers. Each village has four village representatives, *anebaberti adi*, who advise the administration office and mobilise and represent their respective villagers. In addition to *anebaberti adi*, village-level committees such as health, agriculture, school, housing, farmland, food aid, National Service and the PFDJ are under the umbrella of the *memhedar kebabi*. Each of these committees has a chairperson, treasurer and secretary.

Women, youth, and party organisations

Local organisations, such as the women's and youth associations, which have strong links to government institutions and similar organisational structures, are also present in the village.

The NUEW (National Union of Eritrean Women) has six groups at the village level. Each group consists of thirty members and has a group leader responsible for leading meetings, and mobilising and collecting contributions. The NUEW's chairwoman and secretary, also from Amadir, in turn report to the Dbarwa office. A contribution of 12 *Nakfa* a year is made by each member. The NUEW's long-term objective is to raise awareness about various women's issues. Discussions with the women's group indicated that not much has been accomplished yet. The organisation has sought to start literacy programs, among other things, but it has been difficult to attain a critical mass.

"When the stomach is hungry, the children are in need of our attention and assistance, and we are constantly thinking of ways to earn extra money, it is difficult to sit down and learn alphabets."
A woman commenting on literacy programs

Photo: Bissirat Dessalegn

Image 11 *Renovation: just one of the women's household responsibilities*

The NUEYS (National Union of Youth and Students) is operated at the primary school level. Teachers and students above the third grade are members of the association. The aim of involving students who are still children and cannot yet properly be called youth is to prepare them mentally. Members contribute 0.50 *Nakfa* annually. The NUEYS sponsors a variety of sports, cultural, and drama activities where selected students visit and compete with NUEYS members from other schools. 'There is so much more we could do, but we don't have enough material' the school director, who is also a member of the association, commented.

The PFDJ (People's Front for Democracy and Justice) has six group leaders who mobilise and hold monthly meetings to provide updates about national political issues. As a political organization, the PFDJ provides a forum for open discussions, debate and expression. In the group discussions, some villagers equated the PFDJ with the government, stating, 'The PFDJ is the government and the government is the people'.

Photo: Bissirat Dessalegn

Image 12 *Maetot – students doing community work*

A distant clinic

The nearest health centre is located in Adi-Bezehannis, a village about 6 km south of Amadir. Though an assessment of services provided by the clinic in Adi-Bezehannis was not within the scope of this study, interviews made clear that the clinic provides only the most basic of health services. 'It is a first aid station for us' a woman stated. Hence, to receive basic medical care, villagers must travel one hour and fifteen minutes on foot. There is no other mode of transportation available (horse-drawn carts/mules are rarely used).

For more complicated or serious matters, the Adi-Bezehannis clinic refers patients to Dbarwa. In practice, however, seriously ill patients tend to go to Dbarwa directly, rather than on referral. Any patient who needs to be hospitalised is sent to Mendefera – a town 17 km south of Dbarwa.

Photo: Bissirat Dessalegn

Image 13 *Amadir Elementary School*

The school

The villages of Amadir, Hurgud and Edaga-Dahna initiated an area-wide program of formal education in 1949, when Eritrea was under the British mandate[10] . In 1969, the original school was replaced by the current school building, built by the evangelical church. When Eritrea gained its independence, the school reopened as an elementary government school in 1991/1992, serving children in grades one to five from the Amadir *memhedar* – the villages of Amadir, Hurgud, Edaga-Dahna and Adi-Harbo.

The school has a director and ten teachers (six female and four male), most of whom are in National Service. Because of the limited number of classrooms and teachers, the same set of lessons is taught twice a day. Each grade is divided into two groups of students; one group attends the morning sessions and the other the afternoon session.

The school also has a Parent Teacher Association (PTA) and a Teachers' Committee. The PTA, comprised of the school director, one representative of the Teachers' Committee and two parents from each village, is keen to initiate educational development programs.

[10] More precisely, the initiative to build a school in Amadir came from an individual person, originating from Amadir, but being engaged as a priest in the Evangelican Church in Asmara at the time of the British mandate.

Photo: Bissirat Dessalegn

Image 14 *PTA meeting being held in the school*

In 2002/2003, a total of 536 students (272 boys and 264 girls) were enrolled. The figures below show enrolment, dropout rates, and performance for boys and girls over the past 11 years. The highest number of students was enrolled in the 1995/96 school year (575 students), which could be due to the increased number of girls enrolled in that year. In terms of the ratio of boys to girls enrolled each year, Figure 10 shows that until the 1994/95 school year, boys exceeded girls, but from the 1995/96 school year to 2000/2001, enrolment of girls gradually overtook enrolment of boys, though by a relatively small number. Since then, the percentage of girls and boys enrolled each year has been balanced.

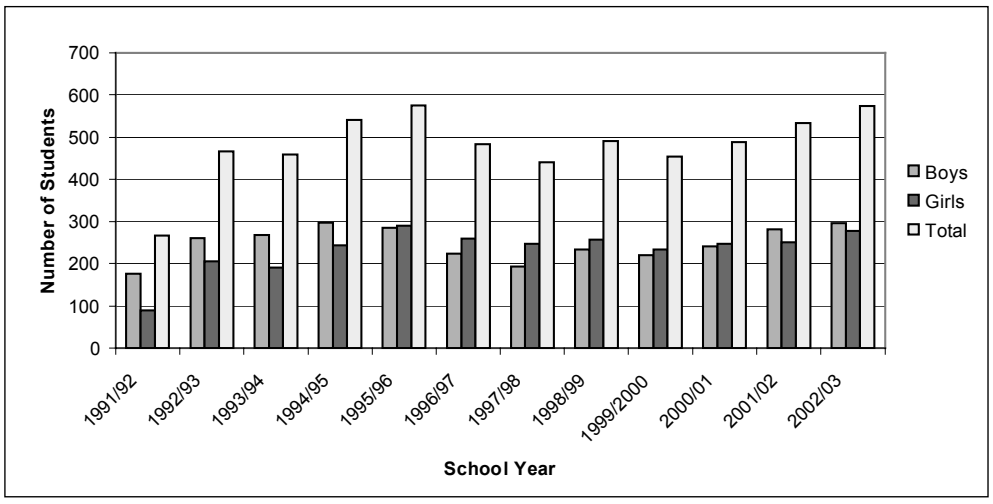

Figure 10 *Number of students enrolled, 1991/92 – 2002/2003*

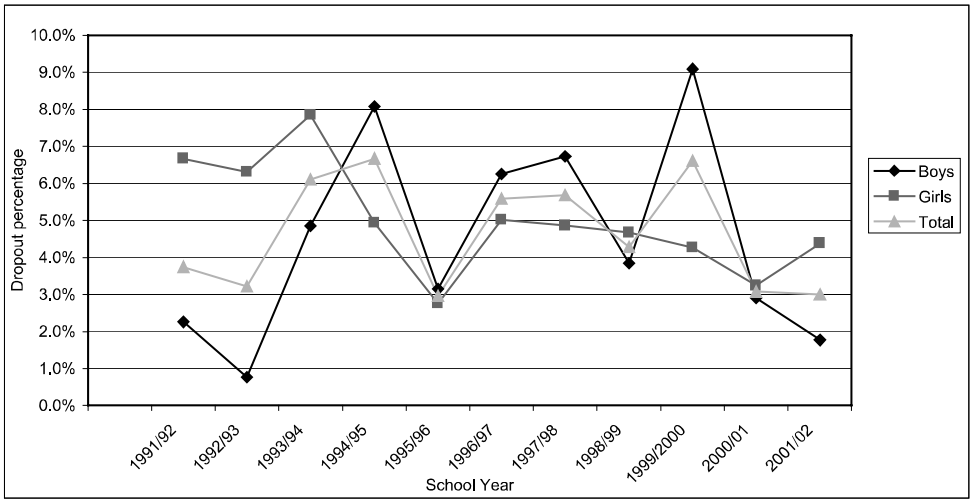

Figure 11 Dropout rate for students, 1991/92 – 2001/ 02

In terms of academic achievement, the gap between the percentage of boys and girls promoted to the next grade is narrower now than it was eleven years ago (1991/92 school year). In fact, in terms of percentage, girls performed better than boys in the 1999/2000 school year. In general, however, academic performance has declined. Performance levels were best in the 1993/94 school year, when 6.8% (31 students) failed, and worst in 2000/01, when 34.6% (169 students) failed.

Since the 1991/92 school year, the lowest dropout rate was 3%, in the 1995/96 and 2000/01 school years (Figure 11). The highest rate (6.7%) was in the 1994/95 school year. As mentioned above, the following year, 1995/96, fewer boys and more girls were enrolled; hence the ratio changed to favour girls. In the 1999/00 school year, the total dropout rate was also high (6.6%), mainly due to a large number of boys that dropped out (20, 9.1% of the total number enrolled). It is also evident from Figure 11 that the gap in dropout rates between boys and girls was consistently high from 1991/92 to 1993/94. The total dropout rate was lowest in the 1995/96 and 2000/01 school years, and the gap in rates between boys and girls was also the lowest (almost zero). Overall, the dropout rate for girls has improved since 1991/92, with the lowest rate (2.8% of the total enrolled), 17 girls, in the 1995/96 school year.

In 2001, in order to encourage students and parents to send their children to school, a local NGO, HABEN, and Dutch Interchurch Aid (DIA) introduced a school food program, provided school materials, and started a handicrafts training program. These initiatives primarily targeted poor families that had been identified by the PTA. These projects, as was made clear in interviews with the school director and three parents, have contributed substantially to increased attendance. This trend is also evident on the pass/fail list obtained from the school. The 2001/02 school year shows an increasing percentage of students promoted to the next grade. The school food program started in 2001 with a small group of students before expanding to include all students. In 2002 all students received support for educational materials.

Handicrafts for self-esteem

The handicrafts training program, developed by HABEN together with the Parent Teacher Association (PTA), began in July 2001. Because this program works closely with the school, it is mentioned here under governmental institutions, although it was not initiated by the government. At first, the primary objective of the project was to assist students who come from poor families by giving parents an additional incentive to send their children, especially girls, to school. Over time, however, the project has grown to include girls and women who are not students (Table 5).

Table 5 Handicrafts training program statistics

Year	Number of graduates	Age group	Trainee
Year 1 (2001)	17	13 – 20	-Students
Year 2 (2002)	17	13 -25	-Divorced -Single (mothers)
Year 3 (2003)	10 (in training)	13 -25	-Girls (married or unmarried) who stopped attending school -Girls who are still in school and interested in handicraft training

The trainer is hired and supervised by HABEN. In a house located next to the schoolyard, trainees receive instruction in tailoring, embroidery, knitting, and making different types of souvenirs and equipment from straw and beads.

The items made during handicraft training are sold to meet various expenses. A third of the income goes to the students, a third to the elementary school, and a third to the training school to cover the cost of materials, rent and salary (information received from trainer).

When students complete training, they receive a package containing thread for sewing machines, embroidery, a 50 cm ruler, measuring tape, scissors, a knitting tin, a needle, and 1.5 meters of cloth. The first batch of trainees has produced seven graduates who are making at least part-time use of the skills they have acquired. Two are working as tailors, two are engaged in knitting, and three are working as embroiderers. One member of the second batch of graduates has bought a sewing machine and is working at home, making and mending clothes. In interviews conducted with the trainer and some trainees, the overriding concern expressed was lack of start-up capital – for example for buying a sewing machine.

The judiciary

For many years until recently, there was one *dagna* (judge) for each village. When a conflict was reported to the *dagna*, the *dagna* nominated three *arako* – elders who act as peace makers – from the village. These *arako* acted as an informal body to resolve disputes. If they failed to resolve the conflict, the parties then had to refer the matter to a court in Dbarwa.

Shortly after the field research for this study was completed, a new proclamation was passed to establish a community-level court, which consists of three persons from the community (one chief judge and two associate judges), at least one of whom is a woman. The judges, elected by the villagers, are to serve a term of two years and can be re-elected. This new proclamation (No. 132/2003) effective from 1st November 2003, is expected to change the judiciary system so that a formal adjudicatory mechanism with enforcement authority can now decide cases at the village level. Civil cases not exceeding 50,000 *Nakfa*, and 100,000 *Nakfa* if non-transferable, as well as land-related cases such as boundary disputes, are within the tribunal's jurisdiction[11] . This should save unnecessary trips to the court in Dbarwa. Although the new judges have more enforcement power (e.g. the ability to award judgments and impose prison sentences) than the *arako*, their powers are still limited. The new community court is financed and supervised by the Ministry of Justice. The chief judge and two associate judges receive a monthly salary.

At the time of the survey, before the new proclamation, men in particular appeared to value the court as an important institution and complained about its distant location. The women complained that the *arako* were not doing a good job. Though still untested, this reform may be beneficial in cases of domestic conflict, which for many reasons discouraged women from reporting domestic violence to the court in Dbarwa.

[11] Gazette of Eritrean Law published by the Government of Eritrea. Vol 13/2003 N0. 7 Asmara, Sep. 22, 2003. Proclamation No. 132/2003.

The Orthodox church

The majority of the population is Orthodox Christian. Of the total number of households, six were Protestant and three Muslim, both of which are fairly recent religions in the village. Hence, the Orthodox Church of Amadir is among the oldest institutions in the village.

Photo: Bissirat Dessalegn

Image 15 *The Arba Ate Ensisa Orthodox Church*

Until the modern era, the church had large landholdings and was financially more stable than it is now. In addition, every household had to contribute 4 kg of whatever crop it harvested to the church. Currently, the only income the church receives is money collected from *kal awadi, fithat, moba'e* and ceremonies such as weddings and baptisms.

Kal awadi is an annual payment of 12 *Nakfa* collected from every family. This money goes toward salaries for the priests and other church personnel.

Fithat is a series of lengthy prayers offered at different times to ensure peaceful rest for the soul of a deceased person. The priests pray for the deceased at death, after twelve days (*asur*), after forty days (*arba'a*), after six months, after one year and/or annually thereafter. The fees are 50 *Nakfa* for *asur*, *arba'a* and bi-annual prayer, and 100 *Nakfa* for annual prayer. In addition, to close the mourning period, *teskar* is performed, usually on the 40th day, or before six months after the person dies. *Teskar* is an important and large event and therefore costly, since the family invites many people, including the priests, to eat and drink. The Orthodox Church, however, has recently outlawed this practice, and the family now pays a set fee of 500 *Nakfa*.

In addition to occasional contributions made during wedding and baptismal ceremonies, parishioners make anonymous contributions.

The administrative structure of the church is as follows:

Keshi gebez: the high priest of the church, who runs and administers the church.

Sebeka gubae: the Church Committee.

This includes three persons who are not priests (*nai-alem*), one treasurer (*tehazi nibret*) and one general manager (*tekotsatsarai*).

The Church Committee thus controls and manages all financial matters. The Church's operating fund, accumulated through these fees and donations, is periodically allocated and disbursed by the Church Committee.

Keshi: priest

A priest earns about 80 *Nakfa* a month directly from the church.

The church also performs spiritual tasks on different occasions. Priests are very respected and influential personalities in the community. Every household/family has *abe nebsi* – a priest who provides the family with spiritual guidance, assists in resolving domestic disputes, and performs spiritual tasks when required.

The origins of Amadir, as related by its inhabitants

The Orthodox Church of Amadir – *ArbaAte Ensisa* (four animals) – is symbolic and as old as the village itself. The name represents four angels in the bible. It is said that two families, namely *Harboy* and *Dinzaz*, settled in the area many years ago. In time, the two families agreed to combine their landholdings and form one village by building a church in between. The two families then formed the village of Amadir.

Other local institutions

Land committees

The land committees fall into two categories, *tessa* (housing) and farmland committees.

The *tessa* committee is responsible for distributing land for housing by verifying that the applicant's lineage justifies a land grant. The application is then forwarded to a higher-level committee in the administration and *anebaberti adi* (village representatives), who in turn forward the application to the Ministry of Water and Land for final approval.

The farmland committee is divided into three groups, *metaro*, *gelafo*, and *aquaro*, members of which are three persons elected by the village. *Metaro* (planners/surveyors) are responsible for mapping the village. They are usually involved at the beginning of village map planning and whenever change is required. They plot, among other things, residential land, churches, schools, cemeteries, paths and farmland. Based on the village

map, *gelafo* allocate the land to be given to an applicant. The last group, the *aquaro* (land preservers) keep track of and preserve land that has reverted to the village when a former owner dies without heirs or migrates.

Social support

Wefera: 'Giving a helping hand.' At the individual or community level, it is common to request that a group of people come together to help with a construction project or perform other tasks. The person making the request serves food and drinks as an expression of appreciation and gratitude.

Keleta: This refers to a practice in which any person who causes accidental death accompanies relatives of the deceased around the village and its surroundings, requesting contributions to assist the family of the deceased.

Equb: This is an informal association formed among a group of villagers, in which contributions are made to an *equb* in cash or in kind. An *equb* is a form of social gathering and/or savings club. There is a village *equb*, for instance, whereby once a year every household contributes food or drinks for a social gathering. A common form of *equb* is one practiced by women. This is similar to a savings fund. Women friends and neighbours form an association and each contributes an equal amount of money every month. The women who host the meeting in a particular month will prepare some snacks and use the money that has been collected. The process of accumulating funds then begins anew. This association allows women to hold events that provide a forum for discussion and socialising.

Commercial institutions

The Saturday market

Every Saturday, Dbarwa market is filled with men, women and youth, including children, buying and selling goods. For the people of Amadir, this is a major social and business event. People from villages throughout the southern zone come to buy and sell. Residents of Amadir sell various grains, eggs, chicken, sheep and goats. The marketplace affords them an opportunity to purchase goods they cannot produce or find in the village – shoes, clothing, kerosene, coffee, sugar, tea, etc.

The mill

Traditionally grinding was done by hand using large specially curved stones. This exhausting, labour-intensive work, usually done by women, has been replaced by one mill that runs on a generator. The mill is privately owned and charges seven *Nakfa* to grind 20 kg of grain. Unfortunately, the mill is frequently out of service, forcing the villagers to go to Adi-Bezehannis.

4. Resource management

Land resources

Baseline information on resources and their management was mainly obtained through resource mapping, carried out with specific stakeholder groups of elders, women and youth. The actual landscape in and around the village was used as a reference during mapping, and the result is shown in Figure 12. The main resources identified included: cropped land (rainfed and irrigated), rangelands, the dam, enclosures (community-owned and state-owned), fuelwood sources, *beles* and eucalyptus trees, and water points. An intensive investigation was also carried out with the village elders through the application of a Participatory Rural Appraisal (PRA). Respondents found this approach to be straightforward, as it enabled them to identify their own priorities and to make their own analysis.

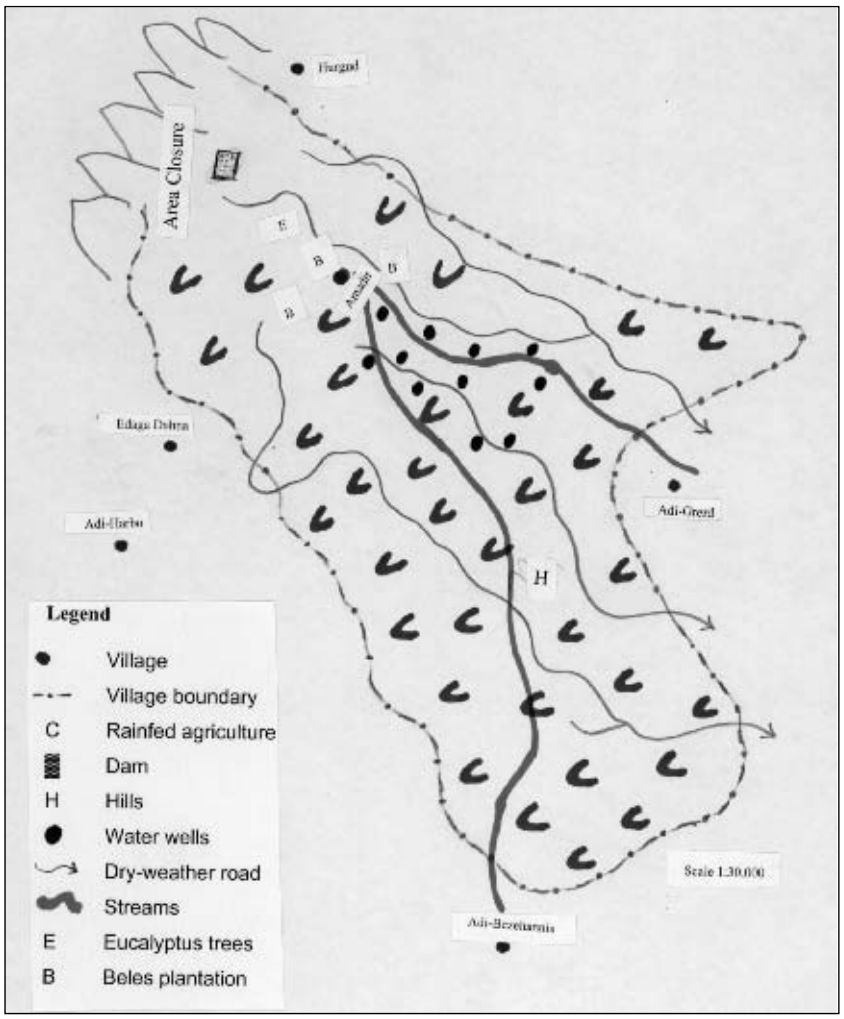

Figure 12 Resource mapping (Picture redrawn from villagers' ground sketch map)

Land rights and policies

Prior to independence in 1991, land ownership in the Amadir area was characterised by *tsilmi*, a land tenure system where land could be inherited but could not be transferred to someone outside the family structure. Discussion with selected groups revealed that 50 households (each with a minimum of 30 *tsmdi*) had exclusive rights over the entire landholdings of the village. In 1974, a new land distribution system based on household size was introduced, and each household was placed in one of the three categories (*adi-hade*, *adi-arbaete* and *adi-shewate*) (Table 6).

Table 6 Land distribution according to household size

Category	Household size	Share of land *(tsmdi)*
Adi-hade	1 to 3 persons	3
Adi-arbaete	4 to 6 persons	5
Adi-shewate	7 and above	12

Source: Discussion with village informants

The Eritrean Liberation Front (ELF) introduced village ownership (*diesa*) in 1984, which necessitates land redistribution among the villagers every seven years. The *diesa* tenure system had some negative effects on agricultural development. The rotation of land in the *diesa* system has proved to be a disincentive, both to investment and conservation, while *tsilmi* led to further fragmentation of holdings. The Land Proclamation of 1994 put all land in the country under the sovereignty of the government. This proclamation introduced readjustment in the size and location of farm holdings in the country. Access to land is assured to every Eritrean above the age of 18 regardless of sex, religion or marital status. Land under the new proclamation cannot be inherited, while investments made on land can be transferred to family members.

Land grant to a non-resident: The tale of Abe Ibrahim

This is a brief account of Abe Ibrahim, a person who lived in Amadir some 40 years ago. Three Muslim widows who lived in the village during the fieldwork provided the information about this person. The women grew up in the village, but they knew little about the history of the Muslim community in Amadir. Many other villagers believed, however, that Ibrahim founded the first Muslim household in their area. He was originally from Gash Barka, but no one knows exactly when he moved to Amadir. According to one source, he lived in the village before the Italians arrived in Eritrea in 1889. Ibrahim was a tailor and his profession brought him popularity and respect among the community members (one of his three sons became a tailor too). He also engaged in farming but had no land of his own. He appealed for a plot of land but his request was refused by the community members at first. After residing there for many more years, Ibrahim was granted equal access to farm plots, like all other residents. The three female headed households (one of which belonged to Ibrahim's family) were also granted *tessa* (land to build a house) and the right to farmland after thirty years of residence in the village. After securing community membership, the Muslim households planned to build a mosque in village, but they failed in their attempt after an active young community member passed away.

