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Pastoral Land Tenure Issues and Development in the Middle Awash Valley:

Case Study on Amibara and Gewane Woredas

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PASTORAL LAND TENURE ISSUES AND DEVELOPMENT IN THE MIDDLE
AWASH VALLEY: CASE STUDY ON AMIBARA AND GEWANE WOREDAS

BY
YASIN MOHAMMED

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Abstract

The study focuses on the pastoralist Afar in the Amibara and Gewane districts, in the Middle Awash Valley, northeastern Ethiopia. The Afar survives for centuries through practicing their traditional production system and way of life that is friendly to the Socio-economic and ecology of the area they inhabit. However, since the Imperial regime, the Middle Awash Valley were incorporated in large scale commercial and state farms which refused to recognize the land rights of the Afar and have had severe impact on the Afar and their land. After the EPRDF government took power in 1991, some change has taken place in Awash. As per the strong quest of the Afar for the return of their land, the transitional government of Ethiopia has returned about 7000 hectares of irrigated and mechanized lands in the Middle Awash to the traditional owners i.e., the Afar. However due to lack of attitudinal change among the Afar pastoralists toward farming practice in general and crop production in particular, shortage of skilled manpower, inadequate financial capital and weak technical support from the federal government, both the Afar and the regional government could not maintain the farms. Consequently, the ANRS re-allocated the land among different clans in the Afar. And hence, each clan lease-out its territory to private cultivators through net profit sharecropping as well as fixed-rental price. This study is stimulated by the current controversy that whether or not the Afars become beneficiary from the private agricultural investment undertaken on their land. The findings of this study indicates that the private agricultural investment in the Middle Awash do not bring any socio-economic benefit to the Afar rather it make the Afarland to be exploited for "free". The Afars' share from the income and employment opportunities generated from operation of the private cultivators is insignificant. Besides the regional government could not generate revenue from tax, as it should have been collected. The Afarland becomes degraded due to high toxic chemicals used by private cultivators as well as their refusal to practice fallowing and crop rotation to conserve the productivity of the land for some years. As a consequence, the Afars become dependent with others and this time some clan leaders and influential elders are intensively competing to expand their clan land territory in order to lease-out more land to private cultivators and receive façade benefit at the expense of the majority of Afar pastoralists and their land. The study recommends that regional government should design compatible land use policy with the objectives of attracting private agricultural investment on the Afar land as well as realizing the transformation of the Afar pastoralists into agro-pastoralists.

Key words- Pastoral Land Tenure: Private Agricultural Investment: Development:
Afar:Amibara: Gewane

their land rights by legal instruments. There has never been re-investment of cotton revenue into the development of the pastoral sub-sector in the area. Resources have always flowed from the periphery to the centre in order to meet the growing state bureaucracy and expanding military. To the Afar this always meant social injustice. (Ali 1997).

The federal government of Ethiopia that took power after the over-through of the former government (i.e., Derg) believes that the development schemes implemented during the pre-1991 period never achieved their intended goals. The study of Industrial Project Service (IPS) that operates under the prime minister office states that past attempts to establish settlement schemes with the intention of compensating the Afar society for the vast land taken up by large scale agricultural enterprises and consequently, 'settling' the nomadic pastoralist were not successful. (IPS 1999).

Generally, the accumulated effect of external interventions remains Afar pastoralists relegating in the waiting room of development. Following the over-through the Derg Regime, about 16, 547 hectare of irrigated and mechanized lands owned by the state farms located in the Middle and Lower Awash Valley were handed over to the pastoralists of the Afar region as a response to their demand for long time. Even though, the federal government claimed to solve the pastoral land question, so far the state has maintained control over most of the irrigable farms.

Moreover, the federal government control additional wet season grazing land of the pastoralist particularly in the middle Awash for expansion of military camps. So far, neither the community nor the regional governments have shown their capacity to manage the returned farmlands in any form. Therefore, the clan leaders and the local government authorities have made most of the recently returned lands, as well as those which were under the control of the pastoral Afar in the study areas which were accessible through the lease system to private commercial farms.

