ERITREAN PASTORALISM IN 2002 AND POST BORDER CONFLICT AND ITS IMPLICATIONS: NEW CHALLENGES AND THE NEED TO RAISE AWARENESS ON PASTORALIST LIVELIHOODS.

By
Zeremariam Fre (PhD) - Team leader
Harnet Bokrezion MSc - Researcher
Saba Haile BA - Researcher
Samia Mohamed BA - Researcher

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1. INTRODUCTION

1.1 Outline of the Study

The Pastoral and Environmental Network in the Horn of Africa (PENHA) has been actively engaged in policy research, training and capacity building among a number of stakeholders, mostly government institutions and some NGOs, in Eritrea since Eritrea’s independence in 1993.

Significant among these partners are the Ministry of Agriculture, the Land and Housing Commission (now Ministry of Land, Water and Environment), the Ministry of Education, the University of Asmara, and a number of International NGOs working in Eritrea (for more details see PENHA website www.penhanetwork.org).

The present study, funded by NOVIB and jointly executed by PENHA and the National Union of Youth and Students (NUEYS), is focused on the study of the impact on the recent Ethio-Eritrean border war on pastoral and agropastoral communities in the three districts of Shambuko, Geluj and Forto-Sawa.

The study clearly shows that the border conflict had a devastating impact on the pastoral economy. Pastoralists and other livestock owners face three fundamental problems:

- Firstly, their economy is shattered and their livelihoods disturbed by war and it will take them some time to get out of the poverty trap induced by war.
- Secondly, there is serious competition over high potential land (especially riverine areas) thus restricting grazing opportunities for pastoralists and for other livestock owners.
- Thirdly, the role of livestock is not fully recognized by policy makers and land use planners who have not so far clearly demarcated grazing land as distinct from farmland. Land-use policies or rather proclamations generated by the Government do not accommodate pastoral land-use and tenure issues.

One must also point out some of the opportunities which may enhance the pastoral production system. Pastoralists are resilient, livestock are already recovering in numbers and local/national markets are buying and selling livestock.

There are also opportunities to assist pastoralist and other livestock owners to organize into local fora and make their voice heard in policy-making circles at National level as well as in local government.

Pastoralism in Eritrea is clearly evolving and faces a number of challenges like other rural livelihoods in Eritrea. The authors of this report believe that pastoralism can be assisted as a way of life and as an economy by taking positive measures.

2. A Regional Context to the Study

Pastoralism in the Horn of Africa in general is a major human occupation and source of livelihood and contributes considerably to food security.
The Horn of Africa, comprising of Eritrea, Somalia, Djibouti, Ethiopia, Sudan, Uganda and Kenya (the IGAD countries), occupies an area of 5.2 million km² and supports a population of some 160 million people. The arid and semi-arid lands (ASALs) and sub-humid lands constitute 80% of the land area and contain approximately 90 million tropical livestock units (TLU) that provide livelihoods for pastoralists. These pastoralists survive in fragile ecosystems that are perpetually affected by drought and are continually threatened by desertification. Pastoralists and agro-pastoralists have therefore adjusted and adapted to these environmental challenges by evolving livelihoods mainly dependent on livestock and livestock-related activities. In fact on the basis of an intimate understanding of these fragile ecosystems, whose resources are scarce and variable, the inhabitants of the ASALs have adopted a mobile and flexible pattern of resource use that has proven to be sustainable. Mobility is in itself an important ecological adaptation and may, in part, explain why some of these pastoral areas have a higher productivity in terms of protein per hectare than Western and Australian ranches. Inevitably, the ability of livestock to convert low quality biomass into high quality products such as meat and dairy products gives it a central position, particularly with regard to food security.

Some analysis of the common features of pastoralism in the Horn of Africa will help us understand the challenges facing our pastoralist communities in Eritrea, which may not be that unique.

Similarities of the production systems: The production systems (pastoral nomadic, agro-pastoral, etc.) have important similarities throughout the Horn. In some cases, pastoralists may be highly specialized in breeding cattle, sheep, or camels and in other cases they may practice mixed farming. In montane regions of Ethiopia and Eritrea, livestock play a significant economic role and are integrated with crop farming.

Geographical spread: In countries like Ethiopia, Eritrea and Kenya over 60% of the population is concentrated in the highlands and their peripheries, occupying only 30% of the total land surface. It is estimated that nomadic pastoralists typically occupy 70% of the total landmass.

Similarity in ecological setting: Most pastoralists inhabit vast savannahs, coastal plains and some montane regions practicing extensive grazing systems.

Pastoralism makes an important contribution to economies in the region: A quick review of the national economies of the Horn countries clearly indicates the importance of the pastoral economy in terms of GDP. Pastoralism contributes 70% of GDP in Somalia, 25-35% in Eritrea, Sudan and Ethiopia and more than 10% in Uganda and Kenya.

Crossing borders and cross-border affinities: Pastoralist communities are not as isolated as is often thought. Many of them cross borders in search of grazing/water resources as well as marketing opportunities. In very many cases, they have blood ties, through ethnicity or marriage, with pastoralist communities on the other side of the border.
Highland/urban elite domination: Many of the more powerful groups vis-à-vis the state (highland settlers, urban elite commercial farmers, the military and big foreign companies) tend to occupy traditional grazing lands on the pretext that it is in the national interest. Such interventions in many ways undermine traditional land management adopted by pastoralists and have made them more vulnerable economically.

Disaster proneness: Wars, droughts, famines tend to affect pastoral areas more than sedentary areas.

- There seems to be more insecurity in pastoral areas (due to insurgencies of one kind or another),
- Wetlands (riverine areas) in pastoral areas are under the greatest pressure, from expanding agriculture
- Famines tend to have their worst effects in pastoral areas.

Neglect in terms of development interventions: Reflecting on experiences so far, it is apparent that most development interventions in the pastoral areas are either imposed from the top by government and/or inappropriate, i.e. not tailored to the needs and aspirations of pastoral people. Such interventions have in fact led to further socio-economic and political marginalisation of pastoral peoples.

Land tenure issues: In most of the countries of the Horn of Africa, legislation regarding land-use does not accommodate or guarantee pastoral land rights and access. In some cases this has led to violent conflict between the state and pastoralists.

Some new thinking and positive developments: Over the last decade there have been some positive developments, which may positively affect pastoralist livelihoods region wide. These include:

- Greater recognition by the state of the positive economic contribution pastoralists make to the national economies.
- A greater knowledge base, based on sound research on the pastoral way of life, and the overcoming of old stereotypes.
- The World Bank, UN agencies and international NGOs recognize pastoralism as an important form of land use, that makes an important contribution to the national economy, and are willing to support it.
- There are a number of local NGOs/CBOS, created and managed by pastoral groups, representing their interests.
- More and more pastoralist associations and unions are emerging as pressure groups in each country region-wide.
- Some governments, e.g. in Uganda and Kenya, have allowed the formation of parliamentary pastoralist groups (PPGs) bringing together MPs representing pastoralist constituencies.
- The idea of better services through mobile clinics, mobile schools, and mobile para-vets is now being introduced in some of the countries.
The above analysis of the regional context is relevant to the sovereign state of Eritrea because pastoralists are major stakeholders and Eritrea should make use of the positive experience of its neighbours so as not to repeat the same mistakes.

1.3 **Pastoralism in Eritrea: An Overview of the Production Systems**

The production systems observed in the surveyed sub-zobas broadly represent the national picture in Eritrea where crop and livestock productions are not mutually exclusive of each other and there is indeed a high degree of complementarity, so high that one system could hardly survive without the other.

According to Fre (1989) pastoralism in Eritrea is in general semi-sedentary, and has the following characteristics:

- It lacks uniformity and specialisation; there is almost no clan which can be referred to as ‘purely’ pastoralist;
- It cuts across ethnic, cultural and ecological boundaries; communities interact economically and share available range resources;
- It is based on multi-species-based herding;
- It contributes significantly to the local economy through animal sales at local and regional markets.

Although the general trend is to move towards agro-pastoral mixed farming systems there are still important distinctions between the production systems.

According to Nauheimer (1994): “…The majority of the population in the Gash and Setit province can be classified as agro-pastoralists with a tendency towards mixed farming. In the past animal husbandry was more important for the economy of rural households. During the twenty years war, epidemics and recurrent droughts caused a reduction in the livestock population by at least 50%. Because some herds are so depleted and cash for restocking is unavailable it is difficult for many farmers to build up new herds...”

The pastoral nomadic system can be defined as a system in which more than 50% of total revenue or more than 20% of food energy needs derive from livestock. Extensive long-range nomadism is a traditional practice in Eritrea, which over the last few years has diminished due to external circumstances. Nomadic pastoralists among Beni-Amer migrated seasonally with their herds to the Eritrean/Sudanese and Eritrean/Ethiopian borders. Even among the pastoral nomads members of the household (women and children) always remained in the traditional territory whereas able-bodied men migrated afar with dry herds across borders. In fact although this system has diminished in importance it is, in no way, exclusive of the agro-pastoral production systems as some members of the family are involved in some form of sedentary agriculture or wage labour. So it is possible that part of the family could be agro-pastoral when the other part is pastoral/nomadic.

The second production category we can refer to as a semi-sedentary pastoral system. This is perhaps a system where the orientation of the producers is still more livestock
oriented while engagement in some form of agricultural activity is considerable. The Beni-Amer and the Hdareb typify this sort of system. We can take the Forto-Sawa area to describe a system of this kind. Land was cleared for agriculture less than a generation ago. Local custom now allows inheritance and land can be hired or leased. The main crops are sorghum, millet and sesame (Fre 1992).

The grazing cycle covers rangeland, riparian woodlands and crop residues. The seasons are characterised by different sources of animal feed and water and different labour requirements. The wet season grazing and dry season are not too distant from each other and the movement pattern is clearly semi-sedentary. Livestock remain at the dry season camp until June and move to the wet season camp at the onset of the first rains. In July the dry season camps are along the main watercourses where family clusters set up their tents together. The groups protect their trees by not cutting them and at the same time also prevent other people from doing so. Leaves and pods are collected for fodder.

Goats, sheep and camels are by far the most important animals in this kind of a system. On average goats wean two kids a year and produce 1.5 kgms of milk per day during their lactation. Camels are an important part of this system and provide milk and transport.

It suffices to say that animal offtake from the semi-sedentary production system is quite considerable and such areas supply the Gash-Barka region’s major markets such as Asmara and Agordat. With the exception of animals retained for breeding or work, males are removed from flocks and herds at an early stage. In the past home consumption was an important element of off takes but most males and old, culled females are now sold at major markets inside Eritrea and eastern Sudan.

The semi-sedentary pastoral system is closely tied to the use of the riverine resources and faces greater risk from the unplanned and externally imposed development interventions in the riverine areas as will be discussed later. Planners should appreciate that part of the riverine areas are essentially dry season refuges for this sort of production system as well as for the sedentary groups.

The third system is what is referred to as agro-pastoral sedentary and is widely practised in Gash-Barka region. The general estimation is that almost half of the population in Gash-Barka could be described as agro-pastoral. The agro-pastoral system cuts across several communities. By definition an agro-pastoral system is where 10-15% of the total revenue comes through consumption, sales and capitalisation of livestock. Using this as a general yardstick one could say that the agro-pastoral system is the predominant system throughout Eritrea. The crop and livestock production systems are highly integrated and there is no exclusion of one by the other. Traditionally highland and lowland interaction has been part of survival strategies for both groups.

It is common for highland agro-pastoralists to migrate towards the eastern lowlands and western lowlands during October to May. Such herders venture back to their villages periodically to prepare their land for the forthcoming season. Many such farmers, akin to the farmers of Shambuko, had similar migratory patterns, which took
them from eastern Hamasin to the western lowlands. Many such farmers have settled permanently in the western lowlands.

There is evidence of interaction between the highlands and eastern lowlands, by which lowlanders traditionally send cattle to the highlands during the rains. This is an area worth investigating.

It is estimated that half of Eritrea’s livestock population is concentrated in and around the Gash-Barka region indicating the importance of the region as a national resource base. The rangelands are therefore under intense pressure from domestic and migratory herds. Migration is an important survival strategy for all the production systems and it is a response to critical shortages of pasture and water, which affect all groups.

In terms of livestock products, draught power, crop manure and fuel (dung), livestock will remain a major source of livelihood for the rural population and also a source of cash and social prestige. Livestock will continue to play a significant role in the national economy contributing well beyond the estimated twenty-five percent of agricultural GDP.

It has to be stated that reliable figures on livestock and the extent of their contribution to domestic and international markets are unavailable. Nauheimer (1995) stated that in 1994 that 35,000 heads of sheep and goats were exported to Saudi Arabia from the Gash-Setit alone earning for the country an estimated $100,000. The export trend has been on the increase since liberation in 1991.
<table>
<thead>
<tr>
<th>Sub Zone</th>
<th>Administrative Centres</th>
<th>No. of Villages</th>
<th>No. of Households</th>
<th>No. of Families</th>
<th>Population</th>
</tr>
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<td>Logo Anseba</td>
<td>13</td>
<td>22</td>
<td>8,035</td>
<td>33,816</td>
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<tr>
<td>Mensura</td>
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<td>93*</td>
<td>11,837</td>
<td>48,933</td>
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<tr>
<td>Agordat</td>
<td>7</td>
<td>49*</td>
<td>9,424</td>
<td>32,661</td>
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</tr>
<tr>
<td>Digge</td>
<td>9</td>
<td>83*</td>
<td>9,744</td>
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<td></td>
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<tr>
<td>Mogolo</td>
<td>10</td>
<td>38</td>
<td>6,478</td>
<td>20,781</td>
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<tr>
<td>Molqi</td>
<td>17</td>
<td>61</td>
<td>9,929</td>
<td>35,801</td>
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<tr>
<td>Shambuko</td>
<td>13</td>
<td>37</td>
<td>8,946</td>
<td>31,140</td>
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<tr>
<td>Barentu</td>
<td>4</td>
<td>18</td>
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<td>Gogne</td>
<td>20</td>
<td>74</td>
<td>11,011</td>
<td>38,151</td>
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<tr>
<td>Forto</td>
<td>8</td>
<td>65*</td>
<td>10,404</td>
<td>39,131</td>
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<td>Haikota</td>
<td>14</td>
<td>79</td>
<td>11,136</td>
<td>41,138</td>
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<tr>
<td>Upper Gash</td>
<td>19</td>
<td>72</td>
<td>12,854</td>
<td>50,159</td>
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<tr>
<td>Om-Hager</td>
<td>6</td>
<td>54</td>
<td>13,230</td>
<td>48,251</td>
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<tr>
<td>Tessenei</td>
<td>7</td>
<td>39</td>
<td>9,011</td>
<td>39,032</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>160</strong></td>
<td><strong>784</strong></td>
<td><strong>138,287</strong></td>
<td><strong>515,568</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Gash-Barka Zonal Administration, 1998

*Predominantly occupied by semi-sedentary pastoralists according to the present survey*
1.4 The Situation Prior to the 1998 Ethio-Eritrean Border Conflict

Thirty years of bitter war and conflict, together with declining ecological conditions, have had a drastic impact on pastoralism and pastoralists’ standards of living have been severely affected. Since 1993, the Government of Eritrea has been acutely aware of the urgent need to intensify the struggle to expand the production capabilities of all Eritrean people.