The best areas in the village are reserved for crop production, while homesteads are located in areas less suitable for agriculture. The community manages land used for building houses under a system known locally as *tessa*. The *tessa* committee consists of eight members at the *kebabi* level (two members are elected from each village). Every household head (including a non-resident) is entitled to this right, so long as he belongs to the village community. The request for land is first submitted to the *tessa* committee, and final approval is given by the Ministry of Land, Water and Environment branch office at Mendefera (Debub Zone).

Local land classification

- All farmland is divided into twelve groups (*gujules*), each comprising 32 households. Each *gujule* has a leader whose task is to monitor the smooth functioning of the land distribution system. Based on the traditional classification method, all landholdings on village territory are classified into four categories. The classification is mainly based on the quality of the land, its size, and its distance from the settlement. Each household receives a plot in each category:

- *Gedena*: A farm plot located around the homesteads (house garden), mainly used in the production of maize, barley and beans. Average yield is about 2 quintal/*tsmdi*.

- *Menber*: The main household farmland. Major crops including wheat, barley, *hanfes*, and *taff* are cultivated. As reported by the farmers, yields of 4quintals/*tsmdi* are expected from this land.

- *Gual menber*: In terms of size and quality, this is less important than *menber*. It is useful in the production of wheat and *hanfes*, and average yields range between 2 and 2.5 quintals per *tsmdi*.

- *Rekik*: This is the least preferable, as the soil is too thin to support the growth of crops. As a result, only crops of minor importance (e.g. lentils, linseed) are cultivated.

Agricultural production parameters

Farm size

Crop yields for households in the study area are closely linked to the amount of landholdings at their disposal. The local unit for measuring farm size is known as *tsmdi*, which is equal to the amount of land ploughed in a single day by a single farming household. Its size varies greatly, as it is influenced by several factors. First, the type of land under which cultivation takes place is important, as very stony soils require much labour, which in turn results in reduction of the size of *tsmdi*. Second, the relative strength of the pair of oxen used during ploughing is also a factor, as certain soil types require animals with strong traction power. Finally, the labour pool available for a particular household and the number of working hours expended on the farm plot also contribute to variations in the size of *tsmdi*. Attempts were made during fieldwork to determine the average size of a single *tsmdi*, taking consideration of the factors responsible for variability. Field measurements were carried out on farm plots, and one

tsmdi was found to average 0.35 hectares. The size of farm plots distributed to the households in the community reflects the amount of cultivable land available on village territory. The total farm holdings of the village (excluding those reserved for future use) were, therefore, the product of the total number of full shares and the average size of four *tsmdi* [385 full shares x (4 x 0.35) = 540 hectares].

Photo: Bissirat Dessalegn

Image 16 *Measuring the size of tsmdi*

Ownership of oxen

Local people rely heavily on animal power for traction, except for infrequent use of modern machinery by a few households on a rental basis. Oxen are used for tillage and for threshing crops, and less frequently they are marketed for cash during food stress periods. They also provide dung from which the local people make dung cakes for fuel. Owning oxen is, therefore, crucial in the study area because this determines, to a large extent, a household's income from crop production. But supporting oxen is often difficult because of short supplies of fodder. The straw available from the crops planted is not sufficient to provide feed for these animals. As a result, people are usually forced to look for supplementary feed, including crop residue. A household with no oxen usually looks for a sharing arrangement with someone who owns a pair. The owner of the land receives half of the total crop produced, while contributing half of the overall seed and labour inputs. The recent introduction of modern farm machinery in the area is, however, gradually transforming this long tradition towards increasing yield and lessening the rural household burden.

Labour allocation

A household in the Amadir study area is a small, task-oriented social unit formed by a group of people closely associated with farming activities. The most basic household

make-up consists of a man, his wife and their children, although it may also include other individuals, both relatives and non-relatives. Members of a household produce food primarily for their own consumption and make use of local resources to ensure survival. The household unit is also an essential component of a community structure at large, which is closely tied to other similar households in a social network. Practically all members of a household except very young children and old people are active in the production system. The division of labour among household members follows a well-established pattern (Table 7). Men generally are engaged in major farm activities, marketing and community decisions, while activities related to the household economy are performed by women. In certain circumstances, some activities are shared commonly with no division of labour between members of a household. For example, men are increasingly engaged in collecting wood, an activity traditionally carried out by women and children.

Table 7 Division of labour among household members

Activity	Head	Wife	Adult		Children	
			Male	Female	Boys	Girls
Type I						
Ploughing	*		*			
Seeding	*		*			
Weeding		*	*	*		
Harvesting	*		*			
Transporting	*	*	*			
Herding					*	*
Crop protection					*	
Type II						
Fetching water	x	*		*		*
Collecting wood	x	*				*
Food processing	*					
Livestock marketing	*		*			
Housing construction	*		*			
Community decisions	*					

Source: Field survey, 2003

* = Traditionally established division of labour

x = Recently established division of labour

The results of the survey showed a marked gender differentiation with regard to responsibilities. For example, women have crucial roles to play in the management of milk and meat from the animals. On the other hand, they have little authority regarding the sale or slaughter of large stock animals. In the past, women's roles were strictly limited to the household (child rearing, food processing, and water fetching), while men were engaged entirely in farming. Today, women are increasingly taking part in other activities. For example, there is growing participation by women in decisions concerning the sale or slaughter of sheep and goats. The change in the overall household labour structure was mainly due to sex-selective migration for urban wages and other

attractions. Besides, many young people from Amadir, as in all other villages, are doing military service. The labour supply in the study area is also supplemented by a traditional labour-sharing practice known locally as *wofera*. The main purpose of *wofera* is to alleviate the burden of work for a particular household during the peak farm season and during house construction. The participants are neighbours and close relatives. The women also participate in this type of community labour but their roles are limited to preparing food and serving coffee to those doing the work.

Crops and crop production cycle

Crop production is primarily rainfed and focuses on subsistence. A variety of crops including barley, sorghum, wheat*, taff*, millet and peas are produced. The study area has only one crop cycle, as the "small" rains during the months of February and March are insufficient to support a second harvest. The major portion of the farmland is used for the production of barley (*Hordeum vulgare*), wheat, and *hanfes* (a combination of wheat and barley). Farmers place much emphasis on the cultivation of barley because of its extensive use in the preparation of bread, *injera* and local beer. Crops of less importance in terms of area covered include maize (*Zea mais*), *taff* (*Eragrostis tef*), millet, chickpeas (*Cicer arietinum*), linseed (*Linum usitatissimum*) beans and lentils. Crop output is low and highly susceptible to variations in rainfall. For the year 2002, the average crop yield in the study area was 6.1 quintals/hectare (Ministry of Agriculture branch office at Dbarwa, 2003)

The season for most crops begins in January, as the amount of moisture in the soil makes tilling possible. The land is ploughed three times before it is sown. Barley, wheat and *hanfes* are sown in June. In May millet, maize and *Hagay taff* (earlier cultivated variety of *taff*) are sown, while *Taff hamle* is sown later in the farming season. Because of the change in climate conditions, crops that require an early rainy season (e.g. sorghum, *Hagay taff*) are no longer cultivated. Weeding for most crops takes place between June and August, though September is also a month of weeding for some crops (e.g. *taff*). Barley, wheat, *hanfes* and millet are harvested during the months of October and November, while peas and chickpeas are harvested late in December and January (Table 8). A more detailed picture is given by Gassner (2004); his main findings can be found in Appendix 7 of the present study.

Table 8 Seasonal production cycle

Period	Environmental conditions	Farm activities	Food cycle
January- April	Moisture level permits ploughing	Beginning of farming season, land preparation	Most households in fairly good situation
May-June	Hottest months of the year	Sowing	Not enough food for most households
June-September	Optimum plant growth conditions	Weeding	Food supply for most households exhausted
October-December	Low temperature	Harvesting of main crops	Abundant food supply, high consumption during social/religious holidays

Source: Discussion with local informants, 2003

As reported by the village informants, the introduction of better farming techniques in the form of tractors and chemical fertilisers has increased crop productivity. The information made available by the Ministry of Agriculture branch office at Dbarwa showed that 50 to 60% of the households use tractors to plough their land. However, subsistence agriculture in the area still faces human and environmental constraints. Rainfall continues to be a limiting factor because of its inconsistency. The nutrients removed by the crops during harvesting are not returned to the soil, as straw and other residue constitute important feed for the animals, while dung is most often used as a source of fuel. There were also complaints among the local people regarding problems of erosion and land quality that caused low crop output. In addition, socio-cultural factors including lack of draught animals and scarce labour were reasons for poor harvests. All these factors have markedly affected the production base of the area, with an overall decline in household consumption levels. The average period of food self-sufficiency for a household was 6.7 months, which is indicative of the consumption level below the minimum caloric intake. Food bought with the money earned through off-farm activities (wage labour, selling animals, and remittances) were used to make up for the food shortage. Moreover, most households received food supplies from the government at the time of the field work for this study (2003).

Soil fertility management

Various ways of maintaining soil fertility are practiced, though the farmers believed nutrient levels in the soils were generally sufficient for plant growth.

- **Crop rotation** is a commonly used technique in the area because of its beneficial effect on crop productivity. It is practiced with a limited number of crops including wheat, barley, *taff* and millet.

- **Inter-cropping,** the growing of different crops together on the same plot of land, is primarily aimed at satisfying the family's consumption requirements. It also serves as insurance in case one crop fails. Inter-cropping is commonly practiced with wheat and barley (*hanfes*).

- **Manuring**: In the past, the households used animal dung extensively for manuring. With the scarcity of wood, however, the use of dung as a fertiliser became less frequent, though there was a report of the use of sheep and goat dung in the application of fertiliser.

- **Chemical fertiliser**: Ministry of Agriculture experts at Dbarwa noted that most of the farmers in Amadir are aware of the uses of chemical fertiliser as an important agricultural input. DAP (diammonium phosphate) and urea are the main types used, at a price of 147 *Nakfa*/quintal and 110 *Nakfa*/quintal, respectively. A quintal of DAP plus half a quintal of urea are required for a one-hectare farm plot. According to the local informants, fallowing (*tsighe*) is not practiced in the area due to better soil fertility.

Livestock

Livestock occupies a place of importance in the economic and social lives of the community in the study area. The economic utility of these animals includes their functions as stores of wealth and units of production (meat, milk). Cattle are a form of

insurance for generating cash income during times of food stress. Livestock also acquire cultural significance as important indicators of a person's social status or as assets used in social ceremonies. By traditional definition, the wealth ranking of an individual is most often determined by the size of the herd he/she possesses.

Households keep multiple species of livestock (cattle, sheep, goats and donkeys), each with a specific grazing and watering requirement. Oxen are draught animals, while donkeys are used for transport in daily activities. Most households also keep chickens to supplement their diet. In addition, selling animals enables local people to obtain cash to buy essential commodities and services, such as food items (cereal grains), clothing, and medical services. Money from livestock sales also supports community duties and government obligations (annual land and livestock tax). The post-harvest grazing fields and the community-owned enclosures are the main sources of grass for the animals. Part of the feed requirement is also met by using grazing resources outside the village's territory as well as by purchasing hay at a price of 500 *Nakfa* per quintal. The informants noted that during the dry period, they sell part of their livestock in order to purchase feed for the rest of their animals.

The depletion of grazing resources (i.e. scarcity of water and forage resources) during drought periods had resulted in a considerable reduction of herd size across the areas surveyed. This has negatively impacted livestock productivity and hence the welfare and livelihoods of the people in the study area. From the taxpayers' list, the average size of livestock per household, expressed in TLU (Tropical Livestock Units) was calculated as 0.89 TLU (1 TLU = 1 standard Zebu bovine of 250kg live weight)[12]. Village informants mentioned insufficient pasture and water for their animals and lack of adequate services as major difficulties. In addition, livestock productivity was affected by an insufficient labour supply required for herding, milking and protecting the animals. All animal types were vulnerable to the stressful conditions of drought and disease, but clear differences were observed between the various species with respect to survival and recovery following a disaster. In general, small ruminants suffered higher mortality rates than cattle. Among the small ruminants, sheep suffered slightly greater losses than goats, because the latter can sustain themselves browsing on the scrub vegetation of the area. On the other hand, the strength of sheep and goats lies in their ability to recover rapidly following a period of drought.

The chances of animal disease occurrence were generally higher during the wet season because of rapid bacterial reproduction. Contagious caprine pleuro pneumonia (CCPP) is a major fatal disease in the study area, causing mortality in goats and sheep, while rinderpest (*golhay*) and anthrax (*lalish*) are fatal diseases among large stock animals. Spoilage of hides and skins, which is commonly seen among smaller ruminants, is due to mengimites (*abek*). Foot and mouth disease, which is most prevalent during the wet season, affects milking animals, causing reduction in milk yield from cows. Dbarwa MoA

[12] Computation based on FAO/UNDP conversion rate, 1984.
Ox = 1.12 TLU
Sheep/goat = 0.08 TLU
Donkey = 0.35 TLU

provides veterinary services to the study area. Depending on the type of animal disease, each household pays 4 *Nakfa* to 70 *Nakfa*. In the case of epidemics, however, veterinary services are provided to all households free of charge. The traditional ways of curing animals using herbal medicine are still practiced by some households.

Marketing of agricultural products

In general, prices for crops are highest at the end of dry period and during the onset of the rainy season. Similarly, prices for livestock are highest at the end of the dry season and lowest at the end of the rainy season. During the dry season, the local people tend to sell more livestock to meet the high demand for cereals. Cattle are marketed during this period, as most households are unable to meet the feed requirement for these animals. The sale of animals is also more common during religious holidays, when almost every household needs cash for food items and clothing. Small stock animals are marketed more frequently than large animals. There are two economic reasons why the local people sell goats and sheep more frequently. First, these animals are the quickest means of obtaining cash income in both the normal and the dry seasons. Second, they reproduce rapidly, which allows for quick replacement of those sold or slaughtered. The total volume offered for marketing is influenced by demand for the animals from consumers and traders, and by the local peoples' expectations of the nature and length of the dry and wet seasons. Livestock are marketed at Dbarwa, and the marketing pattern is highly localised, consisting of limited business transactions with places outside the village territory. The local administration of Amadir believes improved rangeland conditions and construction of new trucking routes could increase the volume of animals marketed.

Rangeland management

The farmers in the study area utilise more or less similar landscapes in terms of forage type, forage quality, and forage availability. Pasture sources are designated as primary grazing sites (those used during the favourable season) and emergency grazing sites (those specifically reserved for use during dry periods). Rights over pasture resources are accorded to the households by virtue of their community affiliation, and use of the grazing grounds is determined and enforced by community decisions. There seemed to be intense competition among community members over resource access.

There are no indicative figures for livestock carrying capacity for the study area. However, field on-site observations showed that range resources had been adversely affected by recurrent droughts and human activities. When animal feed is marginal and inadequate, the local people make use of environmental indicators to track forage availability. The main grazing areas are located at close proximity to the village. The sloping areas are usually closed on a seasonal basis, allowing the grass and the bush to rejuvenate. Such a land use system is locally known as *hezeat* (area closure). *Ghubo* and *Enda Gergish* are mountain area enclosures to the northwest of the village. They are closed for nine months (December through August) and remain open during the harvest months of September, October and November (only oxen are allowed during this period because of the crucial role these animals play in farm activities). Consideration is given to women and elderly men, where cows owned by these people are allowed to use the grazing resource. Between November and April, the animals graze on post-harvest fields. Besides, the households exploit certain dry-season grazing areas outside the village territory. A seasonal migration to a place called *Sefea* takes place from June to September (mainly

cows and sheep are moved). The local people exercise seasonal rights to this grazing area, but this costs each herder 20 *Nakfa* per head per month. Thus rangelands in the study area are not open access but tightly managed by community regulations.

Photo: Woldetensae Tewolde

Image 17 *Crop residue is an important source of animal feed*

Water

Water sources in the study area reflect climate conditions. Their number and their proximity are, therefore, heavily dependent on groundwater recharge. All the water sources are located near the homesteads, which as a result have shorter distances to watering points. During dry periods the streams dry up completely, while the dam and the wells continue to supply water for both human and livestock consumption. At the time of the fieldwork, there were 19 hand-dug wells. The average depth of the wells was estimated to be 9 m, but this increases substantially during dry periods. The wells are primarily meant for horticulture production, but they also bring additional income to the owners through sale of water at a rate of 10 *Nakfa*/barrel. An individual who owns a well has the right to sell it or transfer it to others. A villager who wishes to invest in hand-dug wells is required to obtain permission from the regional administration.

Wood and tree ownership

Wood in the study area has multiple functions: it is a source of energy, and is also used for animal feed, construction material, and making agricultural tools. In the past, it was by far the single most important fuel alternative in the study area. According to an elder informant, the amount of wood that one could collect was *kem sereaka* (an expression used to denote the physical strength of a person as a determining factor in collecting as

much wood as he/she needs). As vegetation cover began to recede, a combination of both dung and wood became an important source of fuel. At the time of the fieldwork, the local people relied heavily on cow dung as an important energy source, though there was a report on the use of kerosene by some households. Dung is also used in the making of all-purpose containers (for grain storage) and in the smoothening of *awdi* (threshing floor).

Photo: Felix Nicolier

Image 18 *Furrow construction for irrigation*

Photo: Woldetensae Tewolde

Image 19 *Dung is an important fuel resource in many villages in Eritrea*

Beles trees are commonly found in the Amadir area. The plant has multiple functions – it is suitable for human consumption and for animal feed. There are two different modes of owning *beles*. Those around homesteads are owned by individual households and are usually fenced with stone walls. The walls are meant to protect the plant from animals. These sites also serve as a threshing ground during harvest season, as well as a place to store hay. There is also thick *beles* growth on the sloping area of Enda Gergish owned and managed by the local community. Eucalyptus trees can be seen in certain parts of the settlement area. Their wood is primarily used for construction. Though individual households own these trees (reflecting the old mode of ownership under the *risti* land tenure system), cutting them is strictly regulated. The owner first needs to explain the situation (stating the exact number of trees he wants to cut) to the local administration before the Ministry of Agriculture at Dbarwa grants him permission to cut.

Photo: Michael Gassner

Image 20 *Beles trees around homestead site*

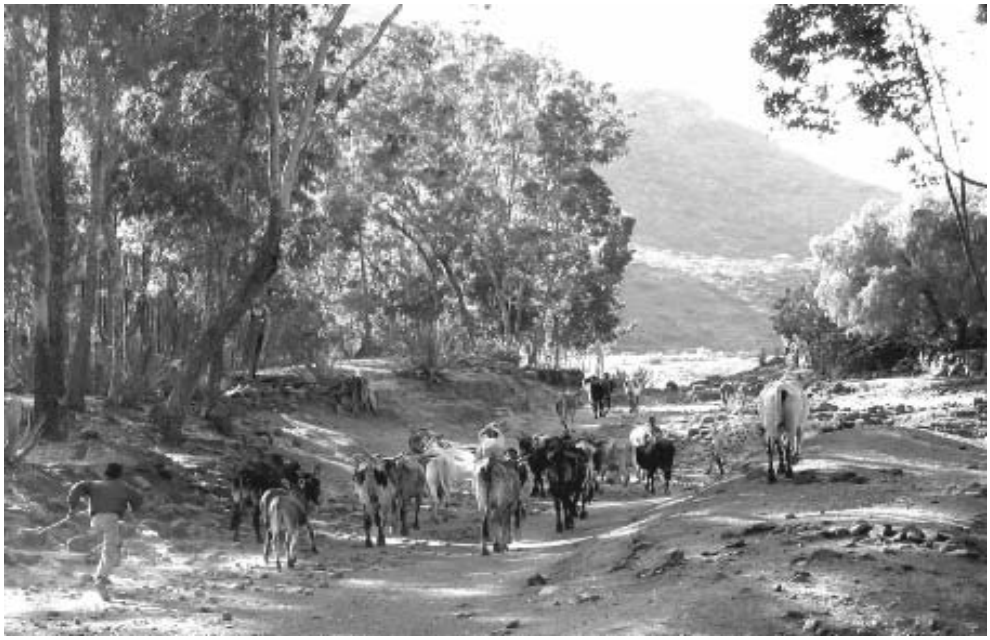

Photo: Michael Gassner

Image 21 *Eucalyptus trees are individually owned*

Irrigation and the dam

Both the amount and the temporal distribution of rainfall in the study area are unreliable, and often inadequate to meet crop moisture requirements. This essentially entails the use of irrigation where the potential exists. The introduction of a modern irrigation system in Amadir as an improved means of producing food is a relatively recent phenomenon. In 1998, MoA/FAO constructed a dam with the aim of utilising the run-off from the nearby mountains of Harmazo and Kudo-Abuer north-west of the village. Estimates by irrigation experts at the Dbarwa Ministry of Agriculture branch office put the total water retention capacity of the dam at 400,000 m^3. Two canals with a total length of 600 m are used to divert water to the fields. With a water-crop requirement of 12,000 m^3/ha [13], the dam is believed to have the capacity to irrigate a total of 30 ha of land (computed with consideration of water loss through percolation, evaporation and domestic use). Maize, onions, tomatoes, potatoes, pumpkins and cabbage are grown on the irrigated fields, and yields in general are high because of the availability of water. Irrigated agriculture also provides animals with a better supply of feed. At the time of the fieldwork, only a single *gujule* (a group of 32 farming households) was making use of water from the dam, which happened to have their land adjacent to the canals. This caused complaints among many other farmers. Village residents suggested that the local administration should find ways to allow more households to utilise the dam.

The total catchment area of the reservoir is 6.77 km^2 (computed from the map shown in Appendix 5). Under different rainfall scenarios, the potential annual recharge based on surface runoff can be calculated using some rough assumptions, as the following paragraphs show.

Photo: Robert Burtscher

Image 22 *The Amadir dam*

[13] Data provided by irrigation expert at Dbarwa Ministry of Agriculture branch office, 2003.

Main dam input: catchment runoff

Runoff is determined by rainfall and the runoff coefficient. However, this coefficient is not well known for specific areas of the country. Some values are given by Negassi et al. (2002, p. 76)[14] Undulating catchments with poor vegetation cover have a runoff coefficient of 10%, whereas catchments with steep slopes and poor vegetation have 20% runoff. Figure 13 shows the distribution of different slope categories within the catchment of the dam, including the numerical values for each slope category in the diagram.