So far, government officials at any level preach the contribution of commercial agricultural investment to enhance the regional revenue generating capacity as well as pastoralists' livelihood. Hence, the private investors cultivate mainly maize and cotton on a considerable portion of the returned land and other pastoral land. However, despite the justification of the regional government regarding effective management of returned land, there are very limited studies conducted on the investigation of the ecological, socio-cultural, and politico-economical transformations of the Afar pastoralist post 1991.

Among these studies Abdurahman (2002) presented the paper on the informal land market in the Middle Awash, in Amibara district. The findings of his study shows that share-cropping is the most informal market in this area and the landowners have weak bargaining power due to low capacity of Zonal administration in effectively enforcing contracts between private cultivators and sub-clans, limited entrepreneurial skills in managing modern irrigated farms by the pastoralists, absence of credit institutions in the area and so on.

Finally, this study concluded by remarking "the direct government intervention in the control of access to and management of the flood fields seems unwarranted. And the government showed endeavor to recognize and strengthen institutional capacity of existing local management systems" (Abdurahman 2002)

Another study conducted by Yirgalem (2002) on the challenges, opportunities and prospects of common property resources management in Gewane woreda focuses on macro and meso-level resource - use conflict resolving mechanism. In this case study, Yirgalem, compare the weak pastoral household capacity to be involved in small scale irrigation with total hectare of land allocated to each household in one Kebele, and he concluded that leasing the remaining "surplus" hectares of land by vision of taking over the land after the lease period is justifiable. (Yirgalem 2002)

However the trend for the last 12 years clearly shows the future prospect of the Afar pastoralists to take over the land after the lease period seems dim. The IPS study also observed that the Afar communities were unable to use the land handed-over by the ex-state farms beyond the traditional way of raising animals and hence, recommended government intervention in agricultural extension programme and settlement schemes. (IPS 1996) But these intervention schemes have tested and failed for long time since the imperial regime in the Afar pastoral areas.

One more research output presented by Getachew (2001) indicates internal conflict among the Afar become more intense since the recent return of state farms because "the returned land is held by the new elite in the administration and clan leadership and was not returned to private farm investors." He concluded that the expansion of farming, the imposition of alien land tenure system and the rules as to their uses, and the increasing individualization of clan lands in Afar land, have cumulatively led to the marginalization and impoverishment of the majority of pastoral households. (Getachew 2001)

Even if, studies on the post -1991 socio-cultural and politico-economical changes among the Afar conclude by suggesting the mismanagement of returned state farms, there are very limited studies, which focus on the investment pattern on the returned lands. It seems sensible, therefore, to attempt to do further research, concerning the contribution and drawbacks of private investment on the returned lands and other pastoral lands by using primary data in sample areas where there is relatively large number of private agricultural investments.

The time framework for the study covers the period of post 1991 to the present. This is because private agricultural investment on Afar pastoral land has restarted since 1991 when the then transitional government has returned some hectares of ex-state farms. Based on these premises the significance of this study lies on the following points.

- The findings and recommendations of the study may serve as a reference to governments at any level (federal, regional and local), to private investors, and other stakeholders that would like to deploy interventions in these pastoral areas;
- The study could initiate other pastoralist areas in the FDRE to carry out extensive studies on the relation between communal pool pastoral land resources and investment on land in the regional as well as national economic growth from the perspective of pastoralist development agenda. It may also serve as stepping -stone for those who intend to do further studies on this particular topics.
- Ultimately, all these efforts may help to draw policy implications and conclusions that may be crucial to policy makers in their endeavor to bring rapid transformation and economic development in the nomadic pastoralist areas.