Examples of the development initiatives which have been launched by the Government are:

- Water provision for both domestic and stock use
- Provision of veterinary services
- Training para-vets
- Extension on pasture and livestock management
- Introduction of irrigated agriculture in suitable areas and its integration with livestock production

Future Government programmes aimed at developing pastoralism were also to include:

- Regulation of pasture use and delineation of permanent pasture lands
- Protection of traditional grazing areas
- Land reclamation and reforms in accordance with the land proclamation
- Introduction of modern grazing systems and promotion of positive traditional practices.

When the border war broke out in May 1998, many of these efforts were halted and such plans are now being revisited.

1.5 The PENHA-NUEYS Study

1.5.1 Study aims and objectives

The recent border war between Ethiopia and Eritrea (1998-2000) displaced nearly half of Eritrea’s population of 3.5 million. Almost all the communities living along the 1000 km Ethio-Eritrean border were displaced and uprooted from their settlements by the Ethiopian army, fleeing to the Eritrean hinterland, especially during the third offensive of April-May 2000. All the frontier communities were hit hard by the war, as the present study has shown, but NUEYS and PENHA were particularly interested in addressing the impact of the war on nomadic communities. The six month long study implemented by NUEYS and PENHA, with funds from NOVIB, had several major components, which are set out below.
a) Assessment of the War’s impact on pastoral livelihoods

The central aim of the research programme was to:

- Identify and assess the impact of the recent border war between Eritrea and Ethiopia on Eritrea’s nomadic/pastoralist communities. This research proposal is the first attempt to clarify how the war has affected the livelihoods (economic and social support systems) and life chances of nomadic/pastoralist people.

The research also has broader aims and seeks to have a significant impact by:

- Generating new information, as well as debate within Eritrea, on the role and significance of nomadic livestock keeping/pastoralism in the economy. This is the first step towards encouraging policy makers, development agencies and others to acknowledge pastoralists as important stakeholders in the national and regional economies.

- Bolstering efforts to lobby Government to accord higher priority to pastoral communities in development programmes and spending in key areas such as supporting pastoralist organizations' awareness programmes on natural resource management and organizational skills for the development of micro projects.

- Helping to ensure that local and central government is more responsive to demands for policy change from civil society.

b) Nomadic Education Review

There are currently two boarding schools for children from nomadic/pastoralist communities in the proposed research areas in Western Eritrea. PENHA and NUEYS will use the educational research to examine the educational curriculum and extra curricular activities of the two boarding schools.

The Nomadic Education Review aimed to determine:

- The effectiveness and impact on the pastoralist way of life of Eritrea nomadic education programmes.
- The educational opportunities offered to children in nomadic/pastoralist communities.
- Available resources and the range of training and support for teaching and non-teaching staff.
- How the educational process, including teaching and support systems, increases pupil’s self-esteem, motivation and aspirations and involves parents in raising children’s achievement and benefits for the community as a whole.
1.5.2 Data gathering and research methodology

A team of experts and researchers from PENHA and NUEYS was set up to undertake the post war impact assessment under the leadership of PENHA.

### Table 1.2 Composition of the PENHA-NUEYS research team
[add names]

<table>
<thead>
<tr>
<th>Name</th>
<th>Qualification</th>
<th>Specialization</th>
<th>Gender</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhD</td>
<td></td>
<td>Pastoral Systems Specialist</td>
<td>M</td>
<td>Team leader (PENHA)</td>
</tr>
<tr>
<td>MSc</td>
<td></td>
<td>Physical Geographer</td>
<td>F</td>
<td>Researcher (PENHA)</td>
</tr>
<tr>
<td>BA</td>
<td></td>
<td>Sociologist</td>
<td>F</td>
<td>Researcher (NUEYS)</td>
</tr>
<tr>
<td>BA</td>
<td></td>
<td>Development Generalist</td>
<td>F</td>
<td>Researcher (NUEYS)</td>
</tr>
<tr>
<td>15 years field experience</td>
<td></td>
<td>Cameraman</td>
<td>M</td>
<td>Cameraman (NUEYS)</td>
</tr>
</tbody>
</table>

PENHA and NUEYS decided to include a mix of qualitative and quantitative methods namely:

- Questionnaires completed based on face to face interviews (110 households in all three districts)
- Focused group discussions (45 sessions in all three districts, 540 persons in all)
- In-depth semi structured interviews with key informants (8 persons)
- Participant observations and a number of informal discussions in the field (watering points, livestock markets etc).
- Six-hour video of livelihood documentary documented through the process of the study.

An effort was made to gather information from as wide ranging group as possible with reasonable representation from ethnic, gender and age perspective.

A preliminary study was carried out from 19th-26th of March 2002, to pre-test the questionnaire in Gash-Barka region, in areas such as Forto-Sawa, Tesseny, Geluj, Shambiqu, and Barentu, with key informants, ministries, returnees, youth, women and men as well as in market places during the pilot field visit.

The main fieldwork was conducted during April-May 2002. The household questionnaires involved about 110 households, and looked at different categories such as men, women and youth.

The qualitative data was gathered from different social categories and age groups including: old men, women, youth, boarding school teachers and students, agencies, returnees and people at market places (see table 1.3). A total of 45 focus group discussions (each FGD involving 12 persons) were conducted in Gash-Barka, with people from different ethnic groups in 8 settlements, namely Gerset, Homib, Kuletibay, Geluj, Gergef, Shamibuko, Tebelida, and Waalkay. Moreover, a great deal of information was collected through observation and video recording to fill any missing gaps in the research.
In-depth interviews with 8 key informants were conducted with local administrators, influential community leaders, Ministries and NGOs to get information about the impact of the war on the pastoralists' lives and on their livestock, as well as on the issues of the expansion of agricultural land versus grazing land and of services given or available to the pastoralists in the study areas.

The household interviews were analyzed with SPSS while the focus group interviews, which were purely based on qualitative data, were afterwards divided into specific topics (e.g. shortage of grass land, lack of veterinary services etc). During the analysis process the research team counted how many interviews referred to each topic and established some ranking of priorities and concerns as perceived by pastoralists and other livestock owners. All team members were involved in the data analysis.

1.5.3 Limitations of the study

Despite its relevance and significance, being community-based and African-led, the study had major limitations which the study team are ready to admit.

Firstly, well over 70% of the respondents involved were male and the study is not able to claim that it fully reflects the view of women. This is despite the fact that more than 50% of the research team was female and special efforts were made to increase the number of women respondents during the course of the study.

Secondly, pastoralists and livestock owners collaborated with the study team wholeheartedly but they had other priorities and needs. They seemed to be research-fatigued and at times cynical as to what material benefits the research would bring to them. The research team could not meet the respondents material needs (money, food aid, medicine etc) but were able to provide a small financial incentive (Nakfa 50 per person during FGD interviews).

Thirdly, the sample size as far as household surveys are concerned was fairly representative but too low because of the reasons explained above. We were aiming for at least 200 households and lesser FGDs but during the course of the study we had

Table 1.3 Composition of FGD Groups

<table>
<thead>
<tr>
<th>Number of FGD</th>
<th>Total No. of Persons</th>
<th>Category</th>
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</thead>
<tbody>
<tr>
<td>12</td>
<td>144</td>
<td>Traders and pastoralists at Livestock markets</td>
</tr>
<tr>
<td>11</td>
<td>132</td>
<td>Older pastoralists</td>
</tr>
<tr>
<td>8</td>
<td>96</td>
<td>Women</td>
</tr>
<tr>
<td>5</td>
<td>60</td>
<td>Youth</td>
</tr>
<tr>
<td>5</td>
<td>60</td>
<td>Boarding school youth</td>
</tr>
<tr>
<td>4</td>
<td>48</td>
<td>Returnees</td>
</tr>
<tr>
<td>Total</td>
<td>Total</td>
<td>-</td>
</tr>
<tr>
<td>45</td>
<td>540</td>
<td>-</td>
</tr>
</tbody>
</table>
established we could obtain more qualitative information by doubling the number of FGDs and reducing the number of households.

Fourthly, the lack of refined research tools specifically designed to study pastoral systems in post-war situations have necessitated the use of multiple and time-consuming data collection methods.

Despite the above difficulties the research team approached the study with an open mind and tried to minimize subjectivity and bias in interpreting the data in hand.

The study was also timed during the long dry season. The harsh climate, the scarcity of water, long distances travelled etc. inevitably put additional strains and stresses on the PENHA-NUEYS research team.

One should conclude by saying that such a study was first of its kind for NUEYS and to a lesser extent for PENHA and the whole process allowed mutual learning. The limitations mentioned above should be seen in that context.
2. GENERAL FINDINGS

This section will present some of the major findings of the research, arising both from the quantitative and qualitative methodologies, before Sections 3, 4 and 5 present some more in-depth findings on the impacts of war, the role of women, and pastoralist education respectively.

2.1 Socio-Economic Context of the Study Population

The main purpose of this section is not to provide a full description and analysis of the social organisation of the various ethnic groups but rather to outline the power structure within the community, and how such structures manage resources and cater for the poor within the community. The traditionally pastoral groups, the Tigre and Hadareb [I personally would use Hadareb throughout, which looks a lot less odd in English, and is used in Sudanese literature, unless the transliteration Hadareb is official in Eritrea] will be discussed together, though they are etho-linguistically distinct, followed by the more traditionally agricultural Tigrinya.

2.1.1. The Tigre (Beni-Amer) and Hadareb

The Tigre-speaking Beni Amer and the Cushitic-speaking Hadareb have traditionally practiced a semi-sedentary form of pastoralism in the western lowlands. The Tigre-speaking communities and the Hadareb have traditional organisations, which consist of clans, Ghebilet, and sub-clans, Feriq, lineages and extended family structures. The Beni-Amer who are the most important group within the Tigre-speaking communities have traditionally been divided into lower and upper classes. A small minority of the Beni-Amer aristocracy, the Shumagelle or Nabtab, for centuries ruled over the majority of the lower serf class and tribal groups (including other Tigre speakers and Hadareb) by subjugation or conquest. The ruling Beni-Amer aristocracy held authority, social status and a great deal of material wealth, which was mostly livestock-based. The Nazir was the highest authority and was supported by the Omda or clan leaders. The aristocracy reaped economic benefits from its social status by owning large numbers of animals, keeping slaves, taxing the serfs and observing taboos such as aristocratic women not being allowed to milk animals or grind corn. The aristocracy did not inter-marry with the lower classes. The various colonial authorities, which ruled Eritrea for over a century, supported the aristocratic groups enabling them to strengthen their hold on power among the communities.

During the 1940s a major rebellion by the serf classes seriously undermined the authority of the aristocracy and ultimately weakened its power. Since the beginning of the liberation struggle in 1962 the authority of the aristocracy was further undermined by the disruption of the cattle economy due to drought and war. The disruption of the pastoral economy led to the pauperisation of the aristocratic groups along with the serf classes. Both groups joined the liberation struggle and this ultimately led to radical changes which have undermined and abolished the Beni-Amer aristocracy altogether.

By the end of the liberation war in 1991 more new grassroots structures had emerged. On one side there is a traditional village council structure which consists of community leaders and sheikhs and on the other the peoples’ assembly or baito
emerged as a political structure organised by the Eritrean Peoples Liberation Front (EPLF). The Baito structures become part of the formal administrative government structures after independence during in 1993.

2.1.2 The Tigrinya

The Tigrinya are the dominant group whose traditional territory is the central highlands of Eritrea. Due to overpopulation and over-exploitation of natural resources in the highlands, some of the communities, which border the western lowlands, decided to migrate permanently in search of better agricultural and grazing opportunities to the western lowlands. According to current information such settlements began in the early 1950s and the number of highland settlers in the lowlands has increased since that time. The Tigrinya-speaking population is one of the major livestock-owning groups in the lowlands.

The highland system was administered by the village chiefs, Shumamnti, and a committee of elders, Shmagele. When the highlanders migrated to the western lowlands they maintained a cohesive social structure and organisation. In their traditional territory in the highlands they have a very different land tenure system wherein arable land was equally distributed to all households in a village. Under this *diesa* system land was distributed approximately every seven years and was strictly divided among the villagers. Another system, *risti*, comprised of land that was privately owned but lacked the equitable distribution system of *diesa*. The *diesa* system allowed farmers to own their own land in more than one village and this often resulted in long court battles over the establishment of inheritance rights.

The new settlers in the western lowlands occupied lands, which were traditionally *terre dominale*, state-owned lands, and they had user rights on such land which they occupied through peaceful expansion into what was then forest and probably dry-season land for nomads.

The highlanders were traditionally mixed farmers and traditionally practiced mixed farming and combined livestock and crops. Having found better grazing and better land they were able to revive their traditional skills in livestock management and are now able to run and integrate a productive farming system in their new areas. The Tigre and Tigrinya groups are the major providers of livestock to the Asmara markets in the highlands.