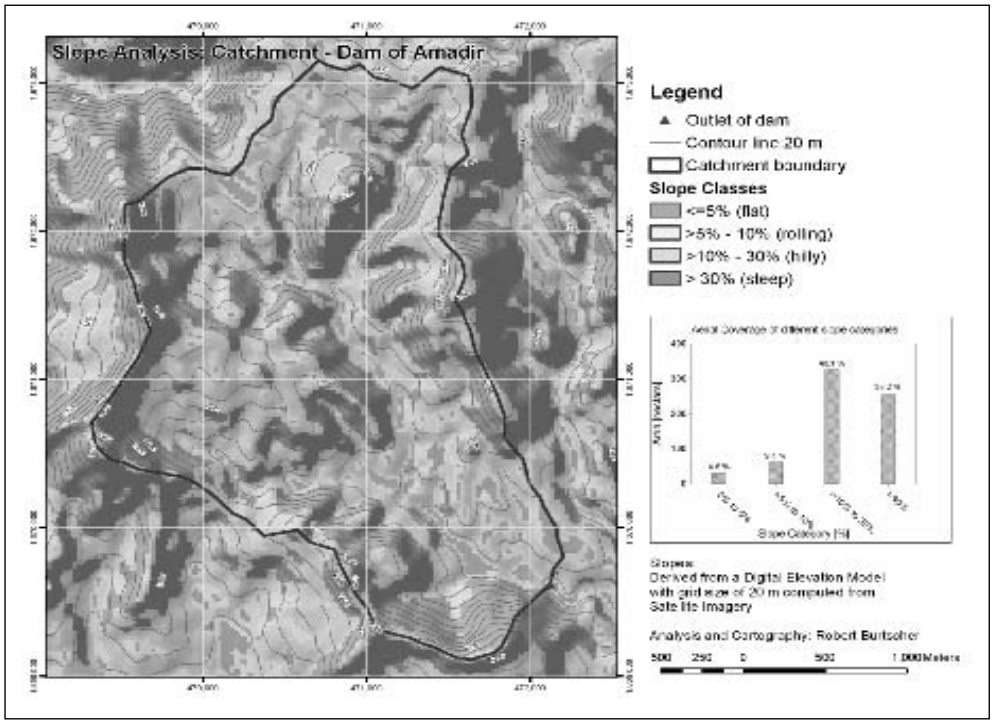

Figure 13 Slope analysis of the catchment area

When applying runoff values according to Negassi et al. (2002), and categorising slopes of less than 30% as "undulating catchments" and slopes greater than 30% as "steep slopes", a runoff coefficient for the catchment as a whole can be calculated using a weighted mean (see Table 9).The resulting overall runoff coefficient for the catchment of the dam is about 14% (13.82%).

Table 9 Computation of runoff coefficient for the Amadir catchment

Slope range	Area (m²)	Runoff coefficient (%)
0% to 5%	310,400	10
> 5% to 10%	618,800	10
> 10% to 30%	3,258,000	10
> 30%	2,586,800	20
	Total catchment area 6,774,000	Weighted mean 13.82

[14] Negassi Amanuel et al. (2002): Soil and Water Conservation Manual for Eritrea. – Regional Land Management Unit (RELMA).

The runoff coefficients indicated by Negassi et al. (2002) are for catchments with poor vegetation. However, the Amadir dam catchment is covered by rather dense shrubs. This means that the calculated coefficient of 13.82% has to be reduced; an estimated value of 12% is assumed. This amount corresponds well with runoff coefficients observed in a gauged catchment in the Eritrean highlands (Afdeyu research area in the *Subzoba* of Serejeka) for years of poor soil and water conservation treatment (Burtscher, 2003)[15].

Main losses: evaporation, seepage, and infiltration

From rainfall-runoff analysis in the research catchment of Afdeyu, it was found that the cumulative losses for evaporation, seepage and infiltration (dam body and underground) accounted for 18% of the total annual catchment runoff (Burtscher, 2003). This figure was applied to the Amadir Dam.

Calculation of expected storage

The expected input into the dam was computed based on the following equation:

$Ai = Ap \cdot rc \cdot Ac (1-L)$ whereby:

Ai Annual inflow [m^3]

Ap Annual precipitation [m]

rc Runoff coefficient (ranging between 0 and 1; in this case 0.12)

Ac Catchment area [m^2]

L Losses (ranging between 0 and 1; in this case 0.18)

The annual inflow was computed for the case of mean annual rainfall as well as for the past three rainy seasons (Table 10):

Table 10 Computation of potential storage for selected years

Scenario	Rainfall (mm)	Annual catchment runoff (m^3)	Losses (m^3)	Potential annual storage (m^3)
Mean annual rainfall	518	420,202	75,636	344,565
Year 2004	405	328,536	59,136	269,400
Year 2003	496.2	402,517	72,453	330,064
Year 2002	437.6	354,981	63,897	291,085

The total amount of water stored in the dam at the end of each rainy season is composed of the annual inflow (*AI*), minus losses from evaporation and seepage, plus the remaining water stored from the previous rainy season. This is usually referred to as the dead storage. Since no data are available for dead storage in Amadir, it is assumed to be 50,000 m^3. Thus, in years with mean annual rainfall, the reservoir is just about filled up (dead storage + annual potential storage = 394,565 m^3). Calculations show that the dam was not filled to capacity in the last three years (2002 to 2004). This was confirmed by

[15] Burtscher R. (2003): Analysis of rainfall-runoff data for Afdeyu and implications for planning of small dams. Proceedings of a Workshop on Water Harvesting in November 2003, Water Resource Department, Eritrea.

observations in the field. These showed that the inflow was lower than computed by the model. In 2003, the water level was 2 m below the spillway. The calculated potential storage for 2003 was about 330,000 m^3. Together with the dead storage of 50,000 m^3, the dam should have been almost full, with a total storage of 380,000 m^3 at the end of the rainy season. It should also be noted that the dam is apparently affected by above-average seepage losses, as it consists of an earthen structure built on rocky underground. This is also clear from the extensive cracks on the dam surface.

Concluding remarks

The above calculations suggest that the storage capacity of the dam matches the size of the catchment and the expected inflow. However, observations from the 2003 rainy season, a better-than-average season, show that the dam is considerably oversized [16]. Thus, the model can only roughly reveal the actual inflow, since there is little information about the most crucial parameter of the model – the runoff coefficient. This coefficient greatly depends on rainfall intensity (a parameter that is not measured in the surrounding area of the dam) and terrain parameters such as soil characteristics, vegetation cover, and slope. The terrain parameters could quite easily have been assessed with the available data (see satellite image map in Appendix 5, slope map in Figure 13). However, rainfall intensity shows high spatial variability, and can only be considered if measured within the catchment area, which was not done in the case of Amadir.

Based on this simple modelling approach, it can be concluded that the runoff coefficient for the catchment is clearly below 12%. Additional research will be done to obtain a better understanding of the runoff process as a whole. This could provide crucial information for planning, especially as the runoff coefficient seems to be clearly overestimated. As helpful as they are as rough guidelines, the figures for runoff coefficients under Eritrean conditions suggested by Negassi et al. (2002) warrant further research.

It should also be added that according to village people, sedimentation is a serious problem that prevents the dam from holding water to its capacity, a statement that can easily be verified by visual evidence. Moreover, the dam should be monitored and emergency repair work done at regular intervals (cracks in the dam body), in order to prevent it from collapsing.

[16] Though the rainfall records for Halhale show annual rainfall amounts slightly below the mean annual rainfall, the perceptions of farmers can be trusted, since we know about the high spatial variation of rainfall (see Figure 5).

5. Environmental and socio-cultural dynamics

Environmental dynamics

Physiologically, three main landform systems were recognised in the study area: mountain ranges, small hills, and plains. The major land-use types were classified as cultivated land, grazing land, homesteads, and barren land. The largest portion of the study area is under cultivation, followed by land under grazing and browsing. The soil types are classified as clay, loam and sand, and have high potential for production despite limitations set by rainfall. Farming is the mainstay of livelihood for the population inhabiting the study area. According to the older informants, population dynamics in the area have been chiefly influenced by in- and out-migration due to past political turmoil. A comparison of aerial photos from 1964 with satellite images from 2003 shows a marked increase in settlement size from approximately 250 households to over 400 (439 according to the taxpayers' list from the local administration office) [17]. This implies a corresponding, and significant, increase in population, assuming that household sizes were similar in 1964. Unfortunately, there are no statistical data from that period to confirm this increase in population.

Vegetation

The plant ecosystem in the study area has been heavily influenced by farming activities, cutting of trees for fuelwood, and house construction. At the time of the fieldwork, only sparse vegetation was seen in large parts of the study area. As noted by the elders, the extended plain to the south of the village (a territory close to Adi Gered) was forested before agricultural expansion took place. The result has been increased soil erosion, declining productivity of agricultural lands, wildlife habitat loss, and acute shortage of materials for both fuel and construction. The slopes of the Harmazo Mountains north-west of Amadir contain some bushy areas, along with some important tree species such as *seraw* (*Acacia etabaica*), *awlie* (*Olea Africana*), *kulkwal* (*Euphorbia*), *tahses* (*Dodonia angustifolis*) and eucalyptus. But access to trees and bushes is nowadays only possible with permission from the local administration. A household with a good reason (e.g. a wedding) is permitted to collect up to 4 quintals of wood[18] . In the past, protection of vegetation in the study area involved a programme undertaken by the Ministry of Agriculture (forestry approach). The area to the east of the dam is permanently closed for restoration. A variety of plant species (e.g. eucalyptus, *Olea Africana, Acacia Nilotica*) was planted in a student summer campaign. With proper incentives and technical support from government and private agencies, community forestry could be a viable way of dealing with the problem of deforestation.

[17] Ghirmay et al. (2004)

[18] Approxim. 400 kg for marriages (bridegroom family; 300 kg for bride family); 50 kg for baptism and memorial ceremonies (Ghirmay et al., 2004).

There is a considerable erosion hazard due to the presence of mountains and hills as potential causes of runoff. During problem identification, groups of men and youth mentioned erosion as the most serious environmental problem. The run-off from the steep slopes in the northern section of the village, has led to high risk of erosion. In addition, very intense rain that often falls on areas with sparse vegetation cover has increased the chance of erosion. Total eroded soil on cropland is estimated to be 2.1 t/ha[19] . *Hutsa* are the soil types most affected, mainly because of local gully formation, particularly in the southern portion of the village's territory bordering Adi-Bezehannes. According to local informants, this has resulted in the reduction of the amount of land available for cultivation.

Photo: Bissirat Dessalegn

Image 23 *Gully formation in the plains south of Amadir*

Check dams and hill terraces are common measures employed by farmers to combat soil erosion. A bench-like structure made of stone, locally known as *zala*, is commonly seen on the sloping portions of the Harmazo Mountains. A previous project implemented under the Food for Work Programme (FFW) resulted in hundreds of meters of conservation structures being built. But no follow-up activities have been carried out. Some stone bunds and check dams can be seen in the lower section of the dam, all suffering some degree of structural damage. The local people reported that massive external intervention in the form of financial inputs and technical support is required to maintain the existing structures and to avert the effect of soil erosion.

[19] Dbarwa Ministry of Agriculture branch office, 2003.

Photo: Thomas Kohler

Image 24 *Bench-like structures made of stones to combat erosion*

Socio-economic dynamics

Marital status

In the Amadir community, as in most other social groups in rural Eritrea, childbearing has enormous cultural and economic implications. Local people perceive a larger family as an indication of physical strength as well as a form of social security in old age. Both men and women are inclined to have as many children as possible, with no preference about sex. One of the interviewed household heads responded to a question about how many children he wished to raise as follows: "I wish I could fill the whole world with my sons and daughters." The community members in the village were neither aware of any contraceptive method nor willing to practice contraception.

Marriage in Amadir takes place at an early age. Two types of marriage, namely religious and customary, are recognised. Religious marriages are indissoluble in principle and are usually entered into by people with a strong religious orientation. Most people choose customary marriage. The traditional parent-arranged type is still prevalent in the area, although gradual changes in preference among many young men are leading to marriage decisions without the consent of their parents. Bride wealth, which may represent a substantial portion of a person's income, is an important component of marriage in the study area. In addition, bride wealth possessed in a joint venture between husband and wife (most often in the form of cattle) constitutes an original asset for a newly married couple. Frequently, this process of primary wealth formation during the wedding is also supplemented by gifts from relatives and close friends.

It appears that divorce among people in the study area occurs more frequently today than it did in the past. The main cause leading to marital breakdowns, apart from mortality, was desertion, more frequently on the male's side. Consequently, the proportion of

households headed by females has increased. Since one of the objectives of marriage is the begetting of children, there were also unreported cases of breakdowns because women failed to produce children. Divorce settlements proceed according to a traditionally established custom. Animal stock, apart from that held privately, is divided into two equal parts when a marriage breaks up. Boys stay with their father, and young girls stay under their mother's care until they reach a certain level of maturity, after which they decide their own fate. A house is usually kept as the husband's property, while the woman is compensated by receiving assets worth half the value of the house. Land is equally divided between the sexes, provided that the woman decides to stay in the same locality.

Female-headed households

The results of the questionnaire showed that female-headed households account for 37% of the total households sampled, most of which had experienced divorce. The increased divorce rate and the resulting number of female-headed households have social and economic implications. Such households are characterised by limited access to production factors, the result of gender differences in the acquisition of livestock, and marketing opportunities. Owing to meagre income, these households are usually forced to adopt coping mechanisms appropriate to their own economic and demographic status. For example, they tend to focus on poultry, which is more sensitive to their unique situation. They also pursue a strategy closely tied to the production of small stock, which do not demand a high labour input during watering and herding. Currently, HABEN (a local NGO) is launching a project to identify the potential for expanded economic opportunities for these households. The project will attempt to create economically self-sustaining household units by providing training, mainly in handicrafts.

Religious holidays and their implications

In Amadir, where the Orthodox Christian faith is practiced by almost all residents, certain activities such as ploughing, digging, seeding, weeding and threshing are forbidden during holidays. The year consists of 365 days (12 months with 30 days and the last month with extra 5 days). There are six monthly holidays and nine annual holidays (Tables 11and 12). Some of these are observed strictly, with no fieldwork allowed, while less strict restrictions apply to the others; activities such as marketing are allowed. Time devoted to festivals and other social gatherings (e.g. weddings and funerals) is noticed, particularly during the peak farming season, when labour is in high demand. The farmers are aware of the impacts holidays have on the time they require for farming, but they do not dare to violate them.

Table 11 Monthly holidays observed in Amadir

Date	Saint observed
The 8th day of each month	*ArbaAte Ensisa*
The 12th day of each month	*Mikael*
The 21st day of each month	*Mariam*
23rd day of each month	*Giorgis*
27th day of each month	*Medhane Alem*
29th day of each month	*Balezghier*

Source: Discussion with village informants, 2003

Table 12 Annual holidays observed in Amadir

Date	Saint observed
1 September	Johannes (Yohannes)
17 September	Cross (*Meskel*)
29 December	Christmas (*Lidet*)
11 January	Epiphany (*Timket*)
Variable	Good Friday
Variable	Easter (*Afasica*)
Variable	*Maria*
Variable	*Harya-Gube*
Variable	*Erget*

Source: Discussion with village informants, 2003

Income and expenditure patterns

The sources of income for the local people in the study area are closely linked with land, which is the major source of livelihood. The amount of cultivable land, the number of pairs of oxen possessed, and access to water and pasture determine income at a household level. The main sources of off-farm income were categorised as wage labour, small-scale trading, sale of livestock and livestock products (animals, milk and milk products, hides, and skins), and remittances. There was virtually no income from sale of forestry products (wood and charcoal) and local beer. With the exception of linseed, no crops were cultivated for sale, indicative of the highly subsistence nature of production in the area. Wage labour was by far the most important off-farm activity. In the period after harvest, some members of the community work in the nearby towns (Dbarwa, Mendefera) as masons and day labourers at construction sites. Local people also earn cash income from sale of livestock, though this varies depending on aridity. Small stock in particular bring more money than large stock, although cattle were nearly as important in this regard, and to some households they were in fact more important during the drought period. In general, income from non-agricultural sources was low, which implied very limited integration in the market economy.

Six major expenditure categories were identified during fieldwork: cereals, other food, (coffee, salt, sugar, etc), livestock, non-food items (clothing, shoes, soap, etc), social/religious and other cash expenditures such as government taxation, and loan

payments. According to the village informants, spending on food grains is declining, while there is increased expenditure on social/religious obligations. General behaviour regarding expenditure is inconsistent, as people tend to spend much during the harvest season (e.g. weddings and religious holidays), and then experience financial problems for the rest of the year. The community members perceive such practices as a sign of social unity.

Diet

Household diets in the study area were examined on the basis of the frequency of food types consumed in normal and drought periods. The types of food investigated were cereals/grain, milk and milk products, meat, and vegetables. Local patterns of food consumption (dietary specialisation) were clearly observed in the heavy reliance on barley and wheat. The former is especially important because of its multiple purposes, including the preparation of *injera* (pancake-type bread) and local beer. The dependency on cereals becomes even more important during food stress periods, although a few well-to-do households continue to consume meat and milk. Vegetables and fruits were less important than the other food types, as only a few households were reported to have consumed them.

Health and education

No specific survey of literacy was conducted during the fieldwork; but few of the local residents are believed to have any formal education. The number of schools has increased in the area since the country won its independence in 1991, but low-income families still find it difficult to educate their children beyond primary school. An important aspect of the link between education and demography deals with parental decisions about which children should enrol in school. Discussion with the school director revealed that there was no clear discrimination between sexes at the primary school level. However, the proportion of female students going on to higher education (i.e. junior high and senior high school) was extremely low, which suggested that culture-specific patterns influence parental decisions concerning female education at this stage (personal communication with the school director).

No specific health data were available for the study area, but information from the villagers revealed that the health profile of Amadir reflects the overall profile in the region. Health services are being provided to the people of Amadir by a clinic located at Adi-Bezehannis. The facilities and personnel at the clinic are clearly inadequate to serve the health needs of the communities in the area. According to the clinic records, the community suffers from a variety of diseases, including respiratory, urinary tract infections, eye and skin diseases. The most prevalent human diseases were categorised as epidemic/infectious diseases, which include pneumonia and urinary tract infections (UTI). In general, epidemic diseases (malaria) were more prevalent during the rainy season, while others were most prevalent during the dry season. The local people are provided with preventive care, including immunization and eradication of vectors such as mosquitoes by the use of DDT. But enforcement of hygienic measures such as the use of latrines and disposal of waste materials was found to be inadequate.

House type and infrastructure

Traditionally, local resources largely determined the materials used in the construction of houses. During the field survey, two different types of housing were recognized in terms of structure and material content. The first is *hidmo*, which is the traditional housing structure for the farming population. An aerial photo from 1964 reveals that in this year, houses of the *hidmo* type still dominated the settlement. The second house type is known as *merebae*. *Merebae* is a modern house made of cement blocks, lumber and corrugated iron sheet. It was introduced recently in response to the scarcity of wood for *hidmo* construction. A large-scale satellite image taken in 2003 confirms that these modern houses are widespread nowadays; a detailed count showed that:

- 46 % of all houses were of the *hidmo* type
- 22% of all houses were of the *merebae* type (corrugated iron roofs)
- 32 % of all houses were mixed (elements of *hidmo* and *merebae* types)[20]

Photo: Michael Gassner

Image 25 *Merebae, the type of house built in the modern style*

[20] Ghirmay et al., (2004)

Photo: Michael Gassner

Image 26 *Hidmo, the type of house built in the traditional way*

There is an overall lack of infrastructure in Amadir *kebabi*. There are no health and sanitary facilities, electricity, or telephone services. The existing dry-weather road linking Amadir with Dbarwa is of poor quality; posing constraints to development activities. The villagers had no access to adequate, clean water until the new water supply system became functional recently; all inhabitants are expected to benefit greatly from of the six water distribution centres provided by the new system within the village.

6. Problems and priorities

Upon entering the village of Amadir, it is easy to make initial and facile assumptions about the problems its people encounter. In order to obtain less biased and more balanced information, the survey team consulted the villagers themselves. Thirty people from the village were involved in identifying the problems the village faces, and to rank them according to their importance and urgency. Groups of women, men and male youth all freely identified and discussed the problems and challenges their community faces (Table 13).

Photo: Robert Burtscher

Image 27 *A mother during a PRA exercise*

Photo: Robert Burtscher

Image 28 *Priorities identification using pebbles*

Table 13 Problems and their prioritisation, as identified by the village people

Priority	Women	Men (elder)	Youth
First	Clinic	Dam/siltation	Health
Second	Electricity	Erosion	Erosion
Third	Transportation/roads	Health	Road
Forth	Educational materials	School	Electricity
Fifth	Cash for work	Electricity	School
Sixth	Firewood	Road	Orphanage
Seventh	-	Farm tools	Wood
Eighth	-	-	Pesticides
Ninth	-	-	Wage labour

The results show that health, erosion, and roads/transportation were ranked as first, second or third by at least two of the groups. Electricity and school/educational materials were ranked fourth or fifth by at least two groups. Wage labour, wood, farm tools, pesticides and orphanages followed.

Health

In the group discussions, all groups (men, women and youth) emphasised the absence of a health facility in the village as their main concern. No facility exists to provide emergency or first aid services. Though in-depth research was not conducted to analyse the area's common and recurring diseases, observations and discussions revealed that many people die from lack of primary health care. At the time the research was being conducted, a ten-year-old girl was said to have died of malaria. The villagers appear to believe that the infection was a result of the recently constructed dam, but so far no action has been taken to confront the threat.

There are also problems with maternal health care. In the group discussions, women especially emphasised this issue at some length, pointing to child delivery complications as a major concern. Currently, there are three traditional birth assistants (TBA). When delivery complications arise, however, patients must be carried on foot all the way to Dbarwa, a journey of at least two hours.

"If there is health there is everything!"
Elderly man from Amadir

Infrastructure and education

There is an overall lack of infrastructure in Amadir *memhedar*. There are no sanitary facilities, electricity or telephone services. The existing dry-weather road linking Amadir with Dbarwa is of low quality; this hampers development activities. The villagers had no access to adequate, clean water until a new water supply system recently came on stream. All the inhabitants within the *memhedar* are expected to benefit greatly from the supply system's six new water distribution centres located at Amadir village.

Public transportation is insufficient. There is one private vehicle that transports passengers to and from Dbarwa during the dry season – an old 12-seat minibus that charges 6 *Nakfa*/person each way. Another mode of transportation, used for transporting goods, is a donkey- or horse-drawn cart. People travel largely on foot, which is only safe in bright daylight.

Photo: Bissirat Dessalegn

Image 29 *Public transport in Amadir*

For illumination at night, villagers use kerosene or gas, both of which are smoky and irritate the eyes and lungs. The closest power line has reached Adi-Geda, which is about 5 km from Amadir. 'To extend the power line from Adi-Geda to Amadir would require a lot of money' the administrator stated. To date, people from the village who reside in Asmara and elsewhere have collected money to initiate a start-up fund, but it will be some time before sufficient funds are available to undertake such a major project.

In the Amadir elementary school, major problems identified include a shortage of school materials and an absence of sanitary facilities. Currently, organisations such as HABEN, a local NGO, are providing school materials, which the villagers found helpful, but not a reliable long-term solution. Students use the area surrounding the school compound for sanitation, which affords no privacy and is unhygienic.

Photo: Bissirat Dessalegn

Image 30 *Children reading after school*

The absence of a Junior and Secondary School in the area is another major concern. After finishing elementary education, students must travel to Adi-Bezehannis to attend Junior School (6th and 7th grades), and to Dbarwa for Secondary School (8th-11th grades). Primarily for reasons of safety and security, parents are reluctant to send their children, especially girls, to a distant school.

Photo: Bissirat Dessalegn

Image 31 *The journey to secondary school*

Erosion and siltation of the dam

Soil erosion is an ongoing process on all types of land. Check dams and terraces are in place in some areas. Villagers acknowledged that they could do more to prevent further soil erosion, but a shortage of building materials, equipment and labour impedes any significant attempts to stem erosion. In regard to the recently built dam, the villagers also mentioned problems with siltation and management issues (see Chapter 4). Their perception is that many of their problems could be solved by good management and fixing the dam.