1.2. The Research Problem in Context

Prior to irrigation development in the Awash Valley, the area utilized by the Afar seasonal migrations ranged from the foothills of the Ethiopian highlands in the west to the Red sea in the east. Movement to the south was contained by the ISSA (Somali), who then covered much of the Awash Valley. The pattern of migration followed the availability of seasonal grazing and water supply during the dry months from December to June. In the rainy period from July to October, the Afar spread outward to seasonal watering points and fresh pasture growth. In the crucial dry months the Awash River and its immediate environs provided the main sustenance for the Afar herds. In order to survive a dry season, which can last from mid-September to mid-June, access to flooded grazing areas is crucial to Afar pastoralists. (Maknun 1993)

Against this background different development schemes was under taken by the central government aimed at national economic growth by ignoring traditional sustenance of the Afar pastoralists. Partner (1979) quoted by Maknun states that "after 1941, the Ethiopian government began to view the Afar territory as politically important by virtue of its strategic location at the entrance to the Red Sea and economically important because of the agricultural resources of the Awash Valley". (Maknun 1993)

Accordingly, big irrigation schemes were launched first at Tendaho in 1961 in Lower Awash Valley. Later, in 1962, the Imperial Government of Ethiopia formed the Awash Valley Authority as an autonomous authority to administer all schemes in the valley.

Since the 1960s as well as recently the Afar's high potential (Awash valley Basins) have been lost to agricultural encroachment, to private and state irrigated development schemes, to conservation schemes and to planned and spontaneous settlement schemes as well as to a tribal grazing reserve to ISSA Somali. These changes have together seriously affected the lives of the Afar pastoralists through expropriation of grazing land, vulnerability to drought and other health and ecological hazardous. (Ali 1997)

Presently, many Afar clans are contained at the Awash River side under life and death struggle to safeguard their only Oasis (Awash River). Consequently, after the Derg, the Afar pastorals claimed to the return of their irrigated dry season grazing land and the federal state returned 16,547 hectare of irrigated state farms in both Middle and Lower Awash Valley.

Even though, the only accessible resources in most parts of the Awash Valley are the returned state farms, they have managerial problems attributable to land use conflicts, environmental degradation and other related socio-economic damage.

Moreover, there is a debate regarding the initiation of the federal government to return portion of the state farms to the Afar pastoralists. Some argue that the 16,547 hectare of land were handed over to the Afar pastoralist post -1991 in response to their demand for longtime and it aimed at contributing to food self-sufficiency in the region through the participation of Afars in irrigated agriculture. On the other hand, there are some elites who argued that the then transitional government has decided to return a portion of the state-owned farms to the traditional owners i.e. the Afar pastoralist merely for political reasons. These groups supported their argument by indicating the under capacity of the regional state in 1991/92 to administer the returned ex-state farms. Hitherto, there is no indication whereby the Afar pastoralists fully participate in the cultivation of their returned plots of lands. Private investors currently manage the land.

The regional government tries to emphasis the current situation being the fruit of their own effort in response to the quest for pastoral land, and enhancing private investment in the region. Strangely enough, no farm is currently cultivated under the full participation and ownership of the Afar. Some returned state farms are out of production for the last 12 years and hence, at present dry land adaptive plant species (*prosopis juliflora*) invading the returned land which resulted in land degradation. On the other hand, in most farms shelters, social services and machineries are shamelessly looted or destroyed.

Among other challenges, cultivation by private investors who unofficially concluded agreement with clan leaders makes the situation worse. For the last 12 years private investors, clan leaders and some influential pastoralists have got the lion share from the agricultural investment on the Afar pastoral land while majority of the Afar pastoralists have got little or no benefit from their land rather they face with intra-ethnic conflict, they develop dependency attitude, and their land is degrading gradually.

In general some individuals become well off not only at the expense of the majority Afar pastoralist's livelihood but also by putting the future Afar's generation survival in question. Thus, the policy vacuum regarding communal land tenure system and its impact on the Afar, the official perceptions regarding the contribution of private investment for pastoral livelihood constitutes the background to the study.

This study addresses the problem stated by trying to answer four interrelated research questions that are central to the topic.