The powers of the feudal aristocracy among all the groups surveyed have diminished greatly over the past forty years and decision-making in the village rotates around the Council of Elders (*mahber*) and the *baito* who are the elected representatives of the community. The most prominent structures are those of the *baito*, which were created and inspired by the liberation movement, the EPLF. *Baito* functions among the Tigrinya group are similar to those described in the previous section.
2.2 Quantitative Findings Based on Household Interviews

2.2.1 Background to the respondents

The respondents (110 households) were predominately men who presented themselves as household heads. A considerable number of women heads of households, local youth and returnees were also interviewed. The mean age of male respondents was 45 years (+ SD 10 years). The age of male youth respondents varied greatly but the mean age was 18 years (+SD 5 years). Women interviewees varied greatly in terms of age, ranging from 18 to 60 years.

The illiteracy rate among older men and women respondents was more than 90%. Among the youth (including but not only returnees from Sudan) the level of literacy is much higher and most of them can read and write.

In terms of ethnic composition the respondents came from the Tigre, Tigrinya, Saho and Hdareb groups and a few from the Bilen. About 35 households were involved from the three study areas of Geluj, Shambuko and Forto Sawa. [What does this mean?] The respondents included nomadic pastoralists, agro-pastoralists, traders youth, women returnees and boarding school students.

During the process of the study it has emerged that the researchers and respondents had very different expectations from the study. Having come out of a war situation the respondents had immediate needs such as food aid, shelter, availability of more grazing land, better social services (health, education), water etc.. The respondents also thought of the researchers as government representatives and made several demands on them well outside the scope of the study.

The researchers were however not able to fulfil any of the above-mentioned expectations other than providing small financial incentives for the respondents during the interviews.

The team originally aimed to conduct 200 household interviews and 20 focused group discussions. The team reviewed the situation half way during the course of the study and found that better quality information could be obtained through the FGDs. The research team then decided to increase the number of FGDs to 45 and limit the household surveys to 130. The research team managed to obtain 110 household interviews and discard 20 questionnaires as incomplete. (See Annex for household questionnaires)

2.2.2 Impact of the border war

War-related death, injury and displacement

Among the interviewees 1% claimed that family members [is my interpretation correct?] had been killed, over 5% claimed that family members had been injured, and a greater number had been displaced. The majority of those injured and displaced were in Shambuko and a few in Geluj. Shambuko is the most affected area because it is adjacent to the Ethiopian border. Forto-Sawa has been least affected because it was far away from the front line.
Status of settlement

Forty-five percent [this figure cannot be a true average of those in the table] of all questioned claimed their properties were looted and their homes destroyed by the occupying Ethiopian forces during May 2000. The majority [No! the graph says only 43!] of the Shambuko inhabitants had to be evacuated to avoid the occupying Ethiopian army. They returned to their settlement during July of the same year when the Ethiopian army withdrew from the Shambuko area. In Geluj 39% claimed their property has been looted or lost but in Forto-Sawa only 8% claimed some houses have been destroyed. The main conclusion is therefore that Shambuko and Geluj were the most affected areas while Forto-Sawa stayed nearly unaffected.

![Scale of Houses Destroyed/ Burnt by Subzoba]

Looting/ Losses of Livestock

An astonishing number of 90% of those questioned in Shambuko claimed they had lost livestock followed by 77% in Geluj, while in Forto-Sawa 26% made such claims. In all three Sub-zobas the majority of those reporting losses had lost between 11-30 animals. However there were claims in Geluj and Shambuko of losses of 150 or more animals per household.
2.2.3 Dynamics of Occupation

Current occupation

Over one third, 37%, of those questioned were pastoralists while the remaining 19% were agro-pastoralists and 16% farmers/agriculturists. [it would be useful here or elsewhere to set out the local terms that were used in the questionnaires] This indicates that livestock rearing in its various forms is still a major occupation among the rural communities in the three Sub-districts. A small minority of people among the respondents own hotels, shops/bars and others are involved in wage labour, trade etc. [I make it 28% of the sample had non-agricultural occupations – not a “small minority”]

Relation between current and past occupation

A high [was it really high or “slight as it was also described in the previous draft?] degree of switching can be noticed from “farmer/agriculturist” to “pastoralist” and to “agro-pastoralist”. The highest number of former farmers who switched to pastoralism can be found in age group 46-60. [I am concerned about how this cross-tab was done and whether the sub-sample is large enough for this to be a significant statement] The rise in the number of livestock owners after the war was most marked in Shambuko followed by Geluj, whereas the numbers of farmers fell in both Subzobas. In Forto-Sawa an opposite movement could be noticed, however the shift was very slight.

In Shambuko there were also major increases in the occupations “agro-pastoralist” and “housewife”, whereas in Geluj “shop- or barkeeper” as an alternative occupation showed greater increase.

The occupation with the highest recorded increase is pastoralism with [a net shift to it among the whole sample of] 6.6% and those shop-or barkeeper with 4.6%.
2.2.4 Source of Survival & Government Support

Main source of survival

The majority (26%) of those questioned cited agriculture as their main source of survival followed by 23% who live mainly from livestock and 17% whose main source of survival is agriculture and livestock. Governmental support is the main source of survival for 7%.

Relation between current occupation and main source of survival

Almost all occupational groups mentioned agriculture as main source of survival. Pastoralists are the occupational group that depend mostly on Government support. In relation to the occupational group one would expect that farmers/agriculturists see their main source of survival in agriculture, pastoralists in livestock etc. But (only) 63% of farmers/agriculturists name agriculture, 59% of agro-pastoralists name livestock and agriculture and only 45% of pastoralists name livestock as their main source of survival.

Government aid

The major form of aid provided to the people is food aid: 54% of those questioned are receiving food aid, followed by 20% who receive no aid at all and 16% who receive food aid and house construction materials.

Forto-Sawa gets the highest amount of food aid with 66% of all those questioned being in receipt, followed by 48% in Geluj and 46% in Shambuko.

Whereas for the combination of food aid and housing materials, the situation was the other way around: Shambuko had the highest proportion of households receiving the combination, but with only 24% of those questioned, followed by Geluj with 16% and Forto-Sawa with 8%. The reason why Shambuko got most building material aid is
because of the high level of destruction of residential homes by the occupying Ethiopian army during May 2000.

Of those who claimed losses of livestock and other assets 47% were receiving food aid, 23% were receiving no aid at all and 21% were receiving food and housing materials. Of those who claimed they had not lost any livestock 69% were receiving food aid, and 19% said they were not receiving any aid.

Of all those who receive food aid 56% said they had lost livestock and other assets, 19% had not lost anything. Of all those who received food aid and housing materials 83% said they had lost livestock or other assets, 6% had had no losses. Of all those who were receiving any government aid, 72% claimed livestock losses and 14% had no losses.

2.2.5 Border crossing

Number of people crossing the border

Only two thirds of those questioned responded. However, of those two thirds claimed they were crossing the border occasionally or regularly with Ethiopia. The highest proportion (39%) is found in Shambuko, followed by 35% in Geluj and only 5% in Forto-Sawa. The majority (41%) of those who were crossing the border are pastoralists, but members of other occupational groups were also crossing the border with Ethiopia.

Length of stay cross-border

Of those who responded positively 41% were staying for over 6 months at a time.
Main reasons for border-crossing

Of those who responded, 100% said it was to find better grazing/water for their livestock.

Advantages/disadvantages if border crossing is forbidden

Of those who responded, 100% gave the main advantage as greater security and peace. A hundred percent (100%) gave the major disadvantage as shortage of grazing areas and water in the home base (i.e. Eritrea).

2.2.6 Future of pastoralism

Wishes for children

Sixty-seven percent (67%) of those questioned wished that their children should be educated, followed by 5% who were more specific and said they would like their children to become teachers or doctors.

![Wish for Children to Become...](image)

[is there missing data here – does not add up to 100%?]

Survival of pastoralism

Young people have greater confidence in the survival of pastoralism as opposed to the older people: 55% of the age group 16-30 believe in the survival of pastoralism, in the age group 31-45 it is still 47%, while in the age group 46-60 only 28% believe in its survival.

The majority of old people in the age group above 60 tend to feel unsure about pastoralism and its future. Those who believe in the survival of pastoralism and those who do not are almost the same in numbers.
Fifty-one percent (51%) of all pastoralists think pastoralism will survive followed by 39% of all farmers and 38% of all agro-pastoralists. There are as many farmers/agriculturists and agro-pastoralists who believe in the survival as those who do not (with some non-responses and “don’t knows”). Among pastoralists however, there are only 17% who do not believe in its survival compared with 51% who do.

2.2.7 Conclusions

The findings above, in brief, highlight the following:

Firstly, Shambuko being nearer to the Ethio-Eritrean border had suffered worst losses in terms of livestock and property. Geluj area has also suffered greatly. Both areas are economically significant in terms of agricultural activity and livestock production. For example most of the livestock sold in Asmara markets originate from these districts. It is also true to say that other migrant herds use the same areas for seasonal grazing. Therefore these losses represent a much wider picture of significant disruption to agricultural and livestock production activities.

Secondly, there is also some evidence which shows that livestock rearing is economically a preferred activity by both nomadic communities as well as so-called farming communities. Some farmers are clearly switching from farming to livestock rearing and hence developing some sort of an integrated farming system. There is clear evidence of this in Geluj and Shambuko and it can be partly explained by the relatively good availability of grazing and watering conditions. In the traditionally nomadic Forto-Sawa district there is an increasing trend to taking up agriculture/horticulture, which in some ways undermines pastoralism. There is serious encroachment of traditional wetland grazing areas which is becoming a constraint on traditional pastoralism. The grazing conditions in Geluj and Shambuko are relatively more favourable, and in fact a small number of pastoral nomads from the Forto-Sawa
district seasonally migrate southwards towards Geluj and Shambuko for better grazing.

Thirdly, there is a significant increase in off-farm activities such as wage labour, the catering industry and so on, in an attempt by the communities to diversify their economic activities. According to our findings there are more opportunities for off-farm activities in Geluj and Shambuko than in Forto-Sawa. The districts of Geluj and Shambuko have better access to markets and better infrastructure and people are more likely to invest in those areas.

Fourthly, in terms of food aid dependency it seems that the Forto-Sawa pastoralist communities depend more on Government food handouts than the communities in Geluj and Shambuko. In Forto-Sawa area the nomadic communities have been recently sedentarized under a Government settlement programme, and it appears that food aid could be a reason for nomads settling.

Fifthly, cross border migration to Ethiopia and Sudan is an individual choice for most livestock owners, and the risks are well known by pastoral nomads. The risks involve include cattle raiding, livestock thefts, heavy taxation by Ethiopian/Sudanese authorities and possible insecurity imposed by bandits.

Lastly, more than 50% of the respondents overall and, perhaps surprisingly the youth from a pastoral background, think that pastoralism is not a dying lifestyle and that it will survive in the future.

2.3 Qualitative Findings based on Focus Group Discussions

The focus groups were composed of livestock traders, pastoralists, agro-pastoralists, youth, women, returnees and boarding school students. Consistent with the broad aims of the study (i.e. assessing the impact of the recent border war), the respondents were randomly selected to represent different age groups, occupations, ethnicity and gender [this can hardly be true, if the focus groups were assembled based on occupational groups].

In terms of ethnic composition, Shambuko district is predominately inhabited by the Tigrinya ethnic group who are predominantly Christian cattle keepers and farmers. 70% of the interviewees in Shambuko therefore were from the Tigrinya communities and the remaining 30% were Tigre nomadic herders who have seasonally migrated to the Shambuko district adjacent to the Gash River. The Tigre who are predominately Muslim and nomadic spend up to 8 months (November- June) in the Shambuko and border areas and then migrate north (during rainy seasons (July- October) to their wet season camps where their families are located.

Geluj district, located south of Tessenei town, is mixed in terms of ethnic composition. Tigre, Saho and Tigrinya groups are the predominant groups and this was reflected in the FGD composition. The Geluj district is described by agricultural experts as the bread basket area for Eritrea. Crop/livestock concentration therefore is remarkably high leading to serious resource competition over farming and grazing land.
The third district of Forto-Sawa in the north is predominantly inhabited by nomadic peoples; most of them have now been sedentarized under a government settlement programme. The Tigre and Hдареb who are adherents to Islam constituted most of the FGDs interviewed.

All the communities interviewed were patriarchal and male dominated which is why out of the 45 FGDs only 8 FGDs were women.

The interviews were held in a variety of locations namely livestock markets, livestock watering points/wells, grazing areas, local government offices and boarding schools. For ease of analysis we have grouped the main findings thematically according to the category of the respondents. After each category we reproduce the main requests or proposals made by the focus group to government/donors.

a) Livestock markets and traders (12 FGDs)

The major problems identified in the FGDs held at market places were the shortage of grazing land and the loss of livestock due to the war.

Those questioned explained that there is a great shortage of fertile grazing land and water, due to restrictions of movement across the Ethiopian border and also within Eritrea (mentioned by 50%) and because of expanding farmland. Natural drought was also mentioned by 50% of those questioned, as an additional problem for the availability of grassland.

Poor market facilities and access were major concerns, followed by food shortage and lack of governmental aid as well as lack of veterinary services.

Focus Group Proposals
- Provision of revolving funds and assists livestock owners
- Provision of food aid for people to mitigate the possibility of starvation
- Improvement of livestock grazing conditions and watering conditions
- Banning of bush fires
- Restricting the expansion of farming
- Provision of veterinary services
- Creating/delivering cheap alternatives of animal food
- Building a sheltered market/compound for the livestock market
- Encouraging the export market

b) Pastoralists and agro-pastoralists (11 FGDs)

Shortage of grazing land caused by expanding farms which are encroaching to previous grazing lands is the greatest concern to all pastoralists and other livestock owners (100% claimed it to be the most critical concern).

The second major concern is the lack of veterinary services followed by lack of governmental support for development of the livestock sector. Livestock products (dairy, meat etc.) were also lacking because of the shortage of grassland areas.
In Forto-Sawa district family separation and reduced labor support from women and children due to sedentarization was mentioned by 60% of the respondents as major constraint to pastoralists. There were also additional problems of food shortage, lack of governmental support as well as restrictions of movement within Eritrea.