"If the dam is fixed there will be plenty of work for all". Farmer from Amadir

Photo: Robert Burtscher

Image 32 *Rainy season day in Amadir*

Farm equipment

There is only one pesticide sprayer to be shared by the four villages of the *memhedar*. Because it is such a scarce resource and in such demand, many households do not get the chance to use it. Those who do have access often do not know how to use the equipment.

7. Recommendations

A priority list for development

The priority list elaborated by the local community gives a clear picture of the expressed development needs of the village. This list, which is summarised in Chapter 6, is reproduced below for easier reference (Table 14). It shows a broad range of topics, most of which belong to two main themes. These are: infrastructure development – which got the highest marks from women and youth groups – and natural resource management, which was the main concern of the elders (older men). The list was presented and discussed in the village on the occasion of the feedback workshop in April 2004, and approved as a correct reflection of what had been discussed during fieldwork in September 2003.

Table 14 Problems and priorities in local development

Priority	Women	Men (elders)	Youth
First	Clinic	Dam/siltation	Health
Second	Electricity	Erosion	Erosion
Third	Transportation/road	Health	Road
Fourth	Educational materials	School	Electricity
Fifth	Cash for work	Electricity	School
Sixth	Firewood	Road	Orphanage

light grey: infrastructure
darker grey: natural resources

Entry points for action

The above priority list suggests a two-pronged approach to local development in Amadir, which should be directed towards infrastructure development and natural resource management (Figure 14). The following suggestions summarise a number of ideas discussed within the study team. They form a basis for discussion with the village community and government authorities on concrete actions to be taken.

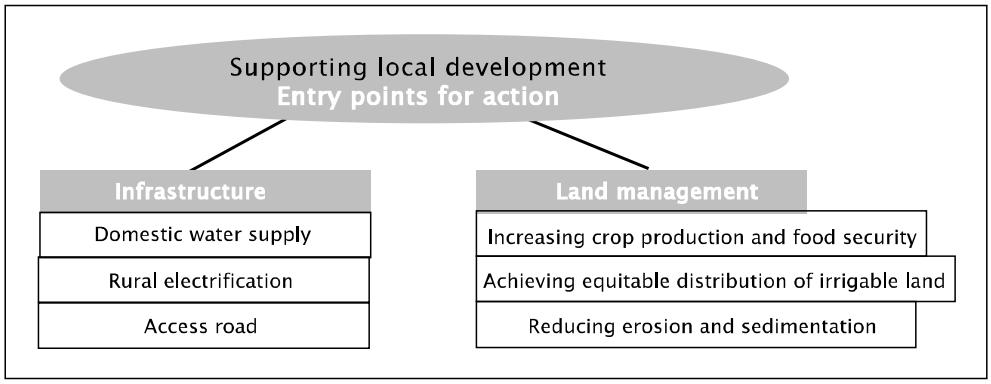

Figure 14 Land management and infrastructure as entry points for local development

Infrastructure development

Domestic water supply: the domestic water supply system was inaugurated towards the end of 2003. There are several paths for further development that can be tackled simultaneously, depending on local interest and support:

- *More crop per drop:* as water is now available close to homes, it could be used for kitchen garden irrigation in the compounds. This does not require expensive installations; a watering can is sufficient. Examples from many rural areas in the world show that the amount and quality of food that can be grown even in a small kitchen garden makes a very significant contribution to household food security or cash income. Possible crops include vegetables and spices, as well as many others. The study team suggests that this option be discussed with the villagers, especially with the women, to find out what they think about kitchen garden irrigation, and if they have the necessary space within their compounds. The advantage of kitchen gardens is that they do not require much land, which is scarce in Amadir. Other development activities that have the same advantage should also be discussed with the villagers, even when these activities are not directly linked with improved water availability. One example known to make significant contributions to rural incomes is poultry keeping.
- *Clean water – better health:* this involves preventive health care education for women and in the school, based on the availability of clean water.
- *Securing institutional and financial sustainability:* rural water supply systems are often poorly maintained and there is little time before the community calls for external support to secure even the most basic repair and maintenance work. However, with the help of local government and some external monitoring and counselling, proper water supply management can be set up and its functioning monitored regularly (is there a water committee; does it do its job properly and for the benefit of the community; are fees collected regularly, and is there a water fund that will cover wear and tear of the water infrastructure?).

Rural electrification: an important issue on the local agenda. The village has already collected funds for this project, which is encouraged by the authorities. Electrification is feasible in financial terms, both with regard to local budgets and the external support it will require. The study team would thus support the electrification project for Amadir, and suggest that negotiations be started to establish the external support needed, and to search for possible external funding partners.

Other infrastructure: health facilities, educational facilities, road construction: in the eyes of the study team, Amadir is not badly positioned with regard to *health and educational* facilities, certainly not if one considers the general situation in the Eritrean highlands. Adopting a more regional perspective, general infrastructure services such as institutions of higher education and health care should be located in such a way as to benefit as large a population as possible, while minimising travel distances. There remains the question whether Amadir would be the best location from a regional point of view. Any action relating to these services should therefore adopt a wider regional perspective, and by the same token should be discussed in depth with the authorities at regional level.

While higher schools and higher-level health facilities cannot be located in every village, but need to be located in selected central places, *getting there* is another issue, in the case of Amadir as well. Better *access by road* (especially during the rainy season) could improve local livelihoods, assuming that public transport (taxi, buses) will improve and the price of services decrease. In the eyes of the study team, there are two basic options for improving access:

- *Upgrade existing roads,* i.e. local improvement at hot spots along the existing access roads to assure passage during the rainy season; this might necessitate only a minor budget;

- *Construct a new all-weather road;* preferably, this should again be done by adopting a regional perspective, with the aim of connecting several villages, and integrating the new road into a broader network of local roads if possible (avoidance of *cul-de-sacs*), as this will provide more connections and hence better (cheaper) services. Both possible actions, upgrading the old roads and construction of new roads, must involve in-depth discussions with the regional authorities.

Land and resources management

Within this broad theme, the focus of the local community was on erosion and siltation of the dam upstream from the village. The study team would want to broaden this view by putting forward the following main issues in land and resource management:

- Low levels of crop production, resulting in poor food security

- Unequal distribution of irrigable land among village households

- High erosion rates, mainly on the hilly rangeland section of village land, resulting in accelerated siltation of the dam upstream from the village

The study team suggests tackling these issues by adopting a *watershed management approach* that aims to *increase production and usable plant biomass* in general within the watershed, while *conserving its water and soil resources*.

Such an approach would include specifically:

- **Increasing crop production and food security:** with the irrigation system basically in place, and the wish of the farming community to make more efficient use of it, development of irrigated agriculture is an option for increasing crop production, food security, and household cash incomes. This should be coupled with a change in the distribution of irrigable land (see below). However, most of the cropland is under rainfed agriculture and will remain so in future. This mode of farming should therefore not be neglected. Concrete action could include: testing of improved ploughs with a somewhat deeper ploughing horizon to increase rainfall infiltration, introduction of new crops such as improved Triticale (South Africa), or improved wheat, barley and millet varieties.

- **Achieving equitable distribution of irrigable land:** concrete actions should include redistribution of the irrigable land between the village and the hill zone, in order to endow each village household with an irrigable piece of land, so that all households benefit from access to irrigable land (those not using it will let it to others). At present, only one of the 12 *gujules* – land tenure groups – has access to irrigable lands.

- **Reducing erosion and sedimentation:** *improved rangeland management* would be the main focus, with the aim of reducing erosion and hence sedimentation rates, while at the same time increasing plant biomass for increased fodder production and increased production of other rangeland produce, including wood and NTFPs. Concrete actions could include: establishment of grass/legume vegetation cover for grazing/cut and carry exploitation; planting of adapted (multipurpose) trees such as *grevillea* or *leucena*; and establishment of physical erosion control structures at selected critical places (small check dams on valley floors). In the cropland area, which is generally well protected, terraces could be planted with fodder grasses, and the few gully areas rehabilitated by using biological control measures wherever possible.

- **Monitoring and maintenance of dam and irrigation main lines:** the Amadir dam is an earthen structure built on solid rock. This configuration is basically threatened by instability; a number of similar dams in Eritrea were damaged or washed away. Hence the *dam must be monitored at regular intervals* (the transversal cracks at its crest are a useful monitorable proxy-indicator of its stability), and repair work must be carried out regularly with expert advice, which could be facilitated by HABEN. Moreover, the two main irrigation lines (half pipes) must be kept free of siltation.

As a next step, these action lines should be reviewed and concretised. This requires action in two directions:

- Presentation to the local community, in order to invite feedback (especially relating to critical factors such as expected benefits, labour demand and availability, capabilities to manage the envisaged changes including know how; etc.), and defining concrete steps and responsibility for action.

- Establishing contacts with institutions and specialists with relevant experience in dryland crop and rangeland management, both in Eritrea and abroad, in order to benefit as much as possible from the state of the knowledge and from lessons learnt elsewhere.

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9. Appendices

Appendix 1 Methodology of the study

This study was based on a combination of qualitative and quantitative data, and on work that employed five sets of tools: workshops, including thematic work groups; a questionnaire survey; secondary statistical data; literature/background references; and a base map (satellite image).

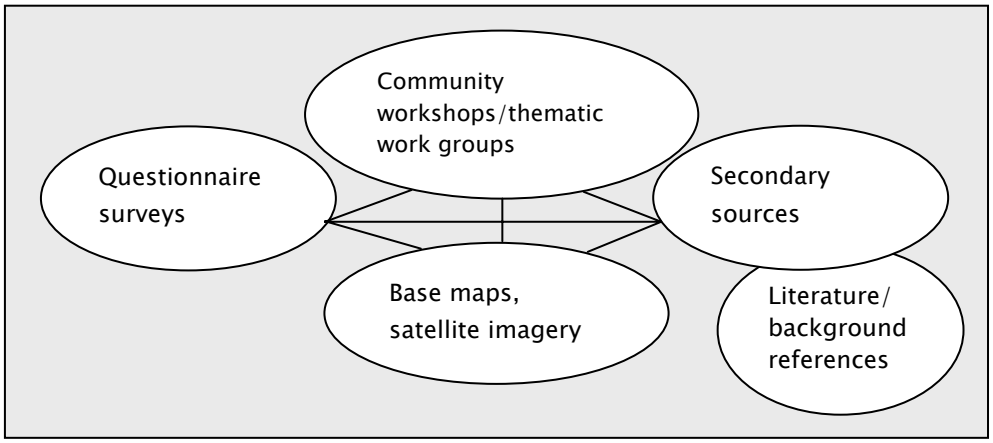

Figure 15 Set of tools used in the Amadir baseline study

Community workshops and thematic work groups

Community workshops were carried out involving all community members present at the time of the study. Thematic work groups, on the other hand, involved a small number of community members only. The following summary starts with workshops where everyone was present.

Community workshops

Workshop on resource mapping: Like the other community workshops mentioned in the following paragraphs, this workshop took place in the school compound and dealt with the village community and its natural resources, which were to be depicted on a map drawn on the school compound. After some introductory remarks, a group of mainly younger men took the initiative and began drawing the boundaries of the village land on the school compound, using a stick. They proceeded by locating the neighbouring villages, and then turned to the village land, filling in what they considered important. This included the village and the church, cropland, grazing land in the mountainous part of the village, the land that includes the large dam upstream of the village, rivers (all dry in the dry season), private wells, etc. Those not involved in the drawing made comments, and there were lively debates at times, sometimes heated ones. On several occasions, other individuals took the stick (although rarely women), and amended or redrew what was in the sand, until a general consensus was reached on the appropriateness of the outcome. Some transect walks were also done, mainly to sites of immediate interest to the villagers (village water supply system, upstream dam and irrigation system). The results of the resource mapping are presented in Chapter 4 of the present report.

Priority lists of development problems: The members of the community who attended this section of the community workshop – about 30 persons – were asked to prepare a list of what constituted the main development problems of the village in their eyes, and, in a second step, to prioritise these problems by weighting them. Three groups were then

formed, namely a men's group, a women's group, and a youth group (entirely made up of young men). These groups first developed a list of problems. Ranking was then done, assigning relative importance by using pebbles. The list of problems was similar for all three groups, but the priorities assigned showed significant differences, especially between the men and women, which is a typical feature of a priority exercise. The resulting lists can be found in Chapter 6 of this report.

Social mapping: Instead of preparing a social map of the village, which would have taken too much time given the size of the village (over 400 households), social mapping was done by way of wealth (assets) ranking. Owing to the large number of households, the ranking was done by taking a sample of all households, which made it possible for the informants to retain an overview and safely handle the ranking exercise. 50 households were selected randomly from the village taxation list, and their names written on small cards. Two groups of informants, each with four men and four women, then ranked these households, according to their definition of assets, in different wealth categories. The two groups made their rankings independent of each other. The results are presented in Chapter 2 of this report. The whole ranking process took about 3 hours, and yielded much information, including what emerged from the discussions that evolved within the two groups as they proceeded with the ranking.

Institution mapping: This was done using the VENN-diagram method, involving all those present in the compound. Owing to the often marked differences between men and women regarding the position and relative importance of institutions, the survey team decided to have two diagrams drawn and presented, one by the men, and the other by the women. This exercise proved more difficult than the others, as the principle of the VENN diagram was not easily understood. A more elaborate and precise introduction was therefore needed after the initial attempts to make graphic illustrations of the discussions of the two groups on the ground. The results are presented in Chapter 3.

Thematic work groups

Work groups were formed with the aim of obtaining more in-depth information on specific topics that emerged during the community workshops. At the same time, working with small groups allowed others to have a break from the community workshop and attend to their farm and household chores. The themes discussed in the work groups were mainly defined by the survey team. The size of the work groups varied considerably, depending on the importance people assigned to the theme, and on their available time. The groups therefore often met before or after a community workshop. Work groups were created to deal with the following themes:

- wealth ranking (see above, involving two groups of 4 persons, including men and women)
- household assets and livelihoods
- local land administration
- environmental and socio-cultural changes
- resources and resource management

Questionnaire surveys

The task of gathering primary data (both qualitative and quantitative) at the household level was carried out with the preparation of a two-stage survey involving two sets of structured questionnaires. The questionnaires were presented in both open-ended and fixed-alternative format. A sampling framework was created by listing all the households in the study area, based on the information obtained from the local administration in Amadir. The first (basic) survey consisted of a sample of 100 households that were randomly selected; information on them was obtained from a group of informants (Appendix 2). The second survey involved detailed interviews with 50 households (Appendix 3). Four senior students from the Department of Geography (University of Asmara) administered the questionnaires; this also provided field material for these students to use in writing up their senior essays. Sampled households were distributed proportionally with regard to age, sex and wealth categories, to make the sample a fairly reasonable representation of the whole community. The main results of the surveys are summarised in Chapter 1 of this report.

Secondary sources

These included the following data sets:

Village taxation list: This list, which is managed by the village administration in every village in Eritrea, constitutes a useful and comprehensive overview of the assets of all village households, with regard to land and livestock endowments. The list was used to select households (random samples for wealth ranking and for the formal household survey). It was of great help in triangulation (comparison with results obtained from ranking exercises and questionnaire survey).

School register: This is a comprehensive and well-kept register of the number of students by gender and by class, including new enrolments, promotions and drop-outs for each class, for each year since the school was started. For the purpose of this study, only basic interpretation was done (see Chapter 3). However, school registers in general contain a wealth of indirect information on livelihood and household circumstances, which could be interpreted in more detail, especially in places where teachers have a longer personal track record in a given locality and can help with interpretation. The school also keeps some basic information about the recently established handicraft centre in Amadir.

Rainfall data: As there is no rain gauge in the village, rainfall data were collected at the office of the Ministry of Agriculture in Dbarwa.

Literature

There is a small body of literature on rural Eritrea, mainly made up of case studies of specific localities. These sources were consulted for the present study. In addition, the study team was aware of the vast body of knowledge that exists, both methodologically and thematically, on local development research.

The study team

The study was carried out by a tri-partite team, which included members of an NGO (HABEN), the academic community (University of Asmara/Department of Geography), and a development programme (SLM Eritrea). The members of the study team are listed below:

The study team	
Dr. Berhane Woldemichael	HABEN
Dr. Woldetensae Tewolde	University of Asmara/Department of Geography (DGUA)
Robert Burtscher	SLM Eritrea
Bissirat Dessalegn	Consultant / SLM Eritrea
Brigitta Stillhardt	SLM Eritrea
Dr. Thomas Kohler	SLM Eritrea
Amanuel Ghirmay	DGUA / student
Amir Bahta	DGUA / student
Michael Gassner	University of Berne / student
Bahta Hailemariam	DGUA / student
Zaid Gebreselassie	DGUA / student

Appendix 2 Questionnaire survey for 100 sample households (basic survey)

Demography:

1. Household head:

Name: _____ ☐ male

Nr/ID:_____ ☐ female

Marital status: Religion:

☐ married ☐ Christian

☐ unmarried / single ☐ muslim

☐ widow / widover

☐ divorced

2. Number of Persons living in the household:

How many are living in the household, including those temporarily absent (military, students, labourers outside the village)?	

Out of a total of:

How many are in military service?	
How many students are temporarily absent?	
How many are labourers working outside the village?	

Livelihood:

1. Main source of household livelihood:

☐ farming

☐ other business

☐ remittances

2. How many oxen:_____

Type of Land:

1. Main source of household livelihood:

☐ yes

- ☐ own cultivation
- ☐ hired land

☐ no

2. Irrigated land:

☐ yes

- ☐ own cultivation
- ☐ rented out
- ☐ hired land

☐ no

Appendix 3 Sample survey for 50 households (detailed survey)

A. General

1. Household I.D. _____
2. Name of the household head _____ Sex _____ Age _____
3. Marital Status _____
4. Age at marriage _____
5. Ethnicity _____
6. Decisions on matters related to marriage
   Personal _____ Arranged _____
7. Fill in the details for members of a household

Family Size	1	2	3	4	5	6	7	8	9	10
Sex										
Age										

B. Farming System and Resource Management

8. Source of labour for farm activities
   1. Household
   2. Hired labour
   3. Collective labour
9. Household livestock

Cattle				
Goats				
Sheep				
Donkeys				

10. Do you take permission on the use of water and pasture?

    1.Yes _____

    2. No _____

11. How often do conflicts arise over resource use?

    1. Most often _____

    2. Sometimes _____

    3. Never _____

12. Indicate the time/distance required to take your animals to water/pasture during different climatic phases

Season	Time/distance required
Normal season	_____
Drought season	_____

13. Do you have herding arrangements with other groups of people? (yes / no)

C. Social Services and Community Organization

14. Do you send your children to school?

    1. Yes _____

    2. No _____

15. State the reason if your answer to the above question is no:

_____

_____

_____

Appendix 4 Rainfall and temperature 1999-2004

Table 15 Monthly rainfall for Halhale

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
1999	No Data	No Data	No Data	No Data	No Data	No Data	179.7	No Data	20.5	0	0	0	
2000	0	0	3.7	32.4	56	20.9	149.5	No Data	35	0	0	0	
2001	0	0	9	19.1	10.5	75.8	238	326.5	No Data	3	4.5	0	
2002	0	0	39.8	1.5	0	6.3	185.5	195	9.5	0	0	0	437.6
2003	0	13	5	6.5	18	37.4	136.5	262.3	17.5	0	0	0	496.2
2004	0	4	8	40.5	4.5	98.2	149.1	100.7					405
Monthly mean	0.0	3.4	13.1	20.0	17.8	47.7	173.1	221.1	20.6	0.6	0.9	0.0	518.3

Source: NARI, Ministry of Agriculture

Table 16 Mean monthly temperature for Halhale

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual mean
1999	No Data	No Data	No Data	No Data	No Data	No Data	19.70	18.26	22.45	18.08	17.40	16.42	18.72
2000	16.10	17.78	19.94	20.13	21.33	21.45	19.81	19.31	18.74	17.90	16.14	16.35	18.75
2001	14.89	17.87	19.73	21.65	21.92	19.76	19.40	19.08	18.94	18.95	16.63	17.24	18.84
2002	16.36		20.50	20.53	21.60	19.26	20.57	19.13	19.10	18.65	18.03	16.35	19.09
2003	16.03	19.07	20.17	20.77	22.65	21.44	19.81	19.16	18.90	18.26	17.62	16.65	19.20
2004	17.59	17.94	19.09	21.13	21.27	20.96	20.82	19.01					19.73
Monthly mean	16.2	18.2	19.9	20.8	21.8	20.7	20.0	19.0	19.6	18.4	17.2	16.6	19.0

Source: NARI, Ministry of Agriculture

Table 17 Local rainfall variability (Halhale-Amadir)

Year 2004	JULY	AUGUST
Amadir	72.2	186.5
Halhale	149.1	100.7

Source: NARI, Ministry of Agriculture, SLM-Eritrea

Appendix 5 Catchment area of Amadir dam

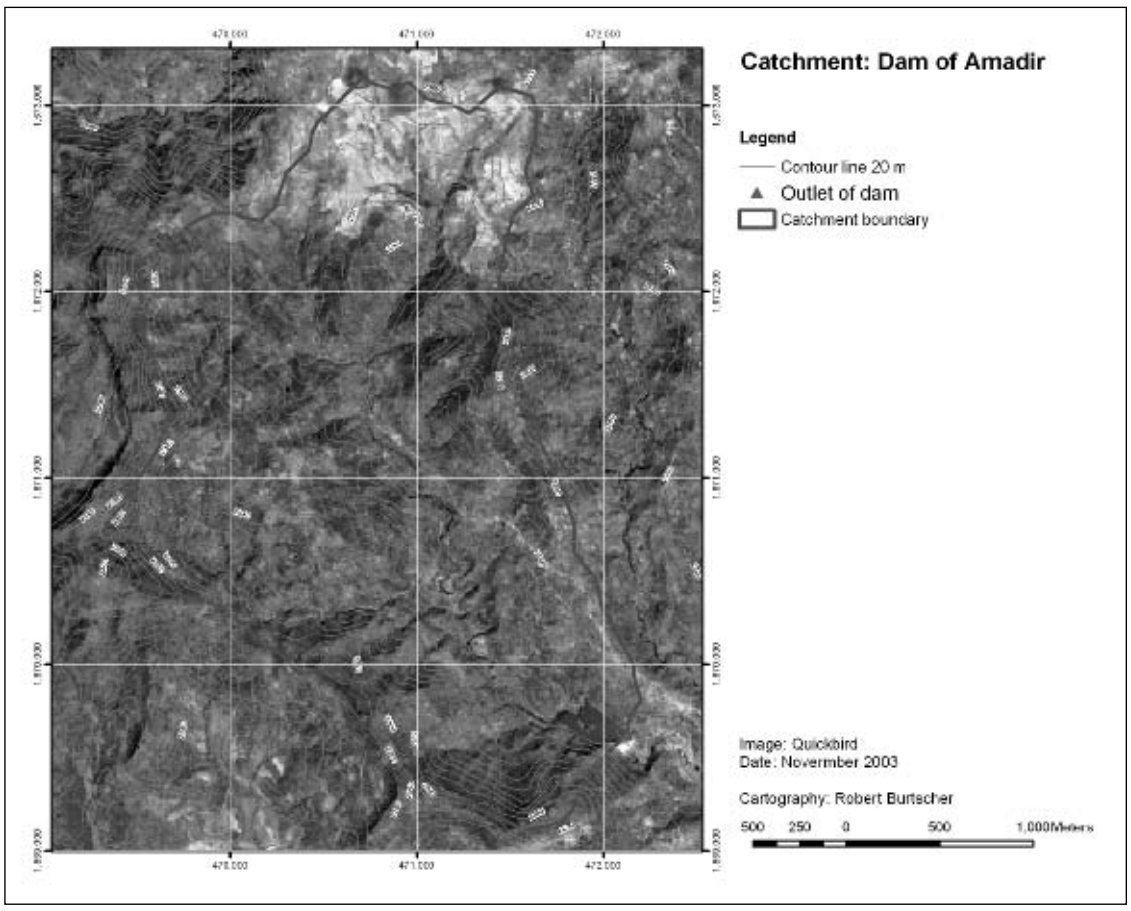

Figure 16 Dam of Amadir: Catchment area

Appendix 6 Primary school statistics, Amadir, 1991-2002

Table 18 Primary school statistics

Year	Number of students enrolled			Dropout rate				Number of students promoted				Number of students who failed			
	M	F	Total	M	F	Total	%	M	F	Total	%	M	F	Total	%
1991/92	177	90	267	4	6	10	3.7	161	55	216	80.9	12	29	41	15.4
1992/93	260	206	466	2	13	15	3.2	213	140	353	75.8	45	53	98	21.0
1993/94	268	191	459	13	15	28	6.1	241	159	400	87.1	14	17	31	6.8
1994/95	297	243	540	24	12	36	6.7	220	189	409	75.7	53	44	97	18.0
1995/96	285	290	575	9	8	17	3.0	235	212	447	77.7	41	70	111	19.3
1996/97	224	259	483	14	13	27	5.6	165	179	344	71.2	47	57	104	21.5
1997/98	193	247	440	13	12	25	5.7	150	169	319	72.5	30	66	96	21.8
1998/99	234	257	491	9	12	21	4.3	173	186	359	73.1	52	59	111	22.6
1999/2000	220	234	454	20	10	30	6.6	163	192	355	78.2	37	33	70	15.4
2000/01	241	247	488	7	8	15	3.1	148	156	304	62.3	86	83	169	34.6
2001/02	282	251	533	5	11	16	3.0	205	164	369	69.2	74	76	150	28.1