- a) What are the legal and political backgrounds of traditional pastoral land that have affected pastoral communities in Ethiopia at different regimes?
- b) How has the nomadic pastoral way of life of the Afar been affected by past development interventions as the result of these political and legal contexts?
- c) What are the ideological and legal premises to return portion of ex-state farms to the Afar pastoralists?
- d) What are the merits/demerits of private agricultural investment on the Afar land post -1991?

The first two questions, mentioned above guide the attempt to understand the transformation of the pastoral Afar through the activities of external interventionist that severely, curtailed their mobility and steadily diminished their access to pasture. The Afar longtime quest for the return of their land has got a response from the Federal Government by handing-over some portion of ex-state farms. However, the Afar could not test the fruit of their land yet and the government claims the Afar's under capability to efficiently utilize the returned land. The third question guides to understand better the background of the federal government to hand-over the land and entail a huge cost. The returned lands have been either left for grazing or leased-out to private investors. In line with this, the fourth question aids in identifying the merits/demerits of private agricultural investment in terms

of income generation, employment opportunities, resource-use conflicts, environmental degradation and other socio-cultural changes among the Afar pastoralists.

1.3. Objectives of the Study and Working Hypotheses

Based on the problem stated above, this study is undertaken with the following general and specific objectives.

General Objectives

The overall objective of the research is to conduct study on trends of investment on pastoral land and its impact on the Afar.

Specific Objective

The specific objectives of the research areas are: -

- To review theoretical and empirical literature concerning communal land tenure system and external interventions on pastoral lands;
- To assess the role of the Afar Regional Government as well as traditional administrative institutions in land tenure issues;
- To analyze the contribution of the private agricultural investment in the study areas to the government, the private investor and to the pastoral livelihood.

Given the background to the study and the objectives set, the following working hypotheses guide the research.

- Large scale irrigation agriculture currently operating under the state farms; military expansion schemes and the current practice of private agricultural investments on the

returned land have caused incalculable damage to the Afar pastoral livelihood. If these situations continuous, in the future, the outcome will be a gradual resource-depletion, economic dependency of the Afar pastoralists and unstable political environment due to mushrooming resource-use conflicts.

1.4. Research Methodology

To achieve the objective set above, relevant data were collected through field survey in the study area and related documentary source were reviewed. These are briefly discussed below.

1.4.1. Data Collection Instruments

To generate both primary and secondary data from various sources, the data collection instrument employed include household questionnaire, schemes of interview guides for clan leaders and elders, schemes of Interview at institution level, schemes of interview guide for private cultivators, as well as informal discussion and reviewing of documentary sources.

1) Household questionnaire

Structural questionnaire was used to obtain the household's overall Socio-economic characteristics. It includes, among others, questions on demographic characteristic of the household, number of educational and health services, sources of potable water, land ownership and grazing management.

2) Schemes of Interview Guide

Non-standardized Schemes of Interview guide were designed by selecting a targeting topic that might be phrased and rephrased according to the situation. Based on these Interview guides, primary data were gathered from the clan leaders,

elders in the study area, the private investors as well as assessment of information at institutional level.

3) Informal Discussion and Review of Documentary sources

These include field observation, informal discussion with experts, key informants as well as review of documentary sources such as Reports, Books, Journals, Policy Documents and other important publications and documents.

1.4.2. Sample Design and Procedures

In the survey, two-stage sample design was adopted. The first stage was the selection of kebeles /localities/ in both Amibara and Gewane woredas, where there is relatively large private agricultural investment on returned state farms and on other pastoral lands. Purpose oriented selection of Kebeles/localities was made to ensure meaningful representation of the area under study. The second stage was the random selection of households from each sample Kebeles/localities. Manageable sample sizes of 90 households were taken from the two sample woredas and a total of nine kebeles /localities/ within them. 60 household questionnaires were administered to ten pastoral and agro-pastoral sample households selected from the first six Kebeles/localities in the Amibara and the remaining 30 household questionnaires were administered to 10 pastoral and agro pastoral households selected from the three kebeles/localities in Gewne woreda.

Purposes oriented allocation of sample households in each of the nine kebeles/localities/ were used to achieve a meaningful representation of the study area.