Focus Group Proposals

- Designation of grazing lands to create secure land access for pastoralists
- Equal treatment for farming and livestock
- Restoration of traditional grazing and watering areas for pastoralists.
- Continued provision of food aid.
- Minimizing of family separation caused by sedentarization by allowing semi-nomadic movements by nomads
- Education compatible with nomadic livelihoods
- Provision of veterinary services (vets and medicine). Construction of a local health centre.
- Help in building water dams and help in providing fodder for animals
- Provision of assistance for war-affected people in order to help people to re-establish their wealth
- Control of tree-cutting by providing paid forest guards
- Human services for settlements: effective water supplies, educational and better health facilities and services including Mother Child Health
- Organization of more centralized markets instead of large numbers of scattered markets that are difficult to manage
- Provision of public transport, improvement of roads, and provision of alternative economic activities, as well as revolving funds.

C) Women (8 FGDs)

The communities in Forto-Sawa district have become sedentarised only five years ago and 100% of women interviewed said that lack of livestock products (dairy, meat etc.), unemployment caused by the lack of economic alternatives, food shortage and lack of government aid are their biggest problems.

Other major concerns for women are the shortage of grazing land and water for livestock. Because of the lack of grazing near the settlements the able-bodied men have to take their animals to distant areas for better grazing areas and far away from their families. Women and children in the settlements are forced to provide additional family labor for fetching water and herd small stock etc. Many young men are also still serving in the national service and are kept away from their families. This means women and children have to provide more and more family labor to keep the family going.

Focus Group Proposals

- Increased provision of food aid.
- Provision of alternative economic activities for women.
d) Returnee youth from the diaspora in Sudan (5 FGDs)

The desire for education, was the most critical concern for all young people questioned. The educational goals however differ. Some want to be educated to escape pastoralism by becoming teachers and doctors and others still see some future in pastoralism provide that it is modernized and developed.

Most of the respondents were refugee youth born and bred in Sudan from Eritrean parents and who have recently returned to Eritrea to start a new life.

Focus Group Proposals

- Access to schools especially for children
- Introduction of fodder crops to feed animals and modernize the livestock sector

e) Administrators, ministry representatives and NGOs (8 key informants)

The major concern for the above authorities was the well-being of those people who had suffered as a consequence of the border war, directly or indirectly. The direct impact entailed livestock losses, loss of human life and assets and the indirect impact includes insecurity in the grazing areas and casualties among migrating herders near the border areas.

Also mentioned as critical problems are the lack of manpower, budget and capacity and the difficulty to deliver services to nomads because of their mobility. Some members of administration and ministries also claimed that there is a lack of popular participation in planning development interventions.

Focus Group Proposals

- Improving the capacity of local ministries/administration/NGOs to provide services to herders specially tailored for them
- Appreciation of the difference between the nomadic way of life and the sedentary way of life
- Integration of farming and livestock development interventions and making such interventions more popular and participatory
- Greater availability of research results (about the area) to local authorities
- Development of livestock as a source of income for the national economy
- Development and promotion of medical, water and educational services
- Provision of training for pastoralists in animal health and management
- Secure land-use rights for grazing
- Encouragement to pastoralists to keep manageable numbers of more productive livestock
- Development of animal hides and skin markets.
f) Children from the nomadic boarding schools in Gogene and Forto-Sawa (5 FGDs)

A great concern for teachers and students in boarding schools are the school drop-outs (mentioned by all questioned) followed by the lack of adequate students’ dormitories.

Also mentioned as most critical problems by over 50% of those questioned were the shortage of books and low student performance and motivation, which could be the result of other factors such as long separation from their parents and lack of role models.

Focus Group Proposals
- Provision of books and other facilities to local nomadic schools
- Encouragement of female students to complete secondary school education.
- Provision of recreational centers and libraries
- Mobilization of the whole community to understand the value of education for their children
- Provision of all necessary facilities for boarding students and creation of a better learning environment
- Provision of more mobile schools
- Making the educational curriculum more relevant to the nomadic students’ way of life
- Better living conditions, in-service training and refresher courses for teachers.
- Training of more teachers from within the nomadic community.

g) Returnees from Sudan (4 FGDs)

The major concern was the shortage of grazing land (mentioned by 100% of those questioned). Half of those questioned also mentioned the lack of employment in the returnee camps as a critical concern.

Focus Group Proposals
- Secure land use rights (clear land demarcation for agricultural and grazing use).
- Provision of additional support for the specific needs of returnees
- Provision alternative sources of employment
- Provision of more tractors to cultivate more land and assistance to poor families by provision of male camels to enable them to cultivate the land.
3 THE SOCIO-ECONOMIC AND ENVIRONMENTAL IMPACT OF THE 1998-9 ETHIO-ERITREAN WAR

3.1 Introduction

The arid and semi-arid rural areas of Eritrea are dominated by subsistence-oriented pastoralism. Particularly in the Western and Eastern Lowlands, where rainfall is very low and has a high variability in time and location, people have been practising pastoralism since they first settled those areas.

Like all other traditional economies, pastoralism is well adapted to the harsh natural conditions of the region. Because of its small size Eritrea has hardly any horizontal climatic zones. However, its highlands give it vertical climatic and vegetative zones, which play a major role in the migration routes of Eritrean pastoralists.

Pastoralists in the Western Lowlands of Eritrea usually migrate to the mountain areas in the summer, and stay there for several months.1 In the Gash and Gash-Mereb Region many pastoralists used to cross the border to Ethiopia with their animals during those months in search of fertile grassland. Some even went deep into neighbouring Ethiopia, as far as Gonder.

For pastoralists in general, crossing national borders has never been an issue of great significance as they rather respect natural borders, or even “cultural” ones, whereby a certain area belongs to a particular clan or group. Political borders are, for the most part, only given emphasis by their governments, which often order restrictions of movement in times of political tension or armed conflict between one country and its neighbour.

Since the outbreak of armed border conflict between Eritrea and Ethiopia, in May 1998, pastoralists in Eritrea have been facing severe restrictions on movements across the Ethiopian border.

But restrictions on mobility are not the only problem Eritrean pastoralists have to face these days. In fact, the border conflict had such a huge impact on the livelihoods of pastoralists that there is great concern in the rural areas as to whether pastoralism has a future in Eritrea at all.

This section will outline the problems pastoralists currently face as a result of the border conflict. Furthermore, it will examine how these problems can be addressed as well as the question of whether or not pastoralism has a future in Eritrea.

1 The period of time spent in the mountain areas ranges from 1-10 months. However, the majority spends 2-5 months in the area.
3.2 The Impact of the 1998-9 Ethio-Eritrean War on Pastoralism

3.2.1 Socio-economic effects

There are many different factors which will have a major impact on the future of pastoralism in Eritrea. There are effects which arose during the armed conflict (direct factors), and others, which occurred afterwards as a consequence of it (indirect factors).

One of the direct factors was the looting of animals by members of the Ethiopian army and other war-related losses of animals. In interviews we conducted with pastoralists, the loss of animals ranked high among their concerns. In the sub-zoba of Shambuko and Geluj, livestock losses were very high as these areas were at the centre of the armed conflict. In Shambuko, 90% of those questioned claimed to have lost livestock, mainly through looting, and in Geluj over 77% of respondents made the same claim. In the sub-zoba of Forto-Sawa, 26.3% of those questioned claimed to have lost livestock. The majority had lost between 11-30 animals, however, there were some who claimed to have lost 150 or more animals.

Moreover, there were reports that animals are still being taken by Ethiopians (probably mostly soldiers), especially from those pastoralists who are taking the risk of crossing the border in search of pasture and water. There have even been cases of herders being taken with their animals and held in Ethiopian territory. Some of these herders have been sent back after a while, though others have not been heard of since.

Other direct factors, which pastoralists had to face during the armed conflict, are displacement, the loss of homes and property, as well as serious injuries and the loss of human lives. Again, Shambuko, followed by Geluj, suffered most. There have hardly been any losses of lives in any of the target areas: only a small minority has been injured and some have been displaced.

3.2.2 Environmental effects

It is very difficult to measure the extent of the natural degradation that has occurred as a result of the war. It is impossible to identify changes in a given area without data about the pre-war condition of that area.

However, in times of crisis, such as war, migration and displacement, people in poor countries are generally forced to exploit natural resources more intensively in order to survive. Emergencies often lead to overcrowding in refugee camps and other temporary settlements and this in turn leads to an over-intensive use of natural resources, principally trees and water. This can cause or promote desertification.

During the recent war, many tons of timber were taken to the front for the construction of hundreds of kilometres of defensive trenches. A huge amount of timber was cut down in the riverine forests. It was mainly the timber of the *doum* palm tree that was used, as it is very hard and resistant (Bokrezion 2000).
Trees are very important to pastoralists, providing firewood, fences for livestock (to protect them from wild animals) and timber for tents and huts. They are also essential as a source of fodder and browsing when there is shortage of grass.

There was already a serious lack of forest and tree cover in Eritrea in the past and more intensive exploitation during the war will have had a huge impact on a fragile environment.

Over-intensive use of trees and water points causes a lack of moisture in soils, which can lead to land degradation. For pastoralists who are already facing shortages of pasture, this process increases the threat to their livelihoods. Moreover, it is not only pastoralists that are affected. In fact, the impact of this environmental degradation appears to have been much greater on farmers. In a study conducted in 1999/2000, some farmers in Mogorayb stated that they had become “semi-pastoralists” having been forced to migrate up to 30 km with their animals during the dry season in search of water and grassland (Bokrezion, 2000).

3.2.3 Analytical discussion

The direct impact of the war - the losses of livestock, homes and other assets, as well as the human casualties and displacement - had a big impact on pastoralism, economically and also psychologically.

While pastoralists identified the loss of livestock as one of their major concerns, a majority said that they could readily restore herd sizes, given governmental support and the necessary access to grazing.

Furthermore about half of those who participated in focus group discussions stated their desire for peace and identified its importance for the survival of pastoralism. The optimistic attitude towards making good the losses of livestock and the emphasis placed on the desire for peace, suggest that the direct impact of the war, in terms of short-term economic losses was very significant, but will be relatively short lived and perhaps less important in the longer term than its psychological impact. That is to say, once confidence is restored, the pastoral sector has the capacity to recover.

The indirect factors rather than the direct ones are of great concern to the pastoralists for the future of pastoralist communities.

These factors are the following:

- Restrictions on movement, across the Ethiopian border, but especially within Eritrea due to military camps, land mines and areas restricted for other security reasons, which lead to a shortage of available pasture. This shortage of grassland decreases the productivity of livestock (less milk and meat, etc.) and in some cases also leads to starvation and death of animals. (Shortage of grassland is also increasing due to drought and the expansion of agriculture. Pastoralists are claiming that the absence of clearly demarcated grazing areas, are leading to high penalties such as cash payment and the enclosure of animals in compounds).
• Lack of traders at markets and too many small, inefficient market places are a further problem that has been raised as an after-war-effect. Livestock prices are rising and people are starting to lose a lot of time in marketing rather than looking after their animals.

• Absence or inadequacy of food aid and governmental aid, which forces pastoralists to sell their animals.

• Shortages of labour due to the imposition of mandatory military service, with all able-bodied males called up.

Pastoralists also claimed that taxation, and restrictions on the sale of meat from animals that died of starvation are causing additional strains on the communities.

The effects of the war lead further to social and also psychological problems within the pastoral community. The following are some of the socio-psychological problems that are of major concern:

• With reduced access to grazing lands, herders are forced to move longer distances in search of pasture and water, which often means longer periods of family separation. Forto-Sawa, where a lot of families have been sedentarized, has been particularly affected as the women and children of the household are now staying in the settlement to take care of their homes.

• The difficult economic situation in families and the shortage of labour within a family may be leading to increased school dropout rates and poorer performance and motivation among students. These were critical concerns for boarding schools in the study area.

• With the economic crisis in pastoral households, women are starting to search for economic alternatives such as selling a variety of goods and services at livestock markets or running small shops. As a result of this, women are less able to take care of the home, the children and the crops, and this brings about changes in the social, cultural and economic patterns of pastoral families.

• The decline in wealth and income among the pastoral community has produced feelings of hopelessness and frustration, which are leading to pessimism about Eritrean pastoralism’s chances of surviving the current crisis.

The lack of grazing land for livestock is the most critical problem for all pastoralists. The availability of adequate grazing areas being the basis of pastoralism; the curtailment of access to grazing is leading to an economic crisis among pastoralists, generating increased poverty, and in addition, social change with a breakdown in traditional patterns and attendant socio-psychological problems. These interacting factors may even end in armed conflict or the extinction of pastoralism.

As in many other countries, the Eritrean government appears to be committed to the sedentarization of pastoralists. This is evidenced by the fact that in many areas (especially in the sub-zoba of Forto-Sawa) the government has already instituted sedentarization programmes. Moreover, government gives much more attention and financial support to agriculture than it does to the herding sector.

Governments often seek to sedentarize pastoralists in order to increase their control over these communities as a matter of national as well as of international security. Governments also associate pastoralism with poverty: it is true that most countries
with a high proportion of pastoralists belong to the poorest countries of this world. Governments have, therefore, a keen interest in enhancing food security, which they tend to see as being based on the increased availability of agricultural crops. Extensive rangeland appears to be inefficient and unproductive, so pastoralism is not of major interest, and often even seen as an obstacle, and therefore easily ignored or even discouraged.

But, could it be that pastoralism’s detractors are, in fact, right. Is it an “ancient” way of life that no longer has anything to offer? Does it undermine political security as well as food security, and is it simply incompatible with modernization and accelerating globalization? It is true that pastoralism is one of the oldest economic systems in existence. In dry land areas it has always played a major role in peoples’ livelihoods. But, might it be insufficient today?

Like all other subsistence-oriented economic systems, pastoralism was designed to ensure human survival within a particular natural environment. The high seasonal and local variability of rainfall impose a natural limit on the availability of pasture in a given area, and this means that pastoralists have to migrate to different areas in the search of grass and water. At the same time, the lack of rain also makes intensive cultivation of the land impossible. Due to its highland regions Eritrea has several distinct climatic zones, some of which provide enough rain for cultivation, while others are hot and dry climates not suitable for agriculture. The Western Lowlands of Eritrea in which this study was conducted has such semi-arid and arid areas. However, due to the large river systems in this region, such as the Mereb, Setit, Gash and Barka, people have been able to cultivate the land to a certain degree.