Source: Headmaster's Office, Amadir Primary School 2003
M= male
F = female

Appendix 7 Cropping calendar and grazing management in Amadir

Segem = *Sighem* (Barley)
Hambfas = *Hamfes* (Appendix 8)
Teff = *Eragrostis tef*
Afun = *Efun* (Maize)
Dagusha = Finger millet
Bersen = Linseed
Ater = Chick pea
Balunga = Horsebeans
Hezeat = temporarily closed area (traditional)
Taka = post harvest fields reserved for oxen
Sefa = Area adjacent to Amadir (Location name)

Source: Gassner 2004

Appendix 8 Glossary of Tigrinya terms

Abe nebsi	A priest who provides a family with spiritual guidance
Anebaberti adi	Village representatives
Arako	Peacemakers
Arba'a	1. Forty. 2. Forty days after a person dies
Baekel	Least fertile type of soil
Beles	Cactus (opuntia) suitable for human consumption as well as animal feed
Dagna	Judge
Diesa	A land tenure system where land is communally owned by the villagers
Duka	Most fertile type of soil
Efun	Maize
Equb	An informal association in which contribution is made in cash or in kind for the purpose of saving
Fithat	A prayer made to ensure the peaceful rest of the soul of a deceased person
Gebar	A person who pays tax
Gedena	A garden plot near homesteads
Gelafo	Persons assigned to measure land size
Gual-menber	A farming plot for crop production, of less importance than a menber
Gujule	A group of farming households consisting of thirty-two persons (Amadir)
Hanfes	A combined crop of wheat and barley
Hidmo	A traditional house made of wood and earth
Hutsa	Sandy soils commonly found along river banks
Injera	Pancake-type traditional bread
Kal awadi	An annual payment made to the church
Kebabi	Area
Keleta	A request for contributions made by a person who causes accidental death, to assist the family of the deceased
Keshi	A priest
Keshi gebez	High priest of the Orthodox Church
Lalish	Fatal disease among large stock animals
Maetot	Community work
Memhedar	Administration
Metaro	Persons assigned to measure land size
Mobae	Anonymous contribution made to the church
Menber	The main farming plot where major cereal crops are cultivated
Merebae	A modern house made of cement blocks and corrugated iron sheet
Nai alem	A person without a spiritual title
Nakfa	Eritrean currency, 13.5 Nakfa = 1 USD (official rate 2003)
Nebaro	Associate judges
Sebeka gubae	Church committee
Sighem	Barley
Rekik	Farmland with thin soils that are least preferable for crop production
Tehazi nibret	Treasurer
Tekotsatsarai	Manager
Teskar	A ritual performed for the closing of a moaning period
Tessa	Land entitlement for building a house
Tsilmi	Individual ownership of land that allows inheritance within the family structure
Tsmdi	A local measuring unit for farmland (Amadir: approxim. 0.35 ha)
Walaka	Soils with high clay content
Wofera	A system of community labor sharing usually in construction works
Zala	A bench-like structure made of stones
Zera'o	Land guards

Previous SLM Reports:

Report (1) A Baseline Survey for Sustainable Development of the Deki Lefay Community, Eritrea (1998)

Report (2) Tradition in Transition – Aspects of Rural Livelihoods in the Eritrean Highlands. A survey for sustainable development of the Adi Behnuna community, Eritrea (2001)

Report (3) Long-term Monitoring of Soil Erosion and Soil and Water Conservation in Afdeyu, Eritrea 1984 – 1998 (2002)

Report (4) Small-scale Micro Irrigation in Eritrea. A feasibility study of affordable micro irrigation technology in Eritrea (2003). Available as a CDRom

Other reports, published in partnership:

Soil and Water Conservation and Management in Eritrea. Current Status and Trends. Published jointly with AEAS/Association of Eritrean Scientists in Agricultural Sciences (1999)

Irrigation Development in Eritrea: Potentials and Constraints. Proceedings of the Workshop of the Association of Eritreans in Agricultural Sciences (AEAS) and the Sustainable Land Management Programme (SLM) Eritrea (2005)

10. Summary in Tigrinya

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ኣብ
ኣማድር

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2003
ኣስመራ, ኤርትራ

ትሕዝቶ ገጽ

1.መእተዊ

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ዓዲ	ብዝሒ ስድራቤት	ብዝሒ ህዝቢ	ማእከላይ ገምጋም ብዝሒ ስድራቤት
ኣማድር	439	2001	4.55
ዓዲ ሓርቦ	158	610	3.86
ዕዳጋ ዳሕና	100	300	3.00
ሑርጉድ	300	920	3.06
ጠቅላላ ድምር	997	3831	3.84

ምንጪ፣ ካብ ቤት ጽሕፈት ምምሕዳር ከባቢ ኣማድር, 2003

ከምዚ ኣብ ላዕሊ ተጠቂሱ ዘሎ መነባብሮ ህዝቢ ምምሕዳር ከባቢ ኣማድር ኣብ ናይ ሰማይ ዝናብ ዝተመርኮሰ ሕርሻ እዩ። ቡኡ መጠን ድማ እቲ ካብኡ ዝርከብ እቶት ካብ ኢድ ናብ ኣፍ እዩ። እንተኾነ ምርባሕ እንስሳ እውን ሓደ ኣገዳሲ ንጥፈት ህዝቢ ምምሕዳር ከባቢ ኣማድር እዩ። ካብ ምምሕዳር ከባቢ ኣማድር፣ ኣማድር እታ ዝዓበየት ዓድን ዝሰፍሐ መሬት ዘለዋን እያ። እዚ ዝተገበረ ዳህሳሳዊ መጽናዕቲ እምበኣር ብከባቢ ደረጃ ዘይኮነስ ንኣማድር ጥራሕ እዩ ዝምልከት።

2. ውጽኢት ዳህሳሳዊ መጽናዕቲ

2.1 ቁጠባዊ ትሕዝቶ ህዝቢ ኣማድር

ኣብ ኣማድር ዝኾነ ተመርዕዩ ሓዳር ዝጅምር ሰብ መሬት ናይ ምውናን መሰል ኣለዎ። መነባብሮ ህዝቢ ብቐንዱ ኣብ ሕርሻ ዝተመርኮሰ ስለዝኾነ ምውናን ናይ ሕርሻ ቦታን እንስሳታትን መሰረታዊ ነገር እዩ። ናይ ሕርሻ መሬት ኣብ ኣማድር ንነብሲ ወከፍ ወዲ ዓዲ ብማዕረ ይመቓራሕ። ዝኾነ ወዲ ዓዲ 18 ወይ እውን ካብኡ ንላዕሊ ዕድመ ዘለዎን ናይ መንግስቲ ግዴታታት ዘማልኣን መሬት ጤሳ ናይ ምውናን መሰል ኣለዎ። ንናይ ሕርሻ መሬት ብዝምልከት ግን ናይ ሕርሻ መሬትነቶም ቀወምቲ ተቐማጠ ዓዲ ዝኾኑ ጥራይ ይወሃብ። ኣብ ኣምድር ዝኾነት ስድራቤት 2 ወይ ካብኡ ንላዕሊ ኣባላት ምስ ዝህልውዎ ንመንበሪ ዝኸውን ጤሳን ሓደ ግብሪ ናይ ሕርሻ መሬትን ትረክብ። ሓደ ግብሪ ኣስታት 1.4 ሄክታር ኣቢሉ ይኸውን። ሓደ ኣባል ጥራይ ዘለዎ ስድራቤት ማለት ዝተፈትሑ ብዘይ ጽግዕተኛ ዝተረፈ ቆልዑን ዘይተመርዓወት ፍርቂ ግብሪ ጥራይ ይፍቀደሎም። ኣብ ሃገራዊ ኣገልግሎት ንዝርከቡ ድማ ንደቀንስትዮ ካብ 25 ዓመት ንላዕሊ ንደቂ ተባዕትዮ ካብ30 ዓመት ንላዕሊ ፍርቂ ግብሪ ናይ ሕርሻ መሬት ይፍቀደሎም።

ብመሰረት በዚ መጽናዕቲ ዝተረኽበ ሓበሬታ ካብ 439 ስድራቤታት ተቐማጠ ኣማድር እቶም 331 ስድራቤታት ወይ ድማ 75.4% (ሚእታዊት) ምሉእ ግብሪ ዝውንኑ ክኾኑ ከለዉ እቶም ዝተረፉ 108 ስድራቤታት ወይ ድማ 24.6% (ሚእታዊት) ፍርቂ ግብሪ ጥራይ ይውንኑ። ንጥሪት ብዝምልከት ድማ 163 ወይ ድማ 37.1% (ሚእታዊት) ተቐማጠ ኣማድር ከብቲ ክውንኑ ከለዉ 77 ወይ 17.5% ስድራቤታት ድማ ጤለበጊዕ ይውንኑ። እቶም ዝተረፉ 138 ወይ ድማ 31.4% (ሚእታዊት) ኣእዱግ ይውንኑ። ብተወሳኺ ኣዝዮም ውሑዳት 77 ወይ እውን 17.5% (ሚእታዊት)ካብ ጠቕላላ ስድራቤታት ኣማድር ካብ 2 ክሳብ 15 ጤለ በጊዕ ይውንኑ፡ኣብ 2002 ዓመተምህረት ካብ ጠቕላላ ስድራቤታት እቶም 260 ዝኾኑ ወይ 59.2% ዝኾነ ዓይነት ጥሪት ኣይውንኑን እዮም። ካብ ኣእዱግ ዝውንኑ ድማ እቶም 76.8% ሓንቲ ኣድጊ ጥራይ ዝውንኑ ክኾኑ ከለዉ እቶም ካብ ሓንቲ ኣድጊ ንላዕሊ ዝውንኑ 7.3% ኣቢሎም ይኾኑ ካብ እዚኦም ከኣ ብውሑዱ ሓንቲ ከብቲ ኣላቶም። ኣብ ኣማድር ኣብ ዓመተ 2003፣ 319 ከብቲ፣ 431 ጤለበጊዕ፣ 171 ኣእዱግ ከምዝነበራ እዚ መጽናዕቲ ወሲኹ የረድእ።

ደረጃ ሃብቲ ኣብ ኣማድር ንምፍላጥ 50 ዝኽዕኑ ስድራቤታት ብወዝቢ (Random) ብምምራጽ ምስ 4 ደቂኣንስትዮን 4 ደቂተባዕትዮን ቃለመሕትት ተኻይዱ እዚ ዝስዕብ ውጽኢት ድማ ተረኺቡ።

ካብተን 4 ደቀንስትዮ ቃለመሕትት ዝተገብረለን ብምሉአን ኣብ 6 ደረጃታት ሃብቲ ተሰማሚዐን፡ ብወገን እቶም ደቂተባዕትዮ ድማ ኣብ 8ደረጃታት ሃብቲ እኳ መጀመርታ ክረቕሑ እንተኽኣሉ ኣብ መወዳእታ ግን ኣብ 4 ደረጃ ሃብቲ ተሰማሚየም።

በዚ ብደቂ ዓዲ ተኽፋፉሉ ዘሎ ደረጃታት ሃብቲ ስድራቤታት ኣማድር ብኽምዚ ዝስዕብ ይምደባ።

ሃብታማት ስድራቤት 16.7%(ሚእታዊት)ካብ ጠቕላላ ብዝሒ ስድራቤት ኣማድር የጠቓልሉ።። እተን 12.5% (ሚእታዊት)ብደቂኣንስትዮ እተን 87.5% ድማ ብደቂተባዕትዮ ዝእለያ ስድራቤታት ኮይነን ናይ ከምዚ ዝስዕብ ወነንቲ ድማ እዮም።።

- ክልተ ወይ ካብኡ ንላዕሊ
- ናይ ጀርዲን ወይ ሕርሻ ቦታ
- ብቕጠባ ነብሰን ዝኽኣላን ናይ ዝኾነ ይኹን ሓገዝ ዘይጽበየ
- ናይ ዓመት ቀለበን ክረኽባ ይኽእላ
- ካብ ዝተፈላለዩ ምንጭታት ሓገዝ ዝረክብ ወይ ትረክብ
- ዱኪን ወይ ንዕኡ ዝመስል ንጥፈት ዝውንኑ ወይ ትውንን

ማእከላይ መነባብሮ ዘለዎም ስድራቤታት እዚኦም ስድራቤታት 20.8% ካብ ጠቕላላ ስድራቤት ኣማድር ኮይኖም ካብዚኦም እተን 20% ብደቀንስትዮ እተን 80% ድማ ብደቂተባዕትዮ ዝእለያ ስድራቤት እየን፡ ከምዚ ዝስዕብ ዝውንና እየን።።

- ሓደ ወይ ካብኡ ንላዕሊ
- ባዕሎም ሕርሸኦም የካይዱ(ይሓርሱ)
- ተወሳኺ ንሕርሻዊ ንጥፈታቶም ካልእ ንጥፈታት የካይዱ
- እንተወሓደ ናይ ሓደ ዓመት ቀለቦም ዝረኽቡ

ድኻታት ስድራቤታ 33.3% ካብ ጠቕላላ ስድራቤታት ኣማድር ይሓቕፉ እተን 31.3 ብደቂኣንስትዮ እተን ዝተረፉ 68.7% ድማ ብደቂተባዕትዮ ይእለያ።። ከምዚ ዝስዕብ ዝውንና እየን

- ሓንቲ ከብቲ
- ን 6 ወርሒ ቀለብ
- ብደቂኣንስትዮ ዝእለያ ሰብኡተን ኣብ ሃገራዊ ኣገልግሎት ዝርከቡ
- መሬቶም ንፍርቂ ሂቦም የስርሕዎ
- ካብ ኣብ ኣስመራ ዝርከቡ ኣዝማዶም ሓገዝ ይረኽቡ ወይ እውን እኹል ዓያይ ጉልበት ዘለዎም።።

29.2% ካብ ጠቕላላ ስድራቤታት ኣማድር በተኻት ኮይኖም 57% ብደቂኣንስትዮ እተን ዝተረፉ 43% ድማ ብደቂተባዕትዮ ይእለያ።።

- ዝኾነ ዝውንንዎ ጥሪት የብሎምን
- መሬቶም ንፍርቂ ይህብዎ
- ናብረኦም ኣብ ኣዝማዶምን ካልኦት ለገስቲ ኣብ ዝገብሩሎም ሓገዝ ይምርኮስ
- ናይ 4 (ኣርባዕተ) ወርሓዊ ጥራይ ናይ መግቢ ውሕስነት ኣለዎም

ካብዚ ምጽናዕቲ ብቀሊሉ ከምእንርዳእ ብዕራይ ካብቲ ሓደ ኣገዳሲ ረቛሒ ኣብ ምጉዳል ደረጃታት ሃብቲ ኮይኑ ንረኽቦ፡፡ ምውናን ብዕራይ ኣብ ባህላዊ ሕርሻ ዝካየድ ሕብረተሰብ ኣዝዩ ኣገዳሲ እዩ፡፡ ምኽንያቱ ከብቲ እቲ ካልእ ዝህብዎ ረብሓታት ንጎኒ ገዲፍካ ኣብ ባህላዊ(ልምዳዊ)ሕርሻ እቶም እንኮ ኣማራጺ ዘይርከቦም ናይ ማሕረስ መሳለጥያ ስለዝኾኑ፡፡ ስለዚ ምውናን ጽምዲ ብዕራይ ኣዝዩ ኣገዳሲ ኮይኑ ንረኽቦ፡፡ በዚ መሰረት ኣብ ኣማድር ጽምዲ ብዕራይ ዝውንኑ እቶም ዝሓሸ መነባብሮ ኣለዎም ዝበሃሉ ስድራቤታት እዮም፡፡ እቶም ሓደ ብዕራይ ጥራይ ዘለዎም ስድራቤታት ድማ ደሓን መነባብሮ ዘለዎም ኮይኖም ምስ ከምኡም ሓደ ብዕራይ ዘለዎም ስድራቤታት ብምልፋን ሕርሻዊ ንጥፈታቶም የካይዱ፡፡ እቶም ዋላ ሓንቲ ብዕራይ ዘይብሎም ድማ ብዕራይ ምስ ጉልበት እንዳለ ወጡ ሕርሻዊ ንጥፈቶም የካይዱ፡፡ እንተኾነ ግን እቲ ዝካየድ ሕርሻ ኣብ ናይ ሰማይ ዝናብ ተጸቢኻ ስለዝኾነ እቲ ካብኡ ዝርከብ ምህርቲ ካብ ቀለብ ስድራ ዝሓልፍ ኣይኮነን፡፡ ከምቲ ዝድለ ደኣ ኣይኹን እምበር ገለ ተቐማጠ ኣማድር ኣብ መስኖኣዊ ሕርሻ እውን ይነጥፉ እዮም፡፡ ምህርቶም ናብ ዕዳጋታት ዱባሩባ ብምውራድ ደሓን ዝኾነ ኣታዊ ወይ መኽሰብ ከምዝረኽቡ ደቂ ዓዲ ይዛረቡ።

ኣብ ኣማድር ብ6 ስድራቤታት ዝውነና 6 ደሓን ትሕዝቶ ዘለወን ዱኪናት ይርከባ፣ እዚ ብዝሒ ዱኪናት ነተን ብዘይ ስሩዕ መንገዲ ኣሕምልትን ባንን ዝሸጣ ዱኪናት ኣየጠቓልልን፡፡ ምስ ገለ ወነንቲ ዱኪናት ዝተገብረ ቃለ-መሕትት ከምዘረድኦ ዱኪን ምኽፋትን ምክያድን ብርክት ዝበለ ርእሰማል ከምዝሓትትን እዚ ድማ ልዕሊ ዓቕሚ መብዛሕትኦምተቐማጠ ከምዝኾነ የረድኡ፡፡

በተኻት ዝበሃሉ ስድራቤታት ዝሸምገሉን ስንኩላትን እዮም፡፡ እቶም ካብ በተኻት ዝሓሹ ዝበሃሉ ድማ እቶም ተወሳኺ ንሕርሻዊ ንጥፈታቶም ካልእ ንጥፈታት ከም ምፍራይ እንስሳ፣ ተቐጺርካ ምስራሕ፣ ሸቐጥ፣ ምርባሕ ደርሁን ካልእን ንጥፈታት ዘካይዱ እዮም፡፡ገለ ክሰርሑ ዓቕሚ ዘለዎም ተቐማጠ ኣማድር ኣብ ዘይ ናይ ሕርሻ ወቐቲ ስራሕ ንምንዳይ ናብ ከባቢኦም ዘለዉ ከተማታት ብምኻድ ኣብ ዝተፈላለየ ናይ መዓልታዊ ስራሓት ተቐጺሮም ይሰርሑ፡፡ ደቂኣንስትዮ ግን ደቀንን ቤተንን ብቐረባ ክኣልያ ስለዘለወን ናብ ከተማ ከይደን ተወሳኺ ስራሕ ክሰርሓ ኣዝዩ ኣጸጋሚኢ እዩ። ስለ'ዚ መብዛሕትኣን ኣብቲ ብልምዲ ስራሕ ደቀንስትዮ ዝበሃል ምፍራይ ደርሁ ኣብ ከባቢኤን ብምክያድ ደሓን ዝኾነ ኣታዊታት ይረኽባ። ቅድሚ ዓመት ኣቢሉ ይኸውን 27 ዝኾና ደቀንስትዮ ነብሲ ወከፈን 25 ጨቓዊት ብሓገዝ ካብ ሃማድኤ ረኺበን ነተን ጨቓዊት ብምዕባይ እንቃቐሑ ብምሻጥ ናብረኣን ከምዘመሓየሻ ተጠቀምቲ ባዕለን ይገልጻ፡፡

ድኻታት ስድራቤታት ተቐማጠ ኣማድር ናይ ዓመት ቀለቦም ክምእርሩ ስለዘይክእሉ ብዝተፈላለያ ትካላት ናይ መግብን ገንዘብን ሓገዝ ከም ዝግበረሎም ተፈሊጡ፡፡

2.2 ማሕበራዊ ትካላትን ልምድንታትን

ማሕበራዊ ትካላት ክንብል ከለና ኣብ ዝተፈላለያ ንህዝቢ ዘገድስ ንጥፈት ዝነጥፉ ኮይነን መንግስታውያን ዘይመንግስታውያን ትካላት የጠቓልላ። ምስ ደቂ ዓዲ ብዝተገብረ ቃለመሕትት እዘን ዝስዕባ ትካላት ኣብ ኣማድር ከምዘለዋ ክፍለጥ ተኻኢሉ ኣሎ። ንሳተን ድማ ምምሕዳር ዓዲ፣ ቤት/ቲ፣ ማእከል ጥዕና፣ ቤተክርስትያን፣ ዓዳዊ ቤት ፍርዲ፣ ህግደፍ፣ ሽማግለ ጤሳ፣ ዘርዓ፣ ሃማመተኤ፣ ሃማድኤ፣ ወፈራ፣ ዕቁብ፣ ጠሓኒትን።