Sample Size Allocated For Woredas and List of Places Covered by the Study

Woreda	Allocated sample size	Kebele/locality
Amibara	60	Ambash Sublale Hassoba Dahitele Bedelu Alie Kedigadora/Awash sheleko
Gewane	30	Ayroli Egile Gala-ela-dora
Total	90	9

1.4.3. Data Collection

The operation of data collection in the areas took place from February 26 up to March 10. A total of six enumerators were hired. Three enumerators handle the data collection in Amibara woreda and the other group in Gewane woreda. Two supervisors were also hired to make a close supervision on the data collection at household level. For each woredas, one supervisor was assigned.

The researcher collected the required data at the community and institutional level and unstructured interview were also held with group elders, clan leaders as well as experts in agricultural bureau, regional bureau of pastoralists coordination, the regional investment bureau and other governmental institutions at the regional level.

In addition, field observation and informal discussion with experts and information were made. All available information were also gathered from institutions at the regional level such as regional Bureau of Agriculture, Regional Investment Offices, Pastoralist Coordination Bureau of the region, the Middle Awash Agricultural Development Enterprise as well as documents from private investors was also collected.

1.4.4. Data Analysis and Presentation

The analysis of the data of the Household of questionnaire started with manual editing and coding. Data compilation was using SPSS (Statistical Package for Social Sciences) computer software. Presentation and interpretation of the results of the household survey were made along with the analysis of information obtained from interview of clan leaders, elders, private investors and institutions as well as informal discussions and review of documents.

1.4.5. Structure of the Study

The rest of the thesis is divided into five chapters. *Chapter 2* describes the field survey result regarding the Socio-economical features of the study area.

In *chapter 3* a particular effort is made to demonstrate the historical trend of pastoral land since the 1950's till 1991. In this chapter an overview of relevant literature focusing on the pastoral land tenure system, various state policies on pastoralist, development interventions on pastoral land as well as Afar responses and the implications of these upon Afar is examined.

Chapter 4 deals with investigating, the current land tenure situation of the Afar region in relation with land related government politics in order to appreciate their multi-faceted impact on the local level reality.

Chapter 5 devoted to the analysis of private agricultural investment on the study areas regarding their expected and actual contribution as well as drawbacks towards the pastoral livelihood. Finally, *Chapter 6* presents the main thrust and highlight of the study by way of generalize summary and concluding remarks.

2. Socio-economic Characteristics of the Study Area

2.1 The Research Area

This study was carried out in the Afar region of Ethiopia. The sights of the work are Amibara and Gewane woredas of The Middle Awash, among the Debine and Waima section of the Ado-hemara Afar.

2.1.1 Geographical Setting

The Middle Awash Valley (MAV) lies along the Awash River Basin, between the Upper and the Lower Valleys of Awash, where sugarcane and cotton plantation have been established by the central government of Ethiopia. The area is characterized by high temperature; it ranges from 25⁰c to 35⁰c. Usually the mean annual precipitation is less than 600 mm. May/June is the driest season of the year, *hagay*. It is said to be unsuitable for browsing since bushes dry up. The main rainy season (*Karima*), which accounts for above 60% of the annual total rainfall are from July to September. This is followed by the best grazing season of *Kayra* that occurs from September to November. Another minor rainy season is *Sugum* and appears during March and April. The *Sugum* accounts for 20% of the total rain fall. *Gilal* is less severe dry season with relatively cool temperatures (November to March). *Occasional rainfalls called dada may interrupt Gilal.*

The sample areas, i.e., Amibara and Gewane woredas are located in the Middle Awash Valley; Zone III of the Afar National Regional state. Amibara woreda covers the flood-fed pastures and wet-season lands located between the Awash station and Gewane. The woreda's boundaries in the west are the Addis Ababa-Assab/Djibouti Highways and the Alleideghe plain, bordering the Awash River in

the East. Gewane Woreda is situated in Zone III of the Afar region extending from the Awash River in the west, to the Dire