However, increasing cultivation by farmers and intensive land use - the felling of trees for firewood, irrigation systems, motorised wells and export-oriented cash crops with monocultures - are damaging the fragile environment of these dry land areas.

This intensification of land use is leading to increased land degradation. In the Western Lowlands of Eritrea, there is evidence of desertification over large areas. The result is reduced crop harvests, a lack of water and a higher intensity of natural drought, endangering the food security of the country (Bokrezion 2000).

Pastoralism is an extensive land use system, rather than an intensive one, that is well adapted to the natural conditions in this area and therefore does little or no harm to the environment. It does not over-exploit the available natural resources and allows natural ecosystems to regenerate themselves. Pastoralism should, therefore, be seen as an important element in an effective national agricultural system, that provides for food security as well as sustainability, given the necessary supportive policies and conditions.

Crop cultivation is an essential part of the food security strategy for any country; but in areas where the growing of crops has to be limited because of natural conditions; pastoralism has to play a significant role and can attain high levels of productivity. In fact, in areas that are marginal for crop cultivation, pastoralism is a more productive, and profitable, form of land use that provides a greater degree of, market mediated, food security. Livestock herding provides milk, meat, leather and other valuable
products. Live animals and animal products can readily be exported, as happens in other countries, such as the Sudan and Somalia.

Moreover, within Eritrea there is a shortage of meat and dairy products, and demand is likely to increase further over the coming years. In August 2002, Eritrea’s national television station reported on the evening news that milk demand in Asmara reached up to 30,000 litre per day, while only 12,000 litre per day could be provided. Through the development of the pastoralist sector, this demand could easily be met.

The pastoralist sector is in crisis due to the effects of the war and a lack of attention and support from government. Nevertheless, pastoralists are determined to try to come through these difficult times and very few intend to abandon pastoralism and adopt a different kind of livelihood. In fact, analysis of the household interviews we conducted showed that people from non-pastoralist backgrounds, with other traditional occupations, were switching to pastoralism after the war. These included former farmers and agro-pastoralists. This may indicate that people consider pastoralism to provide a more secure livelihood in times of crisis, or that people are simply forced to depend on their animals as they have been displaced, or possibly that they do not have the money to invest in the cultivation of crops.

3.2.4 Conclusion and recommendations

Pastoralism in Eritrea is in a time of crisis, which has been caused by the direct effects of the border war, and perhaps to a greater extent by its “after-effects”, and the changed circumstances it brought about. Some of the principal factors behind the current crisis are of a longer-term nature and cannot be handled within a “normal” post-war rehabilitation programme. The restrictions on seasonal movements across the Ethiopian border will remain in place until relations between the two countries are normalized, and the necessary political accommodation presently appears to be a long way off. The resolution of other factors will take both time and money. This is the case with the clearance of mine fields, which are one cause of the restricted movement.

However, there are many other contributing factors in the current crisis of pastoralism that could be resolved more readily. It appears that the Eritrean Government’s lack of interest in pastoralism is behind the failure to undertake certain remedial interventions. Policy priorities are dominated by security concerns and this leads to an emphasis on sedentarization, in spite of evidence that this may be inimical to the recovery of the pastoralist sector.

It is true that sedentarization brings certain advantages for the state as well as for the pastoralists themselves, such as better access to schools and medical services. Evidently, every way of life has its own advantages and disadvantages and these must be weighed against each other.

Looking at the supposed disadvantages of mobile pastoralism, in terms of national security, it has to be said that, even in times of armed conflict, pastoralists have never been a real risk to the security of the country. In fact during the 30-year long war for
independence, pastoralists actively supported the Eritrean fighters. It is not clear why their mobility should pose a threat to national security in the current circumstances.

Concerning food security, pastoralism could make a greater contribution to national income, supplying a greater range and higher quality of animal products and playing a major role in exports. For this to happen, however, governmental support and some degree of modernisation of the animal sector would be necessary.

But in order to modernise and stabilise the pastoral sector other issues such as the lack of education and medical services among pastoralists have to be addressed. Mobile schools and medical services could be a solution. Another possibility would be the building of schools and medical stations in several small centres across the country, which could be easily accessed by pastoralists wherever they are.

The view that sedentarization and the lack of governmental support could be fatal for pastoralism is supported by the following points:

- **Pastoralism is a subsistence economy that is well adapted to the harsh conditions of dry land areas. It does not over-exploit natural resources, using the land extensively rather than intensively, and giving nature the space to regenerate itself. Pastoralism is therefore the most sustainable land use system for fragile dry land ecosystems.**

- **There is rising demand for meat and dairy products within Eritrea, and in fact current demand cannot be met. Active support for pastoralism would promote the development of livestock herding, which has the potential to become a major foreign exchange earner and an even more important part of the national economy.**

- **In times of crisis, non-pastoralists turn to pastoralism or are forced to depend mainly on livestock. In a country that has frequently been struck by drought and armed conflict, and therefore forced migration and displacement, pastoralism has been a more reliable source of food security and incomes than other occupations.**

- **Trees and shrubs are of great importance to pastoralists, as their animals depend on them and also because they enhance the quality of pasture due to their capacity to retain moisture. There is a high awareness among pastoralists about need to conserve tree cover, which is a contribution to the sustainability of Eritrea’s natural resource management.**

- **Lastly, pastoralism is not just a production system - it is also a way of life for a large part of the population, which has been passed down through generations over many centuries. Pastoralism is, therefore, also a fundamental part of the cultures and traditions of Eritrean pastoralists and any attempt to force them to adopt another way life would raise major ethical questions.**

The discussion above describes a pastoral economy, that uses valuable natural resources sustainably, can make a major contribution to national income and is a also a traditional way of life that has persisted for centuries and cannot be ignored or easily eradicated

It is therefore important that pastoralism receives the necessary support to overcome its current crisis and to develop efficiently.
The main issue of concern for all pastoralists is the shortage of fertile grassland for their livestock. As mentioned above, the shortage of grazing land causes many problems and risks for pastoralism. It is therefore important that the Eritrean government actively address the lack of fertile grassland for livestock herding in order to create a sustainable environment for pastoralism in Eritrea. This can be achieved through the following governmental actions:

- Creating a land use plan with secured land use/grazing rights for pastoralists (the areas must be large enough to be efficient)
- Providing alternative grazing areas compensate for those areas that are being restricted for military reasons or because of land mines.
- Raising awareness and providing clear information about the specific areas that are restricted for grazing and animal movements and why they have been restricted. This is important because herders have been incurring penalties for straying onto these areas, and this is contributing to the economic crisis among pastoralists and creating anger against the authorities.
- Establishment of additional crops for grass and fodder production to compensate for the lack of natural grassland areas. This will increase the supply of animal products and reduce animal losses due to starvation.

If these needs are addressed, pastoralism would be able to overcome its current crisis and contribute significantly to the national economy.

Still, there are yet more factors that are undermining the pastoralist economy. In order to develop a sustainable and productive livestock sector the following governmental support is be essential:

- Continuing to provide food aid and other assistance to pastoralists during the current crisis.
- Establishing veterinary services in order to reduce the number of animals that are dying from different diseases.
- Centralising livestock markets.
- Providing revolving funds (loans) to enable pastoralists to re-establish their livelihoods and to develop further.
- Assisting in building water dams to combat scarcity of water.

Over the time the study was being conducted, most of the pastoralists we encountered expressed their understanding of and respect for the actions taken by the Eritrean government during those difficult times of conflict with neighbouring Ethiopia. However, they also expressed a desire for greater recognition of and attention to their basic needs, fearing that, in the absence of this, pastoralism in Eritrea would not be able to survive into the near future.
4 THE ROLE OF WOMEN IN THE PASTORALIST COMMUNITY

4.1 Introduction

In Eritrea, women are, as in most societies in this world, a group that has a major impact on economic and social development and even on political issues but whose role within the society is nevertheless not seen as being of much significance. This view of women is especially common within the pastoral communities.

Since independence in 1991, Eritrean women are considered to be equal before the law. However, today nomadic women are still living under strict traditional patterns within their communities.

To quote Article 14(2) of the United Nations Convention on the Elimination of all Forms of Discrimination against Women, “women from rural areas are entitled to equal benefit from the economic and social development of society”. Most women, including pastoral women, are still very much deprived in terms of economic opportunities and educational, health and other services.

Also, in politics women are marginalized, although conscious efforts have been made by the government to guarantee a quota of representation within political structures at the local and national levels. In Parliament, for example, Eritrean women account for only 15% of representatives - 22 seats out of a total of 150 (New Sudan Women Federation News Letter, 2002).

The impact of the war on pastoralism in general has also led to changes in the lives of nomadic women in particular. The new economic crisis in pastoralist communities has affected the pastoral way of life in many ways and forced women to adapt to the current situation.

4.2 General Aspects

Women carry out the indispensable “reproductive” role of caring for the welfare of the home and the family. In addition to their domestic responsibilities, they have specific roles in pastoral production. However, women are facing new obstacles that make them less and less productive in areas they are normally in charge of.

As mentioned before, the government has made efforts to establish an action ground for women in order to strengthen their role within the society. But because of traditional patterns it has been very difficult so far to involve women in new and different activities, which results in their under-representation at social, economic and political levels.

Some pastoralists have recently been involved in the government’s sedentarization projects, but our study showed that those who live in sedentary or semi-sedentary communities, in the so-called attachment villages, are no better off than those who remain mobile. In fact, many of the women we consulted reported that sedentarization has created greater problems, as they were no longer able to depend on animals and animal products for subsistence and incomes, but instead had to seek economic
alternatives. In many new settlements, there is a lack of such alternatives, so that many women and their families now depend on foreign aid.

Moreover, even when people have been able to find other sources of income to sustain themselves and their families, these often turn out to be selling beer or other products in shops and bars, activities that pastoralist women are generally not very comfortable with.

Pastoralist women are also disadvantaged in terms of access to education. While the illiteracy rate in Eritrea’s rural areas is, at 80%, very high anyway, pastoralist women with illiteracy rates well over 90% are even more disadvantaged.

The present study shows that pastoralists are starting to understand the importance of education. The majority of pastoralists do want their children to be educated, so that they can have better living conditions than their parents in the future. However, pastoralist society still fails to give priority to female education, for a number of reasons: cultural factors such as early marriage and the long distances travelled to schools, compounded by the effects of the war-induced displacement of pastoral populations restrict girls’ access to learning and hamper their participation in the teaching process.

Our study confirmed that, though men are considered to be the head of the family, women are considered to be in charge of the home and household. This might be one reason that female education is not seen as a priority. As in most traditional societies, girls are groomed to be good wives and mothers, managers of the household and, perhaps, small-scale cultivation, small ruminants and milk products – a modern education is not seen as necessary for this role.

Most of the women interviewed perceived themselves as pastoralist and used to move, seasonally, from one place to another before the sedentarization programme and the recent conflict. Some women have a positive attitude towards sedentarization, as they now have improved access to health, education and water. But many have a very negative attitude towards sedentarization, because, as mentioned above, their livelihoods are threatened by a lack of livestock products and a scarcity of food. Some even claim that they now have access to less water then before. As a result, their standard of living has declined and they feel that poverty is now a major issue.

But despite having adopted a new lifestyle, taking up wage labour or trade, pastoralist women have not been released them from their old duties. Women get up early in the morning before everyone else, do all the housework, cleaning, cooking, and, even in the settlement villages, sometimes fetching water from distant sources. Many are also involved in crop cultivation. If they possess livestock, many women now also have the task of looking after them at home. They are, of course, also taking care of their children and husbands. Pastoral women are today, therefore, contributing to the welfare of the family, and to the nation’s economy, more than ever before.
4.3 The Impact of the War on Pastoral Women

The recent war between Eritrea and Ethiopia, which erupted in 1998, affected Eritrean society as a whole, but the impact has probably been especially severe on marginalized communities such as those of pastoralists.

The traditional pattern of the female-male roles within pastoral society has been disrupted as a result of the negative impact the war had on many social and economic structures. Today many women have to earn some additional income, often by engaging in different trade activities. This change may have created an opportunity for many women to learn new skills, to gain more self-confidence and some degree of independence. If it persists, in the future, this increased presence of women in economic activities might bring them greater recognition within society.

But, on the other hand, despite its possible long-term benefits, the current situation has created many additional burdens for women, as they have now taken on more responsibilities than they had before. And, as mentioned above, many of these activities, like selling beer in local bars, make them rather feel uncomfortable, as these kinds of activities might even lead to disrespect towards women within their community. So, even though the new situation requires women to rise to new challenges, and could result in positive developments for women in the future, one has to be aware that in some cases women are not able to meet these new challenges for different reasons. The challenges may exceed the culture’s adaptive capability, and many may fail to appreciate the opportunities that the current crisis brings with it, but for many women the failure to adapt in this difficult time of crises might well imply an increased risk of living in greater poverty.

At the moment however, pastoralist women are still socially, economically and politically very much marginalized and under represented in decision-making within their community, which itself is struggling for acceptance on a national level. Due to this deprivation within society they have little or no connection with local authorities or the government that might help them to express their needs. Pastoralist women have hardly any access to health, education, safe water, or other services.

Many women reported that, because of the lack of access to pasture (which was identified as the principal adverse impact of the war by all male pastoralists), the men had to travel far in search of water and grass for their animals. Even during ‘Keremti’, the rainy season, when most pastoralists used to stay in their home region or settlement, and often concentrated on business at local markets, they are now forced to migrate to other areas with adequate grassland.

This results in the separation of families for most of the year. The men, and often also the sons, are far away herding their animals or doing their national service; many women reported that, besides the sadness of separation, there was a shortage of labour within the household.

The separation of family members was particularly severe in areas where sedentarization programmes had taken place, such as the Forto-Sawa zoba, as the women had to stay in the settlement to take care of the household.
Because of the extent of travelling on the part of the male members of the family, former business activities often ground to a halt. In some families, however, men are instead trying to earn a living on the local livestock markets. But, although there are now more markets than there used to be, pastoralists claim that they are no longer sufficient, due to low prices and the lack of professional traders. This development and also the scarcity of grassland in general has led to a lack of livestock products, such as milk, butter and meat, which play a major role in the nutrition and the incomes of pastoralists, leading to a decline in welfare and living standards.