2.2.1 ምምሕዳር ዓዲ

ኣብ ኣማድር ዘለዋ መንግስታውያን ትካላት ኣብ ነንሓድሕደን ሓያል ዝኾነ ምውህሃድን ናይ ስራሕ ምትእስሳር ከምዘለወን ሰብመዚ ወይ ሓለፍቲ እተን ትካላት ይገልጹ። ምምሕዳር ከባቢ ኣማድር ቀዋሚ ቤት ጽሕፈት ኣብ ኣማድር ኮይኑ ንዓድታት ኣማድር፣ ህርጉድ፣ ዓዲ ሓርቦን፣ ዕዳጋ ዳሕና የጠቓልል። ብሓደ ኣመሓዳርን ምክትሉን ድማ ይምራሕ ወይ ይካየድ። ኣነባበርቲ ዓዲ ብዝሖም 4 ሰባት ኮይኖም ብደቂ ዓዲ ድማ ይምረጹ። ቀንዲ ካብ ዝዓምዎ ስረሑት ድማ ንምምሕዳር ከባቢምኽሪ ምልጋስን ንዝውክልወን ዓድታት ምእካብን እዩ። ብተወሳኺ ድማ ኣብ ትሕቲ ጽላል ምምሕዳር ከባቢ ብሙኻን ኮሚቴ ጥዕና፣ ሕርሻ፣ ትምህርቲ፣ ኣባይቲ፣ መሬት፣ ረድኤት፣ ጉዳይ ሃገራዊ ኣገልግሎትን ህግደፍን ኮይኖም ዝሰርሑ ካልኦት ነኣሽቱ ኮሚቴታት ይርከቡ። ነብሲ ወከፍ ኮሚቴ ኣቦመንበርን ተሓዚ ገንዘብን ጸሓፍን ዘጠቓለለት እያ።

2.2.2 ቤት ትምህርቲ

ብተበግሶ ዓድታት ኣማድር፣ ህርጉድን ዕዳጋ ዳሕና ስሩዕ ትምህርቲ ኣብ ኣማድር ኣብ 1949 ክወሃብ ጀሚሩ፣ ኣብ 1969 ብሓልዮት ወንጌላዊት ቤተክርስትያን እታ ዝነበረት ቤት ትምህርቲ ብሓድሽን ዝሓሸትን ተተኪኣ ድሕሪ ናጽነት መላእ ኤርትራ እታ ቤትትምህርቲ ምሉእ ብምሉእ ኣብ ትሕቲ ጽላል ሚኒስትሪ ትምህርቲ እንዳ ተኣለየት ናይ መባእታ ደረጃ ትምህርቲ ንተመሃሮ ዓድታት ኣማድር፣ ህርጉድ፣ዕዳጋ ዳሕናን ዓዲሓርቦ ክትህብ ጀሚራ። እዛ ኣብ ኣማድር እትርከብ መባእታ ቤትትምህርቲ ብሓደ ዳይረክተርን 10 መማህራንን መብዛሕትኦም ኣብ ሃገራዊ ኣገልግሎት ዝርከቡ ድማ ትእለ። ብምኽንያት ጽበት መምሃሪ ክፍልታት ተመሃሮ ኣብ ክልተ ናይ ትምህርቲ ክፍለ ግዜ ማለት ናይ ቅድሚ ቀትርን ድሕሪ ቀትርን ተመቓቒሎም ትምህርቶም ይከታተሉ።

ብተወሳኺ ድኽመታት ቤት ትምህርቲ ብኣግኡ እንዳተኣለየ ተመሃሮ ብቑዕ ትምህርቲ ከም ዝቐስሙ እትገብር። ብወለድን መማህራንን ዝቕመት ሽማግለ ኣብቲ ቤትትምህርቲ ከምዘላ ምስ ርእሰ መምህር እታ ቤት ትምህርቲ ብዝተገብረ ዝርርብ የረድእ።

ኣብ ዓመተ 2003 536 ተመሃሮ(272 ደቀንስትዮ 264 ደቂተባዕትዮ)ኣብታ ቤት ትምህርቲ ትምህርቶም ይከታተሉ ከምዝነበሩ ጸብጻባት ቤት ትምህርቲ የረድኡ። ናይ ዝሓለፈ 11 ዓመታት ናይ ተመሃሮ ኣካዳምያዊ ብቕዓትን ካብ ትምህርቲ ምቁራጽን ንምፍላጥ ነዚ ዝስዕብ ይመስል። ዝበዝሐ ቁጽሪ ተመሃሮ ኣብ ቤት ትምህርቲ ዝተመዝገቡ ኣብ ዓመተ 1995/96 ክኸውን ከሎ ኣስታት 575 ተመሃሮ ትምህርቶም ይከታተሉ ኔሮም። ብዝሒ ተሳታፍነት ደቂኣንስትዮን ደቂ ተባዕትዮን ብዝምልከት ስጋብ 1994/95 ብዝሒ ተመሃሮ ደቂተባዕትዮ ካብ ደቂኣንስትዮ ይዓቢ ኔሩ።ካብ 1995/96 ስጋብ 2000/01 ዘሎ ግዜ ግን ተሳታፍነት ደቂኣንስትዮ ክዓቢ ጀሚሩ። ኣብ ተመሃሮ ደቂተባዕትዮን ደቀንስትዮን ዘሎ ጋግ ኣብ ኣካድያማዊ ብቅዓትን ካብቲ ቅድሚ ዓመት 1992 ዝነበረ ደረጃ ኣብ ዝሓሸ ደረጃ ይርከብ። እኳ ደኣ ኣብ ዓመተ 1991/2002 ደቂኣንስትዮ ብኣካድያማዊ ብቕዓተን ካብ ደቂተባዕትዮ ጸብለል ኢለን ይረኣያ ኔረን። ብሓፈሻ ክርኢ ከሎ ግን ኣካዳምያዊ ብቕዓት ተመሃሮ ካብ ግዜ ናብ ግዜ እንዳኣንቆልቆለ እዩ ክመጽእ ጸኒሑ። እቲ ዝሓሸ ብቕዓት ተመሃሮ ዝተመዝገቡሉ ዓመት ኣብ 1993/94 ክኸውን ከሎ 6.8% (ሚእታዊት)ማለት 31 ተመሃሮ ጥራይ ካብ ጠቕላላ ብዝሒ ተመሃሮ ተሪፎም። እቲ ዝኸፍአ ምንቁልቋል ብቕዓት ተመሃሮ ዝተራእየሉ ድማ ኣብ 2000/01 ኮይኑ ኣስታት 34.6% ማለት 169 ተመሃሮ ተሪፎም።ካብ ምስ ዳይረክተር ቤት ትምህርቲ ዝተገብረ ቃለመሕትት ከም ዝተረዳእናዮ ወላ እኳ ኣብ ትምህርቲ ርኡይ ዝኾነ ናይ ጾታ ፍልልይ እንተዘየለ ካብ መባእታ ናብ ማእከላይ ካብ ማእከላይድማ ናይ ላዕለዋይ ደረጃ ዝቕጽላ ቁጽሪ ደቀንስትዮ ተመሃሮ ኣዘዩ ውሑድ እዩ።

ኣብ 2001 ንወለድን ተመሃሮን ደቆም ናብ ቤት ትምህርቲ ክሰዱ ብምትብባዕ ሓበን ዝተባህለ ሃገራዊ ዘይመንግስታዊ ትካል ምስ ዲያ ዝተባህለ ኣህጉራዊ ትካል ብምትሕብባር ንተመሃሮ ኣብ ቤት ትምህርቶም መግብን ናውቲ ትምህርትን ናይ ኢደ ስራሕ ስልጠና ከምዝረኽቡ ጌሩን ይገብርን ኣሎ። እዚ ተበግሶ ከም ቀንዲ ዕላምኡ ጌሩ ወሲድዎ ዘሎ ተጠቀምቲ ብሽማግለ ወለድን መማህራን ንድኻታት ከምዝኾኑ ዝተኣመነሎም ስድራቤታት እዮም። ምስ ዳይረክተር ቤት ትምህርትን ገለ ወለዲ ተመሃሮን ብዝተገብረ ቃለመሕትት ተሳታፍነት ተመሃሮ ኣብ ትምህርቲ ይዓቢ ከም ዘሎ ኣካዳምያዊ ውጽኢቶም እውን ብኡመጠን ይመሓየሽ ከምዘሎ ተፈሊጡ ኣሎ። እዚ መደብ እዚ ቅድሚ ክልተ ዓመት ብውሑዳት ተመሃሮ ዝጀመረ ኮይኑ ድሒሩ ግን ንኹሎም ተመሃሮ ከም ዝጠቕልል ተገሩ። (ኣብ 2002 ኩሎም ተመሃሮ ናውቲ ትምህርቲ ረኺቦም)

2.2.3 ናይ ኢደጥበብ ስረሓት

ናይ ኢደጥበብ ስረሓት ስልጠና ብሓበን ምስ ብሽማግለ ወለድን መማህራን ብምስምማዕ ኣብ 2001 ጀሚሩ።ኣብ ምጅማር እቲ መደብ ቀንዲ ዕላማ ጌሩ ዝተበገሰሉ ን ካብ ድኻታት ስድራቤት ዝመጹ ተመሃሮ ንወለዶም ተወሳኺ ምትብባዕ(ሞራል) ብምሃብ ደቆም ብፍላይ እኳ

ደቀንስትዮ ናብ ቤት ትምህርቲ ክሰዱ እዩ ኔሩ። ድሕሪ ግዜ ግን እቲ መደብ ብምስፋሕ ንኣዋልድን ኣንስትን ከምዝሓቁፍ ኮይኑ ኣሎ።

2.2.4 ማእከል ጥዕና

ዋላኳ እትህቦ ጥዕናዊ ኣገልግሎት ካብ ቀዳማይ ረድኤት ዘይሓልፍ እንተኾነ ተቐማጠ ኣማድር ኣብ ዓዶም ማእከል ጥዕና ስለዘይብሎም 6ኪሜ እንዳተጓዕዙ ኣብ ዓዲበዝሓንስ እትርከብ ማእከል ጥዕና ብምኻድ ጥዕናዊ ኣገልግሎት ይረኽቡ። መብዛሕትኡ ግዜ ግን ደቂዓዲ ዝሓሸ ኣገልግሎት ንምርካብ ልዕሊ ሓደ ሰዓት ብእግሪ ተጓዒዞም ኣብ ዱባሩዋ ክሕከሙ ይመርጹ። እቲ ሕማም ብዓቕሚ ኣብ ዱባሩዋ ዘሎ ሕክምና ክፍወስ ምስዘይክእል ግን ብቐጥታ ናብ መንደፈራ ከምዝኸይድ ይግበር። ሕማም ጸዕረ ሽንቲ፣ ናይ ዓይንን ቆርበትን ሕማማት ካብቶም ኣብ ኣማድር ብተደጋጋሚ ዝረኣዩ ሕማማት ኮይኖም ኣብ ግዜ ክራማት እውን ዓሶ ኣዝዩ ግኑን ሕማም ከምዝኾነን ጸብጸባት ማእከል ጥዕና እቲ ኸባቢ የረድኡ።

2.2.5 ቤተ ክርስትያን

መብዛሕትኡም ተቐማጠ ኣማድር ተኸተልቲ እምነት ክርስትና ተዋህዶ ክኾኑ ከለዉ ገለ ሽዱሽተ ዝኾኑ ስድራቤታት ኪኻ ስለስተ ድማ ተኸተልቲ ምስልምና እውን ይርከቡ። እምነት ክርስትና ተዋህዶ ኣብ ኣማድር ካብ ነዊሕ ዘመን ኣትሒዙ ዝጸንሐ እምነት ክኸውን ከሎ እምነት ምስልም ናን ኪኻን ግን ኣብ'ዚ ቀረባ ዘመን ናብቲ ቦታ ከምዝተኣታተወ ይፍለጥ።

ቅድሚ ብዙሕ ዓመታት ብቤተክርስትያን ዝውነን ኣዝዩ ገዚፍ ናይ ሕርሻ መሬት ከምዝነበረን ነብሲ ወከፍ ኣማኒ ድማ 4 ኪሎ እኽሊ ንቤተክርስትያን ይህብ ከም ዝነበረ እታ ቤተክርስትያን ድማ ብቁጠባ ካብዚ ዘላቶ ሕጂ ኣብ ዝሓሸ ኩነታት ከምዝነበረት ናይ ዕድመ ሰብ ጸጋ ተቐማጠ ኣማድር ይምስክሩ። ኣብዚ ሕጂ እዋን ኣታዊታት ቤተክርስትያን ኣብ ሞባእን ቃል ኣዋድን ከምኡ'ውንጥምቀት, መርዓ ዝኣመሰሉ ኣገልግሎት ብምሃብ ትረኽቦ ገንዘብ ጥራይ ተደሪቱ ይርከብ።

2.2.6 ዓዳዊ ቤት ፍርዲ

ካብ ግዜ ደርግ ጀሚርካ ስጋብ'ዚ ቀረባ እዋን(ሕዳር 2003) ኣብ ነብሲ ወከፍ ዓድታት ምምሕዳር ኣማድር ሓደ ዳኛ ጥራይ ኔሩ። ዝኾነ ግርጭት ምስዝለዓል ካብ ዓዲ 3 ዓራቐ (ሽማግለ) ጸዊዑ ከም ዝፍታሕን ዝሃድእን ይገብር ኔሩ። እቲ ጉዳይ ካብ ዓቕሞም ንላዕሊ ምስ ዝኸውን ግን ናብ ቤት ፍርዲ ዱባርዋ ይሰጋገር ኔሩ።

ኣብዚ ሕጂ እዋን ግን ካብ ሕዳር 2003 ኣትሒዙ ኣብ ግብሪ ዝወዓለ ብ ቁጽሪ 132/2003 ዝፍለጥ ኣዋጅ መንግስቲ ነቲ ዝነበረ ፍርዳዊ ስርዓት ተኪእዋ ይርከብ። በዚ ሓድሽ ስርዓት ፍርዲ መሰረት ሓንቲ ጓል ኣንስተይቲ ትርከቦም 3 ደያኑ ማለት ሓደ ማእከላይ ዳኛ ኣቶም ዝተረፉ

2 ተሓጋገዝቲ ዳኛ ብደቂ ዓዲ ተመሪጾም ንዓዲ ኣገልግሎት ኣብ ምሃብ ይርከቡ። እዚ ዓዳዊ ቤት ፍርዲ ንጥረ ገንዘብ ብዝምልከት 50,000 ናቕፋ ንዘይንቀሳቐስ ንብረት ድማ ዋጋ 100,000ናቕፋ ብተወሳኺ እውን ምስ መሬት ዝተኣሳሰሩ ጉዳያት ክርኢ ስልጣን ኣለዎ። እዚ ዓዳዊ ቤትፍርዲ ኣብ ትሕቲ ጽላል ሚኒስትሪ ፍትሒ ዝእለ ኮይኑ እቶም ዘካይድዎ ሰባት'ውን ደሞዞም በቲ ሚኒስትሪ ይኽፈሉ።

2.2.7 ሃማድኤ (ሃገራዊ ማሕበር ደቀንስትዮ ኤርትራ)

እዚ ማሕበር ብደረጃ ዓዲ ነብሲ ወከፈን 30ደቀንስትዮ ዝሓቖፈ 6 ጉጅለታት ክህልዋኦ ከለዋ፣ ኣኼባታት ናይ ጉጅለታት ዝመርሓን ወርሓዊ ውጽኢት ካብ ኣባላት ዝእክባ መራሕቲ ንነብሲ ወከፍ ጉጅለ ኣለዋኣ። ዝኾነት ኣባል ሃማድኤ ዓመታዊ 12 ናቕፋ ናይ ኣባልነት ውጽኢት ክትከፍል ግዴታኣ እዩ። ዕላማ ሃማድኤ ኣፍልጦ ደቀንስትዮ ኣብ ጉዳየን ክብ ብምባል ብኡ ኣቢለን ናብረአን ከምዘመሓይሻ ምግባር እዩ። ምስገለ ኣባላት ብዝተገብረ ቃለ መሕትት ዋላኳ እቲ ማሕበር ናይ መሃይምነት ምጥፋእ መደባት ከተግብር እንተፈተነ ደቀንስትዮ ምስቲ ዘለወን ዘቤታዊ ንጥፈታት ክከታተላ ስለዘይከኣላ እቲ መደብ ክዕወት ኣይከኣለን። ስለዚ እቲ ማሕበር ንደቂንስትዮ ከምቲዝድለ ይሕግዘን ኣሎ ክበሃል ኣይከኣልን።

2.2.8 ሃማመተኤ (ሃገራዊ ማሕበር መንእሰያትን ተመሃሮን ኤርትራ)

እዚ ማሕበር ዋላ ንኣብ ታሕተዎት ደረጃ ትምህርቲ ዝርከቡ ተመሃሮ ይጥርንፍ። ንኣብነት ተመሃሮ ካብ 3ክፍሊ ንላዕልን መማህራን ኣብ ኣማድር ናይ'ዚ ማሕበር ኣባላት እዮም። ነብሲ ወክፍ ኣባል ናይ'ዚ ማሕበር ወርሓዊ 0.5 ናቕፋ ውጽኢት ይኽፍል። ሃማመተኤ ኣብ ከም ስፖርት፣ ባህሊ፣ ድራማን ዝኣመሰሉ ንመንእሰያት ዘዛናግዑን ዝምህሩን ንጥፈታት ይነጥፍ።

2.2.9 ዕዳጋ ቀዳም

ናብሲ ወከፍ ቀዳም ዕዳጋ ዱባሩባ ብዝዕድጉን ዝሸጡን ሰብኡት፡ኣንስቲ፣ መንእሰያትን ቆልዑን ምስ ተመልኣት እያ። እዛ ዕለት'ዚኣ ንተቐማጠ ኣማድር ኣዝያ ኣገዳሲት እያ ምኽንያቱ ንግዳዊ ንጥፈታቶም ከካይዱ ስለ ትሕግዞም። ተቐማጠ ኣማድር ዝተፈላለየ ዓይነት ኣእካል፣ እንቃቐሑ፣ ደርሆ፣ ጤለበጊዕን ክሸጡ ከለዉ ብኣማስያኡ ድማ ባዕሎም ከፍርይዎ ዘይክእሉ ኣቑሑት ከም ሳእኒ፣ ክዳውንት፣ ላንባ፣ ቡን፣ ሽኮርን ዝኣመሰሉ ይገዝኡ።

2.2.10 ጠሓኒት እኽሊ

ቅድሚ ብዙሕ ዓመታት ምጥሓን እኽሊ ብኢድ ሰብ ብኣዝዩ ኣህላኺ ዝኾነ ኣገባብ ይካየድ ከም ዝነበረ ግዳይ ናይ'ዚ ኣህላኺ ስራሕ ድማ ደቀንስትዮ ከምዝነበራ ተቐማጠ ኣማድር ይዛረቡ።

ኣብዚ ሕጂ እዋን ግን ዘመናዊ ጠሓኒት መኪና ተተኺሉ እቲ ኣብ ደቀንስትዮ ዝነበረ ኣደራዕ ከምዝእለ ኮይኑ። ኣብ ኣምድር ዘላ ጠሓኒት ብውልቀ ሰብ እትውነን ኮይና ን20 ኪሎ ብ7 ናቕፋ ዋጋ ናይ መጥሓን ኣገልግሎት ትህብ። መብዛሕቱኡ ግዜ ግን ካብ ስራሕ ወጻኢ ስለ እትኸውን ተቐማጦ ኣማድር ናብ ዓዲ በዝሓንስ ክኸይድ ይግደድ።

2.3 ከባብያውን ባህላውን ለውጥታት

2.3.1 ኣቀማምጣ መሬት

በዚ መጽናዕቲ ክፍለጥ ከምእተኻእለ ኣቀማምጣ መሬት ኣማድረ ኣብ 3 ይኽፈል። ንሳቶም ድማ ጎቦታት፣ ንኣሽቱ ኩጆታትን፣ ጎላጉልን እዮም። ዝዓበየ ክፋል መሬት ዓዲ ንማሕረስን መጋሃጫን የገልግል። ዓይነት ሓመድ ናይ ኣማድር ድሓን ትሕዝቶ ዘለዎ ኮይኑ በቲ ሕብሩ፣ ትሕዝቶኡ ፣ማይ ናይ ምሓዝ ዓቕምን ስብሓቱን ኣብ ኣርባዕተ ይምቀል፣ ንሳቶም ድማ ዱኺ፣ ዋላኻ፣ ሑጻ፣ ባዕከል እዮም።

እዞም ዓይነት ሓመድ ንሕርሻዊ ንጥፈታት ምቹኣት ከምዝኾኑ እዉን ይፍለጥ።

ዱኺ፣ እቲ ኣዝዩ ፍራያምን መብዛሕቱኡ መሬት ዓዲ ዝሸፍን እዩ። እዚ መሬት'ዚ ስቡሕን ድሓን ትሕዝቶ ማዕድንን ዘለዎ እዩ።

ዋላኻ፣ ሕብሩ ጸሊም ኮይኑ፣ ማይ ብጹቡቕ ክዕቕብ ዝኽእል ሓመድ እዩ። ጣፍ ሓጋይ ይኹን ጣፍ ሓምለ ድማ መብዛሕቱኡ ኣብዚ ሓመድ'ዚ ይዝራእ።

ሑጻ፣ ኣብ ደንደስ ሩባ ቁሑን ማይ ጨዓን ዝርከብ ሓመድ እዩ። ሑጻ ንዕፉንን መሸላን ምቹእ ሓመድ እዩ።

ባዕከል፣ እዚ ሓመድ'ዚ ብዙሕ ፍርያም ከምዘይኮነ በቶም ሓረስቶት ይግምገም፣ ኣብዚ ዓይነት ሓመድ ዝዝርኡ ኣዝርእቲ ድማ መብዛሕትኡ ግዜ ዋሕዲ ማይ የጥቅየም። በለስን ቀላሚጦስን ግን ኣብዚ ሓመድ'ዚ ይበቕሉ።

ፍርያምነት መሬት ክዕቀበሉ ዝኽእል ብሓረስቶት ዝውቱራት ዝኾኑ ኣገባባት ድማ እዞም ዝስዕቡ እዮም።

1. ዘራእቲ ምቅይያር፣ ኣብ ሓደ ግራት ዝዝርኡ ኣዝርእቲ በብዓመቱ ተቐያይሮም ይዝርኡ። ንኣብነት ስርናይ፣ስገም፣ ጣፍ፣ ዳጉሻ
2. ሓዋዊስካ ምዝራእ፣ ዝተፈላለየ ኣዝርእቲ ሓዋዊስካ ኣብ ሓደ ግራት ምዝራእ ፣ ንኣብነት ስርናይን ስገምን (ሓንፈጽ)
3. ምድኻዕ፣ ካብ እንስሳታት ብዝርከብ ባህርያዊ ድኹሚ (ዒባ፣ ፋንድያ) ምጥቃም ዓኾር ጤልን በጊዕን'ውን
4. ዘበናዊ ድኹሚ፣ ካብ ወኪል ሚኒስትሪ ሕርሻ ድባርዋ ብዝተረኽበ ሓበሬታ መሰረት