These circumstances have produced major increases in women's workloads and generated additional responsibilities, as they try to fill the gaps with new activities. While many, as discussed above, are trying to earn additional incomes by opening small shops or bars, others have started to get involved in the business of livestock markets – a major shift.

The need for women to make additional incomes seems to be very pressing, as, in the consultations carried out for this study they wished there were more economic alternatives available.

It is very difficult to predict the outcome of these new developments, should they persist. It might be years before we can actually say if the "new role" of pastoral women will have a negative impact on the pastoral way of life or if the current crisis is in fact an opportunity for nomadic women to escape strict traditional patterns, with benefits for women and pastoral society as a whole. But any changes in women's role within the pastoralist community will be judged differently by different individuals, according to their subjective viewpoints, and the opinions of nomadic men on these developments might well differ from those of nomadic women.

However, in our study, one hint that suggests that women would welcome the opportunity to be able to choose alternatives to the traditional way of life is the fact that many women mentioned the importance of education for their children. Pastoral women respondents have stated that they would like their daughters to receive the same level of education as their sons. On the other hand, some said that, due to the long distances between their settlements and the schools, it was not safe for their daughters to go to school and they could not, therefore, be sent to school.

If women continue to establish positions in economic areas like trading and markets, it could well be that they go on to develop a new kind of independence and consciousness. This would be a first step towards social justice for women and the end of discrimination against them within pastoral communities. On the other hand, it could be that such developments will lead to the disintegration of families and social disruption, with increases in school dropout rates and pregnancies among nomadic children and teenagers, which are already a serious concern in local boarding schools.

Sedentarization projects would, on balance, probably increase economic opportunities for nomadic women. Their opinion on sedentarization, however, is split. Many do see positive changes that come along with it. For women, it would, in particular, mean improved access to education and medical centres. But, in addition, women have mentioned simple things like having the chance to wash their clothes. A lot of women actually said that they did not like to move around according to the needs of the herds,
but at the same time they understood that, because of the imperatives of livestock keeping in arid and semi-arid lands, in most cases men would need to continue their migratory lifestyle, in which case sedentarization would result in family separation. For this reason, many women did not support sedentarization projects.

4.4 Conclusion and Recommendations

The impact of the war, as discussed in several papers in this study, had a particular effect on nomadic women. The economic crisis among pastoralists has led to increased responsibilities and workloads for women, who generally try to find economic alternatives in order to support their families.

Recent developments represent a very significant change in the traditional division of labour in pastoralist communities and we can only guess about the possibilities that these developments will be a chance for nomadic women to escape strict traditional patterns or will only undermine the pastoral community.

At the moment however, women have to deal with the food shortages in their families and the lack of incomes. The delayed arrival of the rainy season this year will aggravate this situation. The government should, therefore, continue and intensify the distribution of food aid in order to help overcome the current crisis. Pastoral women themselves are also asking for support, from government and other agencies, to develop suitable economic alternatives so that they can help their families through this time of crisis.

In light of the above, there is a need to:

1. Carry out an in-depth study on war-induced change in pastoral societies in Eritrea and the challenges and opportunities for women
2. Increase the representation of pastoral women in decision-making bodies in order to bring about fundamental change in gender relations.
3. Create a supportive environment for the diversification of income generating activities for sedentarized and semi-sedentarized pastoral women.
4. Upgrade the skills and knowledge of concerned NGOs and governmental bodies so that they can work more closely with pastoralists.
5 THE IMPACT OF THE RECENT BORDER WAR ON PASTORAL EDUCATION IN GASH BARKA REGION: A CASE STUDY OF THE FORTO AND GOGNE BOARDING SCHOOLS.

5.1 Introduction

5.1.1 Nomadic education: challenges and general context

Education is a catalyst of multidimensional development. It is a means of ensuring the continuation and sustainability of moral values and attitudes. Education can also serve as a springboard for social and economic transformation. So, every community educates its children by imparting appropriate knowledge and skills related to the environment in which they live. But with the rapid growth of science and technology, the indigenous education acquired in traditional society is no longer adequate for the demands of a modern society. Hence, having an organised, formal education is becoming crucial to human life and to the ability to function effectively in society and in economic life. From this point of view, education is a fundamental right of every individual, and this right is enshrined in Article 26 of the United Nations’ Universal Declaration on human rights. However, the practical implementation of this right is difficult in the pastoral communities.

There are millions of pastoralists, mainly in Africa, the Middle East, Southwest and Central Asia. In these societies, millions of pastoralist children remain out of the formal school system. Educational provision is challenging due to high mobility, harsh environmental conditions and remoteness (Saverio, 2001).

Eritrea’s pastoral communities face all the above problems and environmental challenges. Though the Eritrean government is committed to providing compulsory education for all, with special focus on nomadic pastoralists and other disadvantaged groups, educational provision is still far from reaching all pastoral children. Generally the national illiteracy rate is estimated to be above 70%, with a higher illiteracy rate in the pastoralist areas. Enrolment of pastoralist children is low. There is a high dropout rate and performance in school is poor.

To tackle the above problems, the government opted to introduce boarding schools, a sedentarization system for nomads and feeder schools in small villages as options for keeping pastoral children in school. But despite such efforts, education for pastoralist children remains a major challenge.
5.1.2 An overview of the Forto and Gogne boarding schools

Enrolment and Performance in the Forto Boarding School

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<tr>
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Enrolment and Performance in The Mogoraib/Gogne Boarding School

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<td>126 72 380</td>
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These boarding schools are intended to function as a back up to the elementary schools operating in the pastoral areas around Forto and Mogaraib. They “bridge” pastoral students from elementary level to high schools. The Elementary schools were the main source of students for the junior and secondary boarding schools in Tebra, Dekemhare and Aqurdat. Generally, boarding schools are seen as an effective means of keeping students in schools, taking them away from the remoteness, harsh environments and mobility that characterize life in the communities. But, there are a number of important questions about this approach:

- Are boarding schools affordable by many pastoralist children?
- Can we provide all the necessary facilities for boarding schools?
- Can we manage to enrol all pastoralist children in boarding schools?
- Can communities send all their children to boarding schools?

These are serious questions, which need further investigation. Though these questions are open for further analysis and investigation, this paper is going to focus on the impact of the border war and some other specific problems in the two boarding schools we have looked at.

5.2 General Problems Facing the Boarding Schools

Nomadic educators face many challenges, including the need to provide appropriate education, policy matters, the design of school curricula, and other external variables/factors. The following is an analysis of these major factors.
5.2.1 Provision of education

Different countries have tried to provide education in various ways for pastoralists. These include mobile schools, boarding schools, and on-site model schools in highly concentrated pastoralist areas.

In the case of Eritrea, provision of pastoral education is mainly focused on boarding schools and feeder schools. Though conventional models and mobile schools were tried on a small scale during the armed struggle, sustaining them became difficult after independence.

After independence, the Government insisted on sedentarising pastoralists in villages where education and health services were to be provided. The process of sedentarization was only partially accepted by the communities. Pastoralists would leave their livestock with some members of their families and come to the sedentarised villages with some family members. Pastoralist children provided herding labour and it was impossible to take all of them away for schooling purposes. Moreover, the pastoralists face economic difficulties due to unemployment and the lack of new, alternative occupations in the sedentarised villages.

The second approach is the feeder school system. These schools are intended to serve small villages for certain years. Students move on to other bigger schools or boarding schools after a few years.

The third approach is boarding school. Students are supposed to spend all their time in the schools.

All these approaches are based on sedentarization. Schools are supposed to be constant in one place and students are supposed to go to the schools. But the participation of nomads in schooling proved to be low.

According to the 1994 statistical information of the Ministry of Education, only 9% of Barka province school age children are enrolling in school. The majority of these children are, moreover, from the town and sedentarized areas. The same problem occurs in the Sahel and Denkalia areas, which are dominated by pastoral communities, and have enrolment rates of 5% and 13% respectively.

5.3.2 Key policy issues

The national educational policy insists on the extension of educational opportunities to all citizens freely and equally with special attention to disadvantaged areas.

Notable policy provisions include:

- Middle school education is compulsory for very child.
- Provision of elementary schools with mother tongue instruction
- Necessary attention is to be given to the establishment of kindergartens (article 2)
The implementation of these policies requires clear strategies and proper approaches to pastoral education. The implementation of compulsory education is only possible with high levels of motivation among participants and the provision of sufficient human, material, and financial resources.

5.2.3 Curriculum

The national curriculum is the same for all citizens. There is no special provision for pastoral children. The children have to adjust themselves to the curriculum. Teachers cannot modify curriculum content to suit the needs of pastoral life. There are several reasons for this. Firstly, teachers do not have time to work on modifications. Secondly, they lack the necessary training in curriculum development/adjustment. Thirdly, most know little or nothing about the culture and conditions of the pastoralists. And lastly, they do not have the necessary supportive materials, such as reference materials, libraries, and laboratory equipment.

One commentator made an emotive statement about the serious implications of these failures:

"How can the teachers be expected to teach relevant subjects when he/she is dictated by the curriculum which does not take relevance into consideration? Whether for the farming community or the pastoralist one, the curriculum is still the same? The question that begs an answer here is what the Ministry of Education's thinking is towards that vast majority of students who will not have the chance to proceed beyond primary education. In the current state of education in what way is it to be justified that it has been worthwhile for them. The whole educational system seems to have been designed for the very few who will climb up the educational ladder and not for the vast majority who will never have any chance to continue even if they want to..." (Woldemichael, 1995:48-49)

When the curriculum has little connection with the way of life of the pastoral communities, it becomes a system for taking children away from their parents, communities, and way of life. For those who have the opportunity to continue in school, education becomes a means of separating them from their family life and traditions, rather than a means of equipping them with skills and knowledge that they can use to improve their own welfare and be a positive force for change within the traditional setting. If students drop out, they do little or nothing with their education in the communities, having gained few if any transferable skills that they can apply in pastoralism. As things stand, the content of the curriculum is totally alien to what they know in their normal life. They cannot relate the lessons with their own experience. So they are losing a base of understanding, relating things to real pastoralist life, and building up confidence on their previous knowledge. If lessons are related with the pastoralist context, the environment in which they live, and the experiences they have had, can be built upon, serving as a basis for creativity and for exploring core concepts and principles. This approach can build confidence to learn and help pastoralist children to develop skills for independent learning. Losing touch with one’s home environment and experience in school is akin to losing one’s social and cultural background.
So, we need a curriculum that has relevance for both ways of life, and this curriculum should make some contribution to enhancing the pastoral way of life.

5.2.4 Training

As mentioned above, all teachers across the country receive the same training. There is no special training for pastoral teachers, so most teachers come to teach in pastoral areas without basic background knowledge of the communities, culture and the language. Special training can help them to approach pastoral children in a better way, but they do not have such opportunities.

5.2.5 Other factors affecting the boarding schools.

Physical facilities

Though the school buildings have been completed, there are many gaps in the physical activities. The students have no dormitories and kitchens. They eat in dusty areas and sleep on the floor. They do not have beds or even sleeping bags. They get only one blanket and a sheet if they are lucky. Without adequate dormitories they are exposed to the dust and excessive heat.

There are no library and laboratory facilities either. Textbooks are not available to them most of the time. They have to share whatever books are available.

Water facilities are inadequate. Students have to go to streams for washing and bathing. Even drinking water is not adequately provided, especially in the case of Forto.

The schools also lack electricity. Students have to fetch firewood for cooking, which also has environmental implications. Students at the Forto School use kerosene candles for reading, which is less than ideal, and bad for their eyesight. The school environment cannot motivate them to learn in the evenings, after dark.

The climate is very hot, with an average daytime temperature of 35-40 centigrade. It is, therefore, very difficult to study during the daytime, yet they do not get light in the evenings when temperatures are more favourable. Under such conditions, the teachers’ motivation cannot be high either.

Recreational Facilities

The areas are very remote and there are no recreational facilities other than those provided by the schools. Furthermore, the schools themselves are not well equipped for recreation. Students do not get access to videos, televisions, radios or facilities and equipment for games and sports. Even playing football is difficult in the hot weather in some seasons. So students spend their time idling around shops and tea or coffee houses in town.
Transportation and communication

Students face transport difficulties when they want to go to see their families during term time or when they need to go home for particular duties. They have to travel a long distance on foot. The school budget does not allow for teachers or students to travel outside the area.

There are also problems with communication. Most teachers don’t know the mother tongue of the students because they are from the highlands and speak a different language to that of the pastoralists. The students also have difficulties in understanding each other because they are from different linguistic-ethnic groups. Some come from the Hadeb ethnic group others from the Nara, Tigre and other ethnic groups. In such conditions teachers need a third person to translate for them. The same applies to the students. Students have difficulties in understanding lessons due to language problems. Also, students lose confidence when they cannot communicate effectively with their teachers. When they know they do not understand their lesson, they often feel inferior and get depressed. This communication and information gap between students and teachers de-motivates students. It can also exacerbate the cultural difference between teachers students and between students themselves.

Lack of financial, moral and emotional support

Pastoralist students get very little financial support from their parents and they may be forced to look for casual labour to earn some money whenever possible, at the expense of their education. Also, they do not have role models to look up to.

The communication between families and schools is also poor. Parents are busy with their own pastoral activities. They don’t come to schools to monitor their children's progress or affairs. So teachers have to do everything for the students, but practically, they need families’ support. Parents spend much of their time herding livestock. They move from place to place with their livestock so they do not have time to visit their children in the boarding schools.

Moreover, students miss their families when they spend long periods of time away at school. If they go to visit their parents regularly, there is a good chance that they will never return the boarding school.

Low level of performance

The elementary schools in nomadic areas are not effective. Most students spend their time at home. They don’t follow the national schools curriculum effectively. As a result, students find it hard to cope in junior school. Once they move up to junior school, they often become frustrated within a few days. They also have language problems in the new school and many also lack the discipline to follow school regulations and keep up with full time learning.

With all the above problems, the performance of pastoralist children is very poor. They often fail classes and drop out. Some of the students start school several months late due to herding commitments and long distances from home to school. There is
very low enrolment, especially among girls. Very few girls attend school and they are unlikely to continue in school and complete their education.

5.3. The Impact of the War on the Boarding Schools

Though the border war had a very severe impact on individuals and families across the nation, the third offensive of April 2000 had a greater impact on the disputed areas nearer to the Ethio-Eritrean border, within which these schools lie. The war had both direct and indirect effects on both boarding schools.

5.3.1 Psychological impact

The immediate interruption of schooling and the uncertainty about whether or not to start evacuation had a major psychological impact on the students. Teachers had to go to the front-line to take part in the fighting against Ethiopian troops. The students were forced to go back to their settlements or escape to safer areas and abandon the schools altogether. Some of the students escaped to the Sudan as refugees. The whereabouts of some were unknown until after the end of the war.

There was also a more general, war-induced separation of families in 2000. Many family members went into the national service and many families are still not sure whether their loved ones are alive or dead. The students had to take on adult roles because many of the able bodied adults were called up for national service.

The combination of these psychological and social problems made it almost impossible for the children to concentrate on their schooling, or for schools to deliver lessons adequately.

5.3.2 Economic impact

The displacement of pastoralist communities and local government administrations, and disruption of traditional markets brought serious economic problems for families. These problems, evidently, had a great impact on the students. They had to work harder, contributing more labour to herding, in order to save their livestock. Students were, naturally, preoccupied with the problems facing their families. There were also restrictions on movement for marketing and for livestock herding in the areas controlled by the occupying Ethiopian forces. This situation also affected the students’ performance and participation in school. Families in the camps for the displaced were not able to take their livestock with them due to the lack of land for grazing in and around the camps. They left their livestock elsewhere with relatives for periods of time and, at other times, with children who had fled the boarding schools.

Most families had lost their livestock and property. Much of the losses were due to looting by the Ethiopian army, impoverishing the parents of many students.

The Ethiopian army also looted the schools. For example, in addition to the theft of the possessions of teachers and students, the Gogne School lost all its stationery, desks, chairs and other furniture. Even the windows and doors were broken. So the school had to be refurbished, almost from top to bottom, after the end of the war.
Though boarding schools are one good option for teaching pastoralist children, this approach has some major disadvantages. There is the difficulty of maintaining students’ levels of motivation and interest in learning as well as providing them with decent living conditions. More fundamentally, it is a costly and long-term commitment, which the Eritrean Government may not be able to afford.

The expansion of elementary schooling in the pastoral areas is currently very rapid. It will be very difficult to accommodate all these learners in boarding school. For example, the Forto sub-zone currently has 13 elementary schools and 2600 students. There is also a plan to further expand elementary schools and enrol even more students. It is highly unlikely that the resources will be available to keep all these students in boarding schools.

The education for all campaign is good in theory, but may be hard to deliver in the pastoral areas. This will increase the challenge in boarding school effectiveness. When the education system brings in all or most of the children, it will be difficult or impossible to serve all of them through boarding schools.

Boarding schools need many other services apart from the purely educational ones. They need to provide a variety of services, such as medicine, recreation and counselling as well as economic support.

As spelt out above, the existing school curriculum and school system are suited to sedentarized people.

The students’ environments are not conducive to mutual learning and do not encourage students to practice reading and to develop their reading and writing. Moreover, when they go to their homes, they cannot get access to reading materials, and their parents do not encourage them to read and to write. This is a reflection of the chasm – the complete absence of integration - between the learning and home environments.

Education is not integrated with the cultural practices of pastoralists for three major reasons. Firstly, the educational approach is not suited to the lifestyle of the communities. Educational programs are intended to transform pastoral children, equipping them for other careers outside of and alien to pastoralism. Secondly, modern education is relatively new in the pastoralist areas and people might need some time to adapt. Thirdly, the economic situation of the pastoralists is very serious following the border war. All members of the family have to work hard in order for the family to survive. In addition, most families have had to send their young adults to the national service, while other youths have had to take on responsibilities for livestock herding. On top of all this, education is not seen as a necessity among pastoralists. Though they are aware of the potential value of education, they don’t give priority to educational activities. So, they prefer to encourage their children to take up livestock herding, which has more immediate value. The children themselves need time to develop an interest in their educational activities.
The dropout rate is very high. In the boarding schools it is above 25% in each class. So, the probability of students completing their education is relatively low.

5.4.1 More on the impact of the war on the boarding schools

The war has had direct and indirect effects on the boarding schools. Directly, the war was conducted in the areas where the schools are and this meant that students, teachers and families were displaced. All students had their schooling interrupted due to the war. Children left schools to join their families. They also fled to areas far from the villages in the vicinity of the schools. Students suffer from trauma caused by mining, aerial bombardment and harsh conditions in the areas of displacement. All children with their families were exposed to extremes of hot and cold weather without adequate shelter and some suffered heat stress.

The changes in the school calendars also affected students and their parents in respect of their farming work, which is governed by a set seasonal calendar.

Under normal conditions, pastoralist routinely crossed the border into Ethiopia in search of seasonal grazing. They would also move to different areas within Eritrea. However, during the war, parts of their fertile grazing areas were taken by the Ethiopians and such areas were also mined. Pastoralists could not, therefore, access such areas. This situation seriously affected livestock production and productivity, undermining the very basis of the pastoralist economy. This, of course, had a serious effect on the lives of all household members, including the students.

Another source of disruption was “draft dodging”. Some young people, well over school age, joined the boarding schools as a means of avoiding conscription. These new “students” had no interest in learning and were prone to misbehaving, thus becoming a disruptive influence on the school environment.

Many pastoralist students start school at a late age, due to the adverse social and environmental conditions in which they live, and the onerous work and family responsibilities placed upon them from a very early age. The harsh conditions experienced under displacement, and the general social and economic disruption, meant that many students were not able to return promptly to school immediately after the war. Some missed the national exam in July 2000 and were, therefore, forced to repeat the whole year. This additional lost year is very significant for a developing child or teenager who has already missed out on several years of schooling.

The sharp deterioration in national economic conditions, brought about by the war, also affected the boarding schools’ budgets. For example, there was a plan to build a dormitory in the Gogne boarding school, but implementation was suspended as a result of the war. All of the nation’s resources had to be diverted to the war effort.

We have discussed some of the ways in which wartime conditions disrupted education. But, other subtle and psychological, yet fundamental, factors distracted students from learning. They were not confident enough about their chances of continuing in education or even about the continued existence of their schools, to commit themselves fully to their studies. Moreover, they were disturbed by the
situation their families faced. So even those who came back to school could not give their full attention to schoolwork.

5.5 Conclusion and Recommendations

5.5.1 Conclusion

The war had direct as well as indirect effects on the boarding schools. It had psychological, economic and environmental impacts on the students, teachers and the communities as a whole. The school properties and buildings were also affected by the war. War and displacement have compounded the negative effects of remoteness and other environmental factors, contributing further to high dropout rates, low enrolment and poor performance in the schools. All these challenges need to be addressed with renewed effort and motivation.

5.5.2 Recommendations

The boarding school children come from very remote and disadvantaged areas so they cannot get the support that they need from their families. They should be given the necessary support by the schools, with assistance from different donors and individual sponsors.

The boarding schools should have specific targets and should provide special education, tailored to their needs and social backgrounds, for disadvantaged groups such as pastoralists. The notion of teaching all pastoral students in boarding schools is impracticable. So, policy, and the boarding schools should aim instead, to train a large number of teachers from pastoral areas who could then become teachers in their own areas. Special refresher training for teachers is important in the pastoralist areas.

The social background of the students, and the responsibilities they feel they ought to be meeting at home, should be considered at the school. Pastoralist children should not be treated as other children from urban or farming areas. So teachers need to consider the backgrounds of the children.

The educational background of pastoralist boarding school students is poor, due to the illiterate environment in which they grew up and their poor performance in the elementary schools. So they need to take a crash revision, or “top-up”, course before they start boarding school.

Boarding students spend the great majority of their time at school. So the schools should put in place additional programmes, such as sports activities, to keep the students busy as well as to equip them with effective skills and knowledge. Students need an atmosphere that is conducive to learning and living. They should have proper dormitories, bathing and dining facilities.

The curriculum should also accommodate the study of pastoralism as a land-use system as well as the unique environmental features of arid areas and needs of the communities.
6 DISCUSSION OF CRITICAL ISSUES EMERGING FROM THE STUDY

A number of issues have emerged from the study which deserve an in-depth analysis. This chapter will synthesise the most relevant aspects which call for policy action and possible programme intervention. The issues as described earlier are uppermost in the minds of pastoralists and other livestock owners.

6.1 Conflict-Induced Poverty

This study has shown that as a direct consequence of the recent conflict the communities are in the same boat as far as the level of poverty is concerned. Before the border war however, Shambuko and Geluj Districts were relatively more affluent than Forto-Sawa. At present the conflict-induced poverty is exacerbated by drought, a diminishing resource base, falling livestock prices, poor terms of trade and lack of alternative employment. The communities in Forto-Sawa, to a large extent, depend on food aid hand outs for survival. The Gluj District hosts 80% of the returnees from Sudan who are given plots of land to cultivate. Forest or open rangelands are cleared to provide land and charcoal for the new settlers.

The Shambuko Sub-District is adjacent to the Ethiopian border and the communities are still victimized by the Ethiopian troops who are still occupying the Transitional Military Zone (TMZ). Cattle are raided and herders regularly arrested along the disputed border which is yet to be demarcated. The current situation is not conducive to cross-border trade or cross-border use of rangeland resources.

There are some indications that the communities are attempting to diversity their economic activities for better income generation. One such untapped potential is leather processing and production. By providing micro-credit to pastoralists and other livestock owners on a pilot level PENHA-NUEYS would like to introduce an income generating activity at pilot level. Unprocessed skin is available but there are little or no skills to process the skin locally and fetch good prices for it in urban centers. The pilot project, if successful, could be expanded to other districts.

There is clearly a need for developing a poverty reduction strategy for the districts and this may be beyond the scope of the PENHA-NUEYS intervention. The intervention however, will enable some pastoralist groups to organize themselves and seek further assistance from government and other sources.

6.2 Competition over Grazing Resources – a Stakeholder Analysis

A number of recent studies (Fre 1993, AMREF-MoA 1996 and Bokrezion 2000) clearly indicated that competition over riverine grazing resources has been intense and to the detriment of the environment and availability of grazing and water to the pastoralists. The current study also revealed that encroachment of the traditional dry season grazing areas is the single most important factor undermining the pastoral production system.

Our study shows that there is a clear need for a proper land-use policy and plan on making a clear distinction between grazing land and agricultural land. Such a policy
can only be developed by a government in which pastoralist communities can play a major role if they can organize themselves. The proposed pastoral forum structure could be an important vehicle in realizing the above objective.

The riverine areas -Gash, Barka and Setit - are used by a range of multiple users or stakeholders. Pastoralists are only one such group. A quick overview of the various stakeholders is necessary in order to appreciate the fate of livestock producers in general and semi-sedentary groups in particular. Generally Eritrea has less than 1% of forest cover and much of the remaining forests are around the riverine areas. Recent studies indicated that forest cover in the riverine areas is 195,000,024 hectares [this cannot be right – probably 195,000]. Much of the rare wildlife is also concentrated along the riverine areas. Such areas are also known to be rich in biodiversity.

The Gash-Barka riverine areas have been under pressure since colonial times. According to NEMP 1995 during that period 300,000 hectares of land was cleared by concessionaries. Such forests have also been used as the main source of firewood, building material, and as a safe haven for livestock during the dry season and during drought.

Since the liberation of Eritrea in 1991 a variety of non-pastoralist land users with varied production objectives started to use the riverine resources with greater intensity. Some stakeholder analysis is important in order to appreciate how livestock producers fit into the overall state of competition over riverine resources.

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6.2.1 Commercial farmers and horticulturalists

From 1992 onwards a large number of concessionaires were allocated land around the Gash-Barka region. During 1992-96, 3,003 hectares were allocated around the Gash and this has a forest cover of 34%. Around Barka 3,471 hectares were allocated with a forest cover of 24%.

Such farmers were encouraged by the Ministry of Agriculture and local government to revive the agricultural-horticultural sector after the long war and to contribute towards food security. They were also encouraged to develop export-oriented crops which would earn badly needed foreign exchange for Eritrea. So far such farmers have only been able to cater for the local/national markets. In order to protect the riverine areas the Ministry of Agriculture in 1992 issued guidelines for farmers providing them with a set of basic rules to be followed. It clearly advised farmers to farm at least 100 metres away from river banks and to make sure they did not cut down trees when preparing land for cultivation within that radius. If the forest is dense then they should keep a further distance of 150-200 metres making sure they do not tamper with the forests. In reality however experience has shown that farmers clearly breached such rules and the impact on the riverine areas has been devastating. Government has recognised this as a major problem and since 1996, with assistance from SOS-Sahel, the Ministry of Agriculture started an Assessment and Management of the Riverine Forests project (AMRF) to map out and prepare an inventory for the existing resources. The ultimate intention was to formulate a better land use plan and protect and introduce a system of sustainable use for the riverine forests. The project also carried out socio-economic surveys of existing and potential use of dom palm (*Hyphaene thebaica*) and an assessment of the potential for improved management. The AMRF studies categorised a variety of users of the riverine resources and mapped out areas of greater intensity in terms of land use for agriculture and grazing. The study indicates that in terms of the direct impact on riverine resources, livestock grazing is of little significance. Through ongoing workshops the findings of the research have been discussed and there is clearly a much higher awareness of the damage to riverine resources and the negative impact of horticultural interventions in Gash-Barka.

During the rainy season in 1998 which was an exceptionally good year the Gash broke its banks partly due to the removal of thick vegetation around the river banks and washed away much of the horticultural holdings around the river banks. A distressed farmer lamented: “…we lost our forests and bananas all in one go…”.

As a consequence of tree cutting the banks of Gash River have now expanded and there is serious erosion in several places. The AMRF project has indeed generated first hand knowledge on the situation on the Gash-Barka and will be a very valuable tool in proper land use planning and a basis for government action. This will partly curtail an impending ecological disaster in the riverine areas.