መብዛሕትኡም ሓረስቶት ኣማድር ዳፕ ከምኡ'ውን ዩርያ ዝተባህለ ዘበናዊ ድኹሚ ብ147

ናቕፋ ወይ ከኣ 110 ናቕፋ ንኹንታል እንዳገዝኡ ይጥቀሙ፡ ብዝተረኽበ ሓበሬታ ጽግኢ ኣብዚ እዋን'ዚ ብዙሕ ዝውቱር ኣይኮነን።

2.3.2 ኣቃውማ ህዝቢ

ኣብ ኣማድር ዝነብር ህዝቢ ብዘይካ ሰለስተ ስድራቤታት ብሙሉኡ ክርስትያን እዩ። ብብሄር ክትሪኡ ግን ብሙሉኡ እቲ ዓዲ ካብ ብሄር ትግርኛ እዩ። ገምጋም ዕብየት ስድራቤት ክረአ ከሎ 4.1 ሰባት ኣብ ሓንቲ ስድራቤት ከምዘለዉ የርኢ። ብውልቂ ደረኛ ክትሪኡ ከለኻ ግን ካብ 1ክሳብ 10 ይዝርጋሕ። ኣብዚ መጽናዕቲ ዝተሳተፉ/ፋ ብዕደመን ጾታት ክረአ ከሎ መብዛሕትኣም መንእሰያት(42%) ትሕቲ 15 ዓመት ዝዕድሚኣም እዮም። ብዕድመን ብጾታን ትንታኔ ምስ ዝግበር ካብ 15-19 ከምኡ'ውን ካብ 35-39 ዘሎ ቁጽሪ ብደቀንስትዮ ይዕብለሉ። 46% ናይቲ ቁጽሪ ጸጋዕተኛታት እዮም። 24% ናይቲ ህዝቢ ካብ 5 - 14 ዝዕድሚኣም ህጻናት እዮም። መብዛሕቶም እዞም ህጻናት እዚኣቶም በዚ ይኹንበቲ ኣፍረይቲ እዮም።

2.3.3 ኣግራብ

ኣግራብ ኣብ ኣማድር ንሕርሻ፡ ንሓዊ፡ መስርሒ ገዛን እንዳተባህለ ስለዝቁረጽ ብዓይነት ይኹን ብብዝሒ ካብ ግዜ ናብ ግዜ እንዳበረሱ እዮም ክመጹ ጸኒሖም።

ኣብ'ዚ ግዜ እዚ ገለ ውሑዳት ኣግራብ ጥራይ ንሰፊሕ ቦታ ዓዲ ሸፊኖም ይርከቡ። ገለ ናይ ዕድመ ሰብ ጸጋ ኣማድር ቅድሚ ሕርሻ ምስፍሕፋሑ ንሸነኽ ደቡብ ዝርከብ ሰፊሕ ጎላጉል ብኣዝዩ ዑሙር ዝተፈላለየ ዓይነት ኣግራብ ዝተሸፈነ ከምዝነበረ ይምስክሩ። ብምኽንያት ምብራስ እዞም ኣግራብ ፍርያም መሬት ኣማድር ንፍግረ መሬት ተቓሊዑ። ብተወሳኺ ንመስርሒ ገዛን ሓውን ዝኸውን ዕንጨይቲ እውን ተሳኢኑ። ኣብዚ ግዜ'ዚ ነቶም ተረፎም ዘለዉ ኣግራብ ንምክንኻን እንተተኻኢሉ እውን ናብ ንቡር ንምምላሶምን ሚኒስትሪ ሕርሻ ካብ ዲጋ ንሸነኽ ጸጋም ዘሎ መሬት ብቕዋምነት ከምዝሕዛእ ክገብር ከሎ ዝተፈላለዩ ዓይነት ኣግራብ ብመደብ ክረምታዊ ማእቶት ተመሃሮ ከምዝትከሉ ጌሩ ይርከብ።

2.3.4 ፍግረ መሬት

ብምኽንያት ኣቀማምጣ መሬትን ምብራስ ኣግራብን ፍግረ መሬት ኣብ ኣማድር ሓደ ካብቶም ከበድቲ ባህርያዊ ሽግራት እዩ። ጸብጻባት ሚኒስትሪ ሕርሻ ከም ዘረድእዎ ካብ ኣማድር ብፍግረ መሬት ተጓሕጊሑ ዝኸደ ሓመድ ዓመታዊ ኣስታት 2.1 ቶን ካብ ሄክታር ኣቢሉ ይኸውን። ንምክልኻል ፍግረ መሬት ከትርታትን ዛላታትን ብሰፊሑ ዝስረሓሎም ሜላታት መከላኸሊ ፍግረ መሬት ኣብ ኣማድር እዮም። ንኣብነት ኣብ ዝሓለፈ ግዜ ብመደብ መግቢ ንስራሕ ሓያለ ኣማኢት ሜትሮታት ዛላታት ተሰሪሑም ኔሮም እንተኾነ ግን እቲ ዝድለ ምክትታል ስለዘይተገብረሎም ኣዝዮም ተበላሽዮም ይርከቡ። ምትዕርራይ እዞም ዛላታት እዚኣቶም ልዕሊ ዓቕሚ ተቕማጠ ኣማድር ስለዝኾነ ተቕማጠ ኣማድር ገንዘባውን ተክኒካውን ሓገዝ ካብ ካልኦት ትካላት ይጽበዩ።

2.3.5 ምክፍፋል ስራሕ

ኣብ ኣማድር ትነብር ስድራቤት መነባብሮኣ ኩሉ ኣብ ሕርሻ ዝተመርኮሰ እዩ። ኣባላት ናይታ ስድራቤት ድማ፣ ኣቦ፣ ኣደ፣ ደቆም ከምኡ'ውን ኣዝማድ ክኾኑ ይኽእሉ። ነብሲወከፍ ስድራቤት ኣከባቢኣ ብዘይሃሲ ኣገባብ ብቐዳምነት ንቐለባ ዝኽውን እኽሊ ካብኡ እንተደኣ ተሪፍዋ ድማ ኣብ ዕዳጋ ብምሻጥ ካልእ ዘድልያ ነገራት ትገዝኣሉ።

ኣብ ምክፍፋል ስራሕ ምስ እንርኢ፣ሰብኡት ኣብ ማሕረስ፣ዓጺድ፣ዕዳጋ ካልኦት ዓበይቲ ማሕበራዊ ጉዳያት ዝዋፈሩ ክኾኑ ከለዉ ደቂ ኣንስትዮ ድማ ኣብ ስራሕ ገዛን ሕርሻን ይዋፈራ።

ምክፍፋል ስራሕ

ንጥፈት	ሰብኣይ	ሰበይቲ	ጎበዝ	ጎርዞ	ንኣሽቱ ኣወዳት	ንኣሽቱ ኣዋልድ
ማሕረስ	*		*			
ምዝራእ	*		*			
ጻህያይ		*	*	*		
ምእካብ እኽሊ (ዓውዲ)	*		*			
ምግዓዝ እኽሊ/ሓሰር	*	*	*			
መጓሰ					*	*
ሓለዋ እኽሊ					*	
ምውራድ ማይ	*	*		*		*
ምእራይ ዕንጨይቲ	*	*				*
ምድላው መግቢ	*					
ምስራሕ ገዛ	*					
ውሳኔታት	*					

ውጽኢት ናይዚ ዝተኻየደ መጽናዕቲ ከምዘርእዮ፣ ኣብ ሓላፍነታትን ውሳኔ ምሃብን ናይ ጾታ ፍልልይ ኣሎ። እዚ ድማ ደቂተባዕትዮ ኣብ ሕርሻዊ ንጥፈታትን ማሕበራዊ ውሳኔታትን ዝለዓለ ተራ ክህልዎም ከሎ፣ደቂ ኣንስትዮ ድማ ኣብ ስራሕ ገዛን ምዕባይ ቆልዑን ከምዝውሰና እዩ። እንተኾነ ግን ኣብዚ ግዜ'ዚ ምስቲ ህሉው ኩነታት ኣዛሚድካ ኣዴታት ካብቲ ቀደም ዝነበረን ሓላፍነት ዝያዳ ሓላፍነት እንዳተሰከማ ክኸዳ ከለዋ ኣቦታት'ውን ኣብ ናይ ኣዴታትን ናይ ቆልዑን ስራሕ (ከምመጓሰ) ወሪዶም ዝሰርሑሉ ኩነታት ይረኤ እዩ። ሕጽረት ዓያይ ጉልበት ኣብቲ ከባቢ

ብሰፊሑ'ኳ ዝረኤ እንተኾነ፣ እቲ ህዝቢ ብወፈራ ናይ ዝተጸገሙ ስድራቤታት ሕርሻ ይሓርስ፣ ይዓጽድ ከምኡ'ውን ገዛ ይሰርሕ።እዚ ሓደ ካብቲ ሰልጡን ባህሊ ኣብ ኣማድር ዝረኤ እዩ።

2.3.6 ኩነታት ሓዳርን ስድራቤታትን

ከም ኣብ ኩሉ ሕብረተሰብ ኤርትራ ውላድ ምውላድ ኣብ ህዝቢ ኣማድር ባህላውን ቁጠባውን ዕዙዝነቱ ሓያል እዩ። ምህላው ዓቢ ስድራቤት(ቡዙሓት ኣባላት ዘለውዎ ስድራ) ከም ምልክት ሓይልን ውሕስነት ምርካብ ተጠዋሪ ኣብ ግዜ እርጋን ከምዝኾነ ተቐማጠ ኣማድር ይኣምኑ። ጸታ ብዘየገድስ ብወገን ኣቦታት ይኹኑ ኣዴታት ብዙሓት ውላድ ክህልዉኻናይ ምድላይ ዝንባለ ሓያል እዩ። ኣፍልጦ ህዝቢ ኣማድር ኣብ መከላኽሊ ጥንሲ ድሩት ኮይኑ ክጥቀምሉ እውን ኣይደልዩን።

2.3.7 መርዓ

መርዓ ኣብ ኣማድር ኣብ ንኡስ ዕድመ ተጻመድቲ ዝፍጸም ሓደ ካብቶም ኣገደስቲ ማሕበራዊ ሂወት እዩ። ኣብ ኣማድር 2 ዓይነት ናይ መርዓ ስነስረዓት ኣለዉ ንሳቶም ድማ ሃይማኖታውን ባህላውን እዮም። ሃይማኖታዊ መርዓ እዚ ዓይነት ስነስረዓት ናይ መርዓ በቶም ኣብ ሃይማኖት ሓያል ዝኾነ ኣፍልጦ ዘለዎም ሰባት ዝዝውተር እዩ። ዝበዝሐ ህዝቢ ኣማድር ግን ባህላዊ ስነ ስረዓት መርዓ እዮም ዘዘውትር። ገዝሚ ኣብ ባህላዊ መርዓ ዝውተር ስነስረዓት እዩ። ቀደም ንሓደሽቲ ምርዑዋት ከም መሰረት ሓዳሮም ዘገልግሎም ገዝሚ ብመልክዕ ከብቲ ይወሃብ ኔሩ፣ ኣብዚ እዋን'ዚ ግን ገዝሚ ብመልክዕ ገንዘብ እዩ ዝኽፈል።

2.3.8 ፍትሕ

ፍትሕ ኣብ ኣማድር ኣብዚ ሕጂ ግዜ ካብቲ ቅድሚ ነዊሕ ዓመታት ዝነበረ ብብዝሒ ከጓንፍ ይረአ፣ እቲ ቀንዲ ከም ምክንያት ናይ ፍትሕ ኮይኑ ዝቀርብ ብመብዛሕቲኦም ደቂተባዕትዮ ዝረአ ካብ ሓዳርካ ወጻኢ ዙረት እዩ። በዚ ምኽንያት ድማ ቁጽሪ ብደቀንስትዮ ዝእለያ ስድራቤታት ካብ ግዜ ናብ ግዜ ክብርክት ይረአ። ፍትሕ ኣብ መንነ ተጻመድቲ ብባህላዊ ኣገባብ ከምዝድቅስ ይግበር። በዚመሰረት ዘለዋ ጥሪት ንኽልቲኦም ብማዕረ ይምቀላ። መብዛሕትኡ ግዜ ገዛ ንሰብኣይ ይውሃቦ ሰበይቲ ድማ ከመ መከሓሓሲ ዋጋ ፍርቂ ናይ'ቲ ገዛ ብመልክዕ ንብረት ወይ ገንዘብ ይውሃባ። ንውላዶም ብዝምልከት ድማ ደቂተባዕትዮ ብኣቦኦም ክእለዩ ከለዉ እተን ደቀንስትዮ ድማ ስጋብ ዓቕመ ሂዋን በጺሐን ድልየተን ዝውስና ብኣዲኤን ይእለያ። እታ ሰበይቲ ኣብቲ ዓዲ ክትነብር ምስ እትውስን መሬት ማዕረ ማዕረ ይምቀሎም፣ እታ ሰበይቲ ናብ ካልእ ዓዲ ወይ ዓዳ ምስ እትኸይድ ግን መሬት ኣይወሃባን።

2.3.9 ብደቀንስትዮ ዝእለያ ስድራቤታት

ካብተን ከም መርኣያ ነዚ መጽናዕቲ ዝተወስዳ ወይ ዝተመርጻ 50 ስድራቤታት እተን 37% (ሚእታዊት) መብዛሕትአን ዝተፈትሓ ብደቀንስትዮ ዝእለያ ስድራቤታት ከምዝነበራ ውጽኢት መጽናዕቲ የረድእ። እንዳ ወሰኽ ዝኸይድ ዘሎ ቁጽሪ ፍትሕ ኣብ ሓዳር ንብዙሓት ስድራቤታት ብደቀንስትዮ ጥራይ ከምዝእለያ ይገብር። ከምዚኣተን ዓይነት ስድራቤታት ብኣደ ጥራይ ስለዝእለያ ቁጠባዊ ይኹን ማሕበራዊ ደረጀአን ትሕት ዝበለ ኮይኑ፣ እዘን ዓይነት ስድራቤታት እቶተን ንምድንፋዕ ኣብ ከም በዓል ምፍራይ ደርሁ ዝኣመሰሉ ቀለልትን ብዙሕ ርእሰማል ዘይሓቱን ንጥፈታት ክነጥፉ ይረኣያ። ኣብዚ እዋን እዚ ሓበን ዘይመንግስታዊ ግብረ ሰናይ ማሕበር ንጽጉማት ንምሕጋዝ ሓደ መደብ ኣተኣታትዩ ይርከብ፣ እዚ መደብ እዚ ንስኡናት ስድራቤታት ናይ ኢደጥበብ ስልጠና ብምሃብ ነብሶም ከምዝኽእሉ ይገብር።

2.3.10 ዝኽትምና

ኣብዚ ዓዲ 50 ዝኾኑ ኣቦኣም ወይ ኣዲኣም ወይ ከኣ ክልቲኣም ዝሞትዎም ቆልዑ ኣለዉ። ሚኒስትሪ ዕዮን ሰብኣዊ ድሕነት ነዞም ቆልዑ'ዚኣም ምስ ስድራቤታት ወይ ከኣ ምስ ኣዝማዶም ኣጸጊዑ፣ነቶም ዘጸግዕዎም ስድራ ከብቲ፣ዘርኢ ወይ ከኣ መበገሲ ቢዝነስ ዝኸውን ገንዘብ እንዳሃበ ይድግፎም ኣሎ።

2.3.11 ሃይማኖታዊ በዓላትን ጽልወኣምን

መብዛሕትኣም ተቐማጠ ኣማድር ከምተኽተልቲ እምነት ክርስትና ተዋህዶ መሰረት መዓልታዊ ንጥፈታቶም ብሃይማኖታዊ በዓላት ምስ ተጸልወ እዩ። ከምዝፍለጥ ዓመት ብ365 መዓልታት ዝቆመት ክትከውን ከላ፣ ኣብዘን መዓልታት 6 ወርሓውያን 9 ድማ ዓመታዊ ዝበዓሉ ሃይማኖታውያ ን በዓላት ኣለዉ። ኣብዞም በዓላት እዚኣቶም ዝኾኑ ኣማኒ ሕርኻዊ ንጥፈታት ከካይድ ኣየፍቀዱሉን። ዋላኳ ሓረስቶት ኣሉታዊ ጽልዋ ሃይማኖታዊ በዓላት ኣብ ሕርኻዊ ንጥፈታቶም ብግቡእ ዝግንዘብዋ እንተኾኑ ነዞም በዓላት እዚኣቶም ክጥሕሱ ግን ዋላሓንቲ ድልየትን ቅሩብነትን የብልምን።

2.3.12 ዓይነት ገዛን ምውናን ረድዮን

ኣብ መረባዕ ዝነብር ስድራቤታት 22% ኣብ ህድሞ ዝነብር ከኣ 46% እዩ። እቲ 32% ድማ መረባዕን ህድሞን ዝውንን እዩ። ዓይነት ገዛ ደረጃ ሃብቲ ከርኢ ይኽእል'ዩ፣ ኣብ ህድሞ ምንባር እንዳተናዕቀ ኣብ መረባዕ ምንባር ከኣ እንዳተባህገ ይኽይድ ኣሎ። 55% ናይቲ ስድራቤታት ሬድዮ ይውንን። እዚ ከኣ እቲ ህዝቢ ኣብ ከባቢኡ ብዛዕባ ዝግበር ዘሎ ምዕባሌታት ንምክትታል ዘለዎ ድሌት የመልክት።

3. ጸጋታት ኣማድርን ምሕደረኦምን

ኣብ ኣማድር ናይ ሕርሻ መሬት፣ ዲጋ። ነቑጣ መዐደሊ ማይ፣ዕንጨይቲ፣ በለስን ቆልቆልን ከም ጸጋታት ዓዲ ክጥቀሱ ይኽእሉ።

3.1 ሜላ ምሕደራ መሬት

ቅድሚ ሓርነት መላእ ኤርትራ ሜላ ምሕደራ መሬት ኣማድር ጽልሚ ኔሩ። በዚ መሰረት መሬት ካብ ወለዶ ናብ ወለዶ ብውርሻ ይሰጋገር ኔሩ። ምስ ደቂ ዓዲ ዝተገብረ ዝርርብ ገለ 50 ዝኾኑ ስድራቤታት ንመላእ መሬት ዓዲ ይቆጻጸርዎን ይጥቀሙሉን ኔሮም። ንነብሲ ወከፎም ድማ ሓሓምሳ ጽምዲ ይበጽሖም ኔሩ። ኣብ 1974 ብዝሒ ኣባላት ስድራቤት መሰረት ዝገበረ ሓድሽ ሜላ ምሕደራ መሬት ተኣታትዩ ኔሩ። በዚ መሰረት ነብሲ ወከፍ ስድራቤት ብመሰረት ብዝሒ ኣባላት ስድራቤታ ኣብ ዓዲ ሓደ፣ ዓዲ ክልተን ዓዲ ሰለስተን እንዳተባህለን ኣብ 3 ጉጅለታት ከም ትጉጀል ኮይኑ።

ምምቕራሕ መሬት ብመሰረት ብዝሒ ኣባላት ስድራቤት

ደረጃ	ብዝሒ ኣባላት ስድራቤት	ብጽሒት መሬት ብጽምዲ
ዓዲ ሓደ	ካብ 1 ሰብ ስጋብ 3 ሰብ	3
ዓዲ ኣርባዕተ	ካብ 4 ሰብ ስጋብ 6 ሰብ	5
ዓዲ ሸውዓተ	ካብ 7 ሰብን ልዕሊኡን	12

ኣብ 1984 ከም ብሓድሽ ህዝባዊ ግንባር ሓርነት ኤርትራ (ህግሓኤ) ሓድሽ ምምቕራሕ መሬት ብምትእትታው ናይ ሕርሻ መሬት ኣብ ነብሲ ወከፍ 7 ዓመት ከም ብሓድሽ ናብ ደቂ ዓዲ ከም ዝመቕራሕ ጌሩ። እዚ ናይ ዴሳ ምሕደራ መሬት ኣብ ሕርሻዊ ንጥፈት ዓዲ ኣሉታዊ ሳዕቤን ኣኸቲሉ፣ ምኽንያቱ ደቂ ዓዲ ኣብ ነብሲ ወከፍ 7 ዓመት ካብ ሓደ ናይ ሕርሻ መሬት ናብ ካሊእ ክግዕዙ ስለዝግደዱ ነት ናይ ሕርሻ መሬት ዝገብሩሉ ዝነበሩ ክንክን ክቕጽልዎ ስለ ዘይተተባብዑ እዩ። ኣብ 1994 ብመሰረት ሓድሽ ኣዋጅ መሬት ኩሉ መሬት መሬት መንግስቲ ክኸውን ክገብር ከሎ ኣብ ዓቕንን ዝርገሐን ናይ ሕርሻ መሬት ድማ ምትዕርራይ ጌሩ። ብመሰረት እዚ ኣዋጅ ዝኾነ 18 ወይ ካብኡ ንላዕሊ ዝዕድሚኡ ጾታ፣ ሃይማኖት፣ኩነታት መርዓን ብዘየገድስ ተጠቃሚ መሬት ክኸውን ክኢሉ።

3.1.1 ኣመቓቕላ ዓዳዊ መሬት

መሬት ሕርሻ ዓዲ ብሓፈሽኡ ነብሲ ወከፍ 32 ስድራቤት ብዝሓዘ ኣብ 12ጉጅለታት ይምቀል። ነብሲ ወከፍ ጉጅለ ሓደ መራሒ ይህልዎ።ሓላፍነቱ ድማ መሬት ብትኽክል ይምቕል ከም ዘሎ ምዕዛብ እዩ። በቲ ልማዳዊ ኣገባብ ትሕዝቶ መሬት ኣብ 4 ይምቀል።እዚ ምቕሊት'ዚ ዓይነት መሬት ግዝፍን ርሕቀትን ካብ ዓድን ኣብ ግምት ዘእተወ እዩ።ነብሲ ወከፍ ስድራ ድማ ካብዘን 4 ዓይነት ክትረክብ ይግባእ፡ እዘን ኣርባዕተ ዓይነት ዝበሃላ ድማ ገደና፡ መምበር፡ጓል መምበር፡ ረቂቕ እየን።

3.2 ትሕተ ቅርጺ

ትሕተ ቅርጺ ኣማድር ኣብ ዝተሓተ ደረጃ ዝርከብ ኮይኑ ከም ማእከል ጥዕና፣ ኣገልግሎት ኤለትለሪክ፣ ቴሌፎንን ጥጡሕ ጽርግያን ሽቓቓትን የብሉን። እታ እንኮ ንኣማድር ምስ ዱባሩባ እተራኸባ ጽርግያ እንተኾነት'ውን ኣዝያ ተባላሽያ ጽገና ትጽበ ዘላ እያ። ህዝባዊ መሳጎጊያ እውን እንተኾነ ዳርጋ የለን እዩ ክበሃል ዝከኣል። ምክንያቱ ሓንቲ ኣረጊት ላንድሮቨር ንሳውን ኣብ ግዜ ሓጋይ ጥራይ ህዝቢ ካብን ናብንኣማድር ድባርዋ ተመላልስ እዛ 12 ወናብር ዘላዋ መሳጎጊያ ንሓደ ጉዕዞ 6 ናቕፋ ተኽፍል። መብዛሕትኡ ህዝቢ ብእግሩ ዝነዓዝ ኮይኑ ስሕት ኢልካ ግን ብኣእዱግ ወይ ከኣ ብኣፍራስ ዝጉተታ ዓረብያታትውን ንኣቕሑትን ሰብን ከም መሳጎጊያ የገልግላ እየን።