6.2.2 Returnees

The government of Eritrea has the responsibility in settling returnees and internally displaced communities as a result of the liberation war. The plan to settle more than 100,000 returnees has been underway since 1995. By 1996 6,370 households were
settled in the Gash-Barka region. The settlement patterns are well outside the riverine areas but such communities depend to a large extent on riverine resources for agricultural land, wage labour, grazing for livestock and firewood. Following the Ethio-Eritrean conflict during May 2000 more than 500,000 displaced people have crossed the border and are now being settled in the Gash-Barka region although it is difficult to say how many of them will be actually involved in using riverine resources. It is in any case anticipated that the returnee population will increase over the years putting yet more pressure on the riverine resources.

6.2.3 Other Stakeholders

There is a variety of other stakeholders including producers of fuel wood, the national service/national army, and producers of dom palm leaf-products (mats, baskets and other products). According to the Ministry of Agriculture/SOS-Sahel workshop report (1997) during 1996 forty-five licenses were given to small companies who produce cement and building blocks. The furnaces for block making consumed 1,019,992 quintals [= 101,999 tonnes?] of firewood in one year. This is estimated to be five percent of the national energy requirement.

Table F.1 Amount of Dom Palm Products Entering the Asmara Market

<table>
<thead>
<tr>
<th>Year</th>
<th>Dom Palm Products in Quintals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>297.00</td>
</tr>
<tr>
<td>1993</td>
<td>13,660.00</td>
</tr>
<tr>
<td>1994</td>
<td>3,740.81</td>
</tr>
<tr>
<td>1995</td>
<td>5,260.05</td>
</tr>
<tr>
<td>1996</td>
<td>7,089.80</td>
</tr>
</tbody>
</table>

Source: MoA 1997

6.3 Options for the Semi-Sedentary System;

6.3.1 Maintaining the status quo

This means leaving pastoralism alone to fend for itself and to continue as the principal mode of land use and mode of production. The context presented above makes this option unfeasible. The pastoralism we observe is a semi-sedentary sort which is practised within two seasonal camps. In practise the majority of the population, women, children, old folk and households with their small stock and camels, always inhabit two camps seasonally. Only an estimated 10-20% of herders migrate to distant grazing areas mostly heading south and at times heading north with composite herds belonging to different families. This sort of long-range nomadism particularly across borders has become a very risky business for pastoralists. According to the Gash-Barka administration restrictions on the movements of Eritrean nomadic herders to northern Ethiopia has been an ongoing phenomenon since 1993; well before the start of the present Ethio-Eritrean conflict. Herders were heavily fined for grazing and their movements were constrained around the Wolgait area and their movement generally within northern Ethiopia was heavily curtailed. During the recent conflict
between Ethiopia and Eritrea several herds were looted and confiscated by the Ethiopian army. According to the Gash-Barka administration the following losses were reported by the people since May 1998. The losses include 5,450 heads of cattle, 1,655 sheep and goats, 108 camels and 194 transport animals. The administration stressed that this is a conservative estimate and indicates only those cases that were reported. During the conflict it was also reported that 35 herdsmen were killed and their animals looted since the start of the war. This was reported by a pastoralist who survived such a massacre and he was able to tell the story on his return to Eritrea.

Following the Ethio-Eritrean conflict more than 500,000 pastoralists and farmers who were farming and herding animals in the Tigre region were expelled and displaced as an immediate consequence of the present war. Such communities, most of whom are of nomadic origin, are now being settled in Gash-Barka region by the administration. It is very clear that the Ethiopians wish to restrict the pastoralists’ movements from Eritrea which consequently means this sort of long range nomadism towards Ethiopia in the future will not be feasible.

Along the Sudan-Eritrea border there have not been reports of such major incidents. However, given the extent of degradation of the environment in the eastern Sudan region pastoral nomadic movements towards the Sudanese border may not be sustainable either. Such close border conditions therefore make long-range nomadism unsustainable and it is inevitable that the pressure of such livestock will be put on the riverine areas as well as on the seasonal camps these communities have traditionally used.

The second important issue is that of the protection of the riverine areas and acknowledging the rights of access of pastoralists as major stakeholders. In a recent workshop held in March 1998 by the Government of Eritrea and SOS Sahel there was a clear acknowledgement that pastoral land use is not a major factor in damage to the riverine areas.

“…pastoralists and livestock are not the direct cause of destruction of the riverine forests but the main cause is the expansion of uncontrolled horticulture concentrated in some of the riverine banks…”

The same report acknowledges that pastoralists:

“…cause uncontrolled fires along the riverine areas in their efforts to burn grasses to control insects and wild animals…”

6.3.2 The settlement option

The congregation of scattered hamlets into larger villages indicates that settlement of pastoralist groups is de facto government policy.

In an ideal scenario a variety of services - health, education, water and fodder resources - would be easily available to induce the communities to abandon their
migratory patterns. In reality, however, people could happily combine sedentarisation with the continued practice of transhumant livestock movements. Judging by experience elsewhere in Eritrea, including the highlands, migration with herds has been a critical survival strategy for the rural communities so one can anticipate that there will be some sort of transhumant pastoralism using traditional areas as before within Eritrea’s borders. The sedentarisation process will clearly be monitored by government and other interested parties who are involved in pastoral development. It will be possible to draw lessons from the careful monitoring of this process.

As a short to medium term strategy development interventions in these areas, no doubt, should be livestock oriented and thus build on the accumulated experience such communities have in livestock management.

6.4 The Context for Establishing Pastoral Fora

Pastoralists played a major role as combatants and in leadership positions during the liberation war in Eritrea (1961-1991). During the liberation struggle the role of the village communities or baitos was political agitation and providing support to the fighters by providing manpower, food, shelter and so on.

After independence in 1991, the baito was transformed to a local administrative structure. The following are some of the functions:

- Collecting land tax for local administration.
- Organising food for work activities for input distribution.
- Liaising with administration in all aspects of community development work

There are mutual self help groups of informal structure which still exist in the districts surveyed. The communities cooperate in a variety of productive and other work, according to the particular production system or occupation. This includes:

- Conflict resolution between families and groups.
- Mobilise assistance for needy families through donations and loans
- Organise communal work for poor families.
- Organise communal agricultural work (sowing, weeding, harvesting, etc.)
- Communal herding
- Marketing
- Assistance with burial and bereavement
- Women’s saving groups (aekoub)

As the above represents a variety of activities it will be useful to discuss some of these groups in detail as they could have the potential to become an important instrument in project development.

Communal work in Tigrinya wofera or kewa in Tigre, is the most established village institution. This is a well established institution among all the groups. Kewa or wofera literally means “group work” and entails a small or large number of people working together manually or using oxen to mitigate labour shortages. In a typical kewa five to ten farmers would assign themselves to work as a group in one farmer’s
field for a day and by the end of the day they will have a meal in his home and then continue to rotate the labour. People believe that group work is convenient and faster. People also have the opportunity to socialise whilst they work. Aspects of non-agricultural work where collaboration is evident are building huts, constructing wells and so forth.

Among the more sedentary groups such as the Tigrinya there are also other forms of organisations such as the mahber which is named after a saint obeying precisely defined regulations and having typical obligations. Such groups celebrate the day their saint is named after. Mahber also has a secular meaning and refers to a group of people or an association working towards a common objective.

According to Eva-Maria Bruchhaus et al:

“…usually the groups count ten to twenty maximum certain members. They are either composed of men only or men with their wives. Be it in one way or the other the leaders are always men and the women do not have a say in most of the groups…”

The same author also gives an interesting description of the aekoub which is a popular group form especially among the Tigrinya and it seems to attract particularly women. The aekoub groups of women are usually small and generally composed of eight to twelve members and the emphasis is on savings. Some such groups function in a classical way as in many African countries. Members meet once a week and each member contributes a fixed amount of money and collection is given to one of the members according to an order established at the outset. The author points out that only in a few cases is such money invested in productive equipment such as a sewing machine or a grain mill.

Among the semi-sedentary pastoralists such as the Beni-Amer and Hidareb group work is manifested through communal herding where small numbers of stock held by families are combined together to form a large herd, murah, which is then herded by one or two members of the clan who will be remunerated in cash or kind raised by the various households. Communal herding is widely practised among the semi-sedentary groups both around their homesteads and migrant herds belonging to different families.

Strong collaboration is also seen among the semi-sedentary groups during marketing. Households select the animals for sale and agree to round them up together assigning two, three or more able-bodied men to drive the animals to important markets.

In eastern Sudan and among the Beni-Amer and Hidareb such persons are known as gallelenab (livestock drovers) and they are supposed to be the bridge between the local pastoralist producer and their kinsmen in the main markets.

Culturally, taking care of the vulnerable and the marginalised is inbuilt in the culture. Poor families are identified and assisted through communal labour by lending lactating animals to a poor family, burying their dead, contributing to death and marriage ceremonies, and so forth. Among the semi-sedentary pastoralists their
Sheikh at the camp level shoulders this particular responsibility of identifying the poor within the community.

One has to mention that there has been a proliferation of mostly urban based associations, unions, cooperatives, etc. since Eritrea’s independence during 1993. The proposed pastoral fora will be the first grassroots led groupings and a step towards realising pastoralist-led national forum which will be established in the future. NUEYS, with a membership of 150,000 (20% of whom are from pastoral origin) would be a natural ally in assisting pastoralists to set up such fora. NUEYS is active in all three districts and has offices managed by local people.
7 CONCLUSION AND RECOMMENDATIONS

7.1 Conclusion

The present study which was limited in scope and duration has clearly established that the recent border conflict between Ethiopia and Eritrea has had a major negative impact on the pastoral economy. Losses of property and livestock were up to 90% in the case of Shambuko and Geluj. There is a clear need therefore for community rehabilitation measures to enable the communities to stand on their own feet again. This need underlies the proposed intervention through credit provision in the three districts. Such intervention should be preceded by a proper needs assessment before project implementation so that vulnerable groups such as poor women and pastoralists are not sidelined.

By focussing the study on three distinct (ethnically diverse) communities in three districts the study has been able to show that livestock production plays a dominant role in the national and local economy. There is clear evidence which shows that livestock are a social and economic asset the contribution of which is neither recognised nor really supported by the relevant stakeholders. A great deal more can be done to support the livestock sector. One such step would be for government to set in motion a policy direction which guarantees land-use rights for pastoralists and other livestock owners. Without such a policy pastoralism will have no future in Eritrea. Grazing opportunities across borders (in Sudan and Ethiopia) may be a thing of the past given the awkward relations between the countries. The tendency among pastoralists and livestock owners to take risks (cattle raiding mines, heavy taxation, etc.) is not so great and home-based grazing areas are preferred. In country mobility and seasonal migration will remain as an important survival strategy for pastoralist and other livestock owners.

As discussed in Chapter 6, pastoralist sedentarisation in Forto-Sawa District had negative and positive consequences on livestock and the economy. The communities themselves are divided in their views. There is a clear need to conduct a critical assessment on the pros and cons of forced sedentarisation of pastoralists and take remedial action. Our study indicates that wholesale sedentarisation is not as glamorous as it is made out of. It is indeed an expensive exercise for government and it cannot be sustained without food aid injection. It has created a great deal of dependency of the communities on government handouts. There is also a widespread malnutrition caused by a lack of dairy products as the newly sedentarised communities are no longer able to migrate with the herds. Women and children suffered most as a consequence.

We observed that Eritrean women are equal before the law, however the study uncovers that women are still highly marginalised in terms of educational and health service delivery. A major share of domestic work and management of small stock rests upon women and children. The research team believes that such challenges are not insurmountable and there is an opportunity for women to establish women based fora and through such fora provide micro-credit and training opportunities.

It is clear from the study that pastoralist and other livestock owners are underrepresented and there are opportunities to enable pastoralists to organise themselves.
The challenge remains how to develop viable pastoral fora that will have an impact on the improvement of the quality of pastoralists and other livestock owners

7.2 Recommendations

The following recommendations are consistent with the findings previously discussed. From its inception the present study was a fact-finding and not a project identification mission. The following recommendations are reflective of community priorities and if elaborated would form the basis for short-medium term interventions.

- The Government of Eritrea should develop an effective land-use plan which guarantees land rights for pastoralists. The newly formed pastoral fora prefer to make pastoral land demarcation as one of their main agendas or action

- PENHA and NUEYS should be actively engaged in assisting the formation of local pastoralist fora by providing funding, technical support and other back up.

- Education and health are high on the agenda and effective delivery requires full participation from pastoralists. Furthermore, education and the curriculum in rural and pastoral areas must be compatible with the pastoral way of life, if it is to attract high participation rates and provide a firm basis for social and economic development. Schools and health facilities must be developed along the routes and settlements of the nomadic people.

- There is a need to re-orient and revise existing plans which are intended to deliver services to the rural people. The results of the present study should be fed into revising the existing district strategy and programme.

- It is critically important to sensitise NUEYS’ local staff operating in the nomadic areas and at project level. This could be done by organising exchange visits for such staff, organising short term training for them in-country and outside-country and provide them with participatory skills in research methodology and project implementation to be able to serve the communities.

- There are other critical areas of intervention which PENHA and NUEYS could recommend other agencies to look into and these include, firstly, range development, early warning systems and improvement in market infra-structure which should be the foundation for a comprehensive pastoral development strategy. Secondly, range and water development and improvements in stock productivity should be pursued alongside efforts to support economic diversification, through the promotion of alternatives such as bee and poultry keeping and the creation of new employment opportunities.

- A comprehensive and detailed study of the process and mechanism of livestock marketing is needed in order to identify ways to improve the functioning of markets and enhance pastoralists’ ability to secure fair prices and capture a greater share of mark-ups along the marketing chain.
7.3 **Outstanding issues which need further investigation or intervention**

Due to the limitation of time and resources the research team were unable to cover the following important areas of research.

a) Women’s marginalisation and seclusion  
b) Impact of recent pastoralist sedentarisation on nomadic families  
c) Crop-livestock integration among the sedentary highlanders  
d) The role of livestock in the national economy
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