ንጽሩይ ዝስተ ማይ ብዝምልከትድማ ተቕማጦ ኣማድር ሽግር ጽሩይ ዝስተማይ ከም ዝነበሮም ብሓበን ግብረሰናይ ማሕበር ብዝተገብረ ተበግሶ ግን ሽግሮም ከም ዝተፈትሐሎም ይዛረቡ። እዚ ብሓበን ተሰሪሑ ዘሎ ሚላ ማይ 6 መዐደሊ ነቕጣታት ዘለዎ ኮይኑ ንተቕማጥ ኣማድር ጥራይ ዘይኮነ ነተን ኣብቲ ከባቢ ዝርከባ ዓድታት'ውንኣገልግሎት ክህብ ትጽቢት ይግበረሉ።

3.3 ማይ

ምንጪ ማያት ናይዚ ከባቢ ምስ ኩነታት ዝናብ ዝተተሓሓዘ እዩ። ብዝሒ ማይ ከኣ በቲ በብግዚኡ ዝዘንብ ዝናብ ይውሰን። መብዛሕትኤን ምንጭታት ማይ ኣማድር ኣብ ጥቃ'ቲ ዓዲ ስለዘለዋ ህዝቢ ማይ ንምምጻእ ነዊሕ መንገዲ ኣይጎዓዝን። ኣብ ግዜ ሓጋይ ፈልፈልቲ ወይ ከኣ ሩባታት ስለዝደርቁ ህዝቢ ካብ ዲጋ ወይከኣ ካብ ሚላታት እንዳቐድሐ ነብሱን ጥሪቱን ይሰቲ። መጽናዕቲ ኣብ ዝተገብረሉ ግዜ 19 ዝበጽሓ ዕምቆቱን ካብ 9 ሜትሮ ዘይበዝሕ ሚላታት ነይረን። እዘን ሚላታት እዚኣተን ንጀራዲን ዝጥቀሙለን እየን። ውልቀ ሰባት ካብተን ሚላታት ክቕድሑ ምስ ዝደልዩ ድማ እንዳኸፈሉ ይወስዱ። ስለዚ እዘን ሚላታት ብዘይካ ንጀርዲን ከም ናይ እቶት ምንጪ'ውን የገልግላ እየን። ሚላ ክኹዕት ዝደሊ ነባሪ ዓዲ ብዞባ ከይተፈቕደሉ ክኹዕት ኣይክእልን።

3.4 ምሕደራ መጋሃጫ

ኣብ ከባቢ ኣማድር ንእንስሳታት መገሃጫ ዝምረጽ ቦታ፣ ብብዝሒ ሳዕርን ዓይነት ሳዕርን እዩ። ንመገሃጫ ዝውዕል ቦታ ኣብ ክልተ ይምቀሉ፡ ንሳቶም ከኣ፣

- ሓባራዊ መገሃጫን
- ሕዛእትን፡ እዮም

ኣብዚ ከባቢ ብዓዲ ድኣምበር ብውልቂ ዝውነን መገሃጫ የለን። ኣብቲ ሓባራዊ መገሃጫ ጥሪት ዓዲ ብዘይ ዝኾነ ገደብ መግበን ዝምእርራሉ እዩ።ሕዛእቲ ግን ካብ ታሕሳስ ክሳብ ነሓሰ ሕዙእ ኮይኑ ሓራሳት፡ ዓባሩ፡ ወይ ከኣ ዝተፈቕደሎም ናይ ማሕረስ ኣብዑር ካብ መስከረም ክሳብ ሕዳር ይምገቡሉ።ብዘይካዚ ሳዕሪ እንዳተሳእነ ኣብ ዝኾደሉ ግዜ ናብ ሰፍኣ ዝበሃል ቦታ ጥሪቶም ሒዞም የሳግሙ። እዚ ድማ ካብ ሰነ ክሳብ መስከረም ኣብ ዘሎ ግዜ ኮይኑ ንላምን ኣባጊዕን ድማ ይምልከት። ምስጋም ከም መሰል ዝጥቀሙሉኪ እንተኾኑ ኣብዘይዓዶም ኮይኖም የብልዑ ስለዘለዉ ንሓንቲ ላም ክሳብ 20 ናቕፋ ኣብ ወርሒ ንክኽፍሉላ ይግደዱ። ስለዚ መገሃጫታት ከምድላይካ ትጥቀመሉ ዘይኮነ ብኮማት ዝውሰን ባህላዊ ሕግታትን ኣገባባትን ዘለዎ እዩ።

3.5 ጸገማትን ቀዳምነታትን

ኣብ ኣማድር ዘለዉ ጸገማት ንምልላይን ብቕዳምነት ንምስራዕን ን30 ሰባት ብምውካስ፡ እዞም ሰላሳ ሰባት ኣብ 3 ጉጅለታት ተመቂሎም ማለት ኣንስቲ፡ ሰብኡትን መንእሰያትን ቀዳምነታት ሰሪየም።

እቶም ጸገማትን ቀዳምነታትን ድማ ከምዚ ዝስዕብ ተሰርዑ

ቀዳምነት	ኣንስቲ	ሰብኡት	መንእሰያት
ቀዳማይ	ክሊኒክ	ዲጋ	ጥዕና
ካልኣይ	ኪሬንቲ	ፍግረ መሬት	ፍግረ መሬት
ሳልሳይ	መጎዓዝያ/መገዲ	ጥዕና	መገዲ
ራብዓይ	ሓገዝ ንዋት ትምህርቲ	ቤት ትምህርቲ	ኪሬንቲ
ሓምሻይ	መሳርሒ ገንዘብ	ኪሬንቲ	ቤት ትምህርቲ
ሻድሻይ	ዕንጨይቲ	መገዲ	መዋእለ ህጻናት
ሻውዓይ	-	ናውቲ ሕርሻ	ዕንጨይቲ
ሻሙናይ	-	-	ጸረ ሓሳኹ
ታሽዓይ	-	-	ደሞዝ

እዚ ሰሌዳ ከምዘርእዮ ጥዕና፡ ፍግረመሬት፡ መገዲ/መጎዓዝያ ኣብ ቀዳማይ፡ ካልኣይን ሳልሳይን ደረጃ ክስርዑ ከለዉ፡ መብራህቲ፡ ትምህርትን ቀጺሎም ይስርዑ።

ዓያይ ጉልበት

ዓያይ ጉልበት ብፍላይ ከኣ ኣብ ሕርሻ ካብ ስድራቤት ናብ ስድራቤት ይፈላለ እዩ። ብሓፈሽኡ ግን ኣብዚዓዲ ናይ ዓያይ ጉልበት (ኣብ ሕርሻ) ሕጽረት ኣሎ።

4. ሕርሻዊ ንጥፈት

4.1 ኩነታት ዘራእቲ

ኣብ ኣማድር ዝፈርዩ ኣዝርእቲ ካብ ናይ ዝናብ ማይ ተጸቢኻ ስለ ዝኾነ ዝርከብ ምህርቲ'ካብ ኢድ ናብ ኣፍ'ዝሓልፍ ኣይኮነን። ገለ ካብቶም ዘራእቲ ስገም፣ ማሽላ፣ ስርናይ፣ ጣፍ፣ ዳጉሻ፣ ዓተር ምጥቃስ ይከኣል ። ካብዚኣቶም ስገም እቲ ዝለዓለ ቦታ ክሕዝ ከሎ ስርናይን ሓንፈጽን ድማ ድሕሪኡ ይስርዑ። ስገም ቀዳማይ ቦታ ዝሕዘሉ ምኽንያት ከኣ ንእንጀራ፣ ቅጫን ስዋን ስለዝጥቀሙሉ እዩ። በቲ ዝሕዝዎ ናይ ሕርሻ ቦታ ዝተሓተ ቦታ ዘለዎም ድማ ዕፉን፣ ጣፍ፣ ዳጉሻ፣ ዓተር፣ እንጣጢዕ፣ ባልዶንጓን ብርስንን እዮም። ፍርያምነት መሬት ክረኤ ከሎ ኣዝዩ ትሑትዩ። ካብ ሚኒስትሪ ሕርሻዝተረኽበ ናይ 2002 ጸብጻብ ከም ዘርእዩ ድማ 6.1 ኩንታል ኣብ ሄክታር'ዩ። ማሕረስ መሬት ኣጸቢቹ ከይነቐጸ ከሎ ካብ ወርሒ ጥሪ ኣቢልካ ይጅመር፣ ሰለስተ ሳዕ ተሓሪሱ ድማ ይዝራእ።

- ስገም፣ ስርናይ፣ ሓንፈጽ ኣብ ወርሒ ሰነ ይዝርኡ።
- ዕፉን፣ ዳጉሻ፣ ጣፍ ሓጋይ ኣብ ወርሒ ግንቦት ይዝርኡ።
- ጣፍ ኣብ ሓምለ ይዝራእ።

ብዋሕዲ ዝናብ ዝኣክል ኣብዚ ግዜ'ዚ ከም ጣፍ ሓጋይን ዳጉሻን ዝኣመሰሉ ዘራእቲ እንዳተረፉ እዮም።

ስለዚ ካብ ወርሒ ግንቦት ክሳብ ነሓሰ ዘሎ ግዜ ናይ ዘርኢ ግዜ፣

ወርሒ ሓምለ ክሳብ መስከረም ናይ ጸህያይ

ወርሒ መስከረም ክሳብ ሕዳር ቀውዒ ምኻኑ እዩ።

ውደት ስራሕን ምህርትን ብወቕቲ

ኩነታት ኣየር፡ ንጥፈታት መግብን	ጥሪ	ለካቲት	መጋቢት	ሚያዝያ	ግንቦት	ሰነ	ሓምለ	ነሓሰ	መስከረም	ጥቅምቲ	ሕዳር	ታሕሳስ
ኩነታት ኣየር												
ጠሊ ስለዘሎ ምሕራስ ይከኣ።												
ዝወዓያ ኣዋርሕ ናይ ዓመት												
ኣዝርእቲ ተዘሪኡ ዝዓብየሊ ግዜ												
ዝሑል ኩነታት ኣየር												
ንጥፈታት												
ምቅርራብ ሕርሻዊ ስርሓት												
ግዜ ዘርኢ												
ጸህያይ (ክረምቲ)												
ቀውዒ (እኽሊ ዝእከበሉ)												
ኩነታት መግቢ												
ዝበዝሓ ስድራቤታት ነብሰን ይኽእላ												
መግቢ እንዳጎደለ ይኽይድ												
ብዙሓት ስድራቤታት ዝጠምያሉ												
ኣኽል ታርፍ መግቢ ዝርከበሉ												

ምንጪ፡ ምስ ህዝቢ ኣማድር ኣብ2003 ዝተገብረ ዙተ

ካብቲ ዓዲ ብዝተረኽበ ሓበሬታ ብምኽንያት ምትእትታው ትራክተርን ዘበናዊ ድኹዕን እቶት ናይ ሓረስቶት እንዳወሰኽ ይኽይድ ኣሎ። ኣብ ድባርዋ ዝርከብ ወኪል ሚኒስትሪ ሕርሻ ከም ዝሓበሮ ካብ 50-60% ናይ ሓረስቶት ግራውቶም ብትራክተር ክሕረሱ ጀሚሮም ኣለዉ።ዋላውን ከምኡ ኮይኑ እቲ ባህላዊ ሕርሻ ሰብኣውን ኣከባብያውን ጸገማት የጋጥም። ሕጽረት ዝናብ ፡ ፍግረ መሬትን ዋሕዲ ነጸግቲ ጸረ ባልዕ ካብቶም ዝጥቀሱ ጸገማት እዮም። ብተወሳኺውን ሕጽረት ናይ ሕርሻ፣ ኣብዑርን ዝሰርሕ ጉልበት ሰብውን ካብቶም ዘጋጥሙ ጸገማት እዮም። እዞም ኩሎም ኣብ ላዕሊ ዝተዘርዘሩ ጸገማት ገለ ካብቶም ጸገማት ሓረስታይን ቀንዲ ምንካይ እቶታውነትን እዮም። ብሓፈሽኡ ክረኤ ከሎ ሓንቲ ስድራቤት ብሕርሻ ነብሳ ክኢላ ትኽደሉ ግዜ እንተነውሐ 7ወርሒ እዩ። እቲ ዝተረፈ 5ወርሒ ድማ ሸቂላ ወይ ጥሪት ሸይጣ ወይ'ውን ተለቂሓ ትሓልፎ ማለት እዩ።

4.2 ሕርሻዊ እትዋት

98% ናይቲ ህዝቢ ብሕርሻ ይናበር።።ኣብ ኣማድር ዝካየድ ሕርሻ ብዘይካ 4% መስኖኣዊ ሕርሻ እቲ ኻልእ ዝናብ እንዳተጸበየ ዝካየድ እዩ።። ካብ ሕርሻ ዝርከብ ምህርቲ ኣብ ደሓን ዝኾነ ቀውዒ ሓንቲ ስድራቤት ክሳብ 6.32 ኩንታል እኽሊ ትረክብ።። ቀውዒ ሕምቐ ኣብ ዝብለሉ ግዜ ድማ እቲ ምህርቲ ናብ 1.6 ኩንታል ይወርድ።። ሕርሻዊ ምህርቲ ምስ ናይ ሕርሻ ኣቡውር፣ ስፍሓት ግራት፣ ዝሰርሕ ሰብን ቀጥታዊ ዝምድና ኣለዎ።። 44% ምህርቲ ሕርሻ ኣብ ብዕራይ ምውናን ይምርኮስ።። ብዕራይ ዘይብሉ ሓረስታይ ግን ግራቱ ንብላዕ ክህብ ይግደድ።። መብዛሕቱኡ ኣብዚ ዓዲ ዝነብር ህዝቢ እቲ ካብ ሕርሻ ዝረኽቦ ምህርቲ ብገምጋም ን7 ወርሒ ክምግቦ ይኽእል።። ነቲ ዝተረፈ ኣዋርሕ ድማ እንተ ጉልበቱ ወይ ጥራቱ ሽይጡ ይሓልፎ ማለት'ዩ።።

4.3 መስኖኣዊ ሕርሻ

መስኖኣዊ ሕርሻ ኣብ ኣማድርን ከባቢኡን ሓድሽ ተርእዮ እዩ።። ብ1998 ብሚኒስትሪ ሕርሻን ፋኦን ነቲ ካብቲ ጎቦታት ዝወርድ ውሕጅ ንምዕቃብ ዲጋ ተሰሪሑ።። እዚ ዲጋ'ዚ 400,000ሜ^3 ይሕዝ።። 600ሜትሮ ዝቕመቱ ናብቲ ገርሁ ዘምርሕ ካናለ ድማ ተሰሪሕሉ።። እዚ ዲጋ ክሳብ30 ሄክታር መሬት ከልምዕ ይኽእል።። ኣብዚ ቦታ'ዚ ብመስኖ ካብ ዝፈርዩ ዕፉን፣ ሽጉርቲ፣ድንሽ፣ ኮሚደረ፣ ዱባን ካውሎን ክጥቀሱ ይኽእሉ።። መስኖኣዊ ሕርሻ ንቐለብ ሰብ ጥራይ ዘይኮነ ቀለብ እንስሳ ኣብ ምፍራይ'ውን ዓቢ ተራ ኣለዎ።። ነዚ መስኖኣዊ ሕርሻ ዝጥቀሙሉ ስድራቤታት ኣዝዮም ውሑዳት ብምኻኖም፣ ብምምሕዳራት ናይ መሬት ምድልዳል ብዘይምግባር ህዝቢ ከዕዘምዝም ይስማዕ።። ኣብቲ ዲጋ ተሰሪሓትሉ ዘላ ቦታ ዝርከቡ ኣኻውሕ ይኹኑ ሓመድ ማይ ስለዘዝሩኞ ብዙሕ ማይ ዚሂጉ/ ዘሪቑ ይውዳእ።።

ብዘይካ'ዚ ካብቲ ጎቦታት ተባሕጊጉ ዝወርድ ጸጸርን ሓመድን ነቲ ዲጋ ስለዝመልኡ እቲ ዲጋ ዝኣክል ማይ ኣይሕዝን።። እዚ ናይ መጽናዕቲ ጉጅለ ናብቲ ቦታ ኣብ ዝተንቀሳቐሰሉ ግዜ ነቲ ዲጋ ንምፍዋስ ኮነ ንምትዕርራይ ዘዕግብ ስጉምቲ ኣይተወስደሉን።። ስለዚ ነቲ ትሕቲ ዲጋ ዘሎ መሬት ኣደላዲልካ ብዙሓት ሰባት ናይ መስኖ ተጠቀምቲ ዝኾኑሉ ኣገባብ ከድሊ እዩ።።

4.4 ኩነታት ጥሪት

ጥሪት ምጥራይ ሓደ ካብቲ ኣገዳሲ ረቐሒታት ሕብረተሰብ እዩ።። ኣብ ኣማድር ከም ኣብ ኩሉ ዓድታት ኤርትራ ጥሪት መምዘኒ ሃብቲ ናይ ሓደ ስድራቤት እየን ።። ዝበዝሐ ጥሪት ዘለዎኦ ዝሃብተመ እዩ።።ከብቲ ከም ናይ ሕርሻ እንስሳ ክረኣዩ ከለዉ ንኣሽቱ እንስሳታት ከም ጤለበጊዕ ድማ ከምውሕስነት ህይወት ብፍላይ ከኣ ስእነት ኣብዘጋጥመሉ ግዜ ንዕኤን ሸጥካ መቃለሊ ሽግር ይኾና።።

ዝኾነት ስድራቤት ዝተፈላለያ ጥሪት ማለት ከብቲ፡ ጤለበጊዕ፡ ኣእዱግ ክትውንን ትኽእል፡፡ ጥሪት ኣብ ገርሁ ወይ ከኣ ኣብ መሮር ብምኻድ መግበን ይምእርራ፡ እንተኾነ ግን ኣብ ግዜ ሓጋይ ተወሳኺ ሳዕሪ ወይ ሓሰር ክወሃበን ግድን እዩ፡፡ ስለዚ ጥሪት ከተብዝሕ ከሎኻ ብዛዕባ ውሕስነት ቀለበን'ውን ምሕሳብ የድሊ፡፡ ኣብ ጽንኩር ግዜ ሓረስቶት ገለ ካብ ጥሪቶም እንዳሸጡ ይቕልብወን፡፡ ድርቅን ምጥፋእ መገሃጫን ጥሪት እንዳጎደላ ንክኸደ ጠንቂ ኮይኖም ኣለዉ፡፡ ኣብዚ ግዜ'ዚ ጥሪት እንዳጠፋኣ ዝኸዳሉ ዘለዋ ካልእ ምኽንያት'ውን ንዕአን ዝጓስን ዝከናኸንን ሓይሊ ሰብ ስለዝጠፍአ እዩ፡፡ ኩለን ጥሪት ብድርቂ ዝህሰያ'ኳ እንተኾና ከብቲ ዚያዳ ተጻዋርነት ክህልወን ከሎ ካብ ኣባጊዕ ድማ ኣጣል ዝሓሸ ተጻዋርነት ከምዘለወን ተነጺሩ፡፡

ጥሪት ኣብ ግዜ ክራማት ብዝያዳ ከምዝሓማ እቲ መጽናዕቲ'ኳ ዝሕብር እንተኾነ ብተደጋጋሚ ካብ ዝረኣዩ ሕማማት ጥሪት ድማ ጉልሓይ፡ ላልሽ ክጥቀሱ ይኽእሉ፡፡ሓደ ሓረስታይ ንመሐከሚ ጥሪት ኣብ ዓመት ካብ 4-70 ናቕፋ ከምዝኸፍል እቲ መጽናዕቲ ክሕብር ከሎ ተመሓላለፍቲ ሕማማት ኣብ ዝኣትወሉ ግዜ ግን ነጻ ሕክምና ይወሃብ፡፡ ባህላዊ ሕክምና ጥሪት'ውን ጌና ኣብ ቦትኡ ከም ዘሎ ተነጺሩ፡፡

5. መደምደምታን ለበዋታት

ውጽኢት ናይዚ መጽናዕቲ ብሞያውያን ናይ ሓበን ናብ ትግርኛ ተተርጕሙ ኣብ መጋቢት 2004 ኩሎም ዝምልከቶም ኣካላት ማለት ወከልቲ ዓዲ (ህዝቢ)፣ ኣማሓደርቲ ዓዲ፣ ወከልቲ ንኡስ ዞባን ዞባን፣ ወከልቲ ሓበን፣ ከምኡ'ውን ወከልቲ ነዚ መጽናዕቲ ዘካየደት ጉጅለ ኣብ ዝተረኽቡሉ ዝቐረቡ ለበዋታትን ምስ ህዝቢ ክዝተየሎም እዩ። ብተወሳኺ ኣብቲ ርክብ ተራጎ ግደን ናይ ነብሲ ወከፍ ኣብቲ ኣኼባ ዝርከቡ ኣካላት ክንጸርን እቲ ቀጺሉ ዝውሰድ ስጉምቲ እውን ብንጹር ክግለጽ እዩ።

5.1 ንምዕባለ ዓዲ ዝምልከት ነጥብታት

ውጽኢት መጽናዕቲ ብሓበን ናብ ህዝቢ ኣብ ዝቐረበሉ ግዜ መታን ንጹርን ክውንነታውን መብጸዓ ካብ ኩሎም ኣካላት ወይ ተሳተፍቲ ክርከብ፣ ኣብ'ቲ ዝግበር ኣኼባ ወይ ርክብ ነዞም ዝስዕቡ ነጥብታት ብግቡእ ክዝተየሎም ይግባእ።

5.1.1 ምዕባለ ትሕተ ቅርጺ

ምስ ደቂ ዓዲ ኣብ ዝተገብረ ርክብ ደቂ ዓዲ ነዞም ዝስዕቡ ዓውድታትን ንጥፈታትን ቀዳምነት ሂቦም።

- ጥዕናዊ ኣገልግሎት
- ጥጡሕ ጽርግያ
- ትምህርቲ
- ሓይሊ ኤለትሪክ
- ምሕደራ ማይ

5.1.2 ምሕደራ መሬትን ካልኦት ጸጋታት ዓድን

ኣብ ትሕቲ'ዚ ኣርእስቲ ድማ ነዞም ዝስዕቡ ነጥብታት ክዝተየሎም ይግባእ።

- ሓባራዊ ጻዕሪ ኩሎም ዝምልከቶም ኣካላት ኣብ ምድንፋዕ ናይ እንስሳ ሕርሻ፣ ብመንገዲ ምምሕያሽ ምሕደራ ናይ መገሃጫ መሬት፣ ናይ ሓሰር ምህርቲ፣ ከምኡ'ውን ምድንፋዕ ኣገልግሎታት ሕክምና እንስሳን ዕዳጋን።
- ሕገዝ ኣብ ምቅላል መሬት ብሓፈሻ፣ ምጉዳል ፍግረመሬት ኣብ ናይ መገሃጫን ዘራእትን መሬት ድማ ብፍላይ።
- ንመስርሒ ገዛን ሓውን ዝኸውን ቀረብ ዕንጨይቲ ምሕያል ወይ ምምሕያሽ፣ ብምትካል ኣግራብን ብምሕያል ባህላዊ ምሕደራ ኣግራብን።

- ምትሕግጋዝ ኣብ ምቕም መምርሒ ኣጠቓቕማ ናይ ዲጋ ማይ፡ ኣብ ክንዲ ውሑዳት ሓረስቶት ጥራይ ዝጥቀሙሉ፡ ብዝተኻእለ መጠን ኩሎም ሓረስቶት ንመስኖኣዊ ሕርሻ ከም ዝጥቀሙሉ ምግባር፡፡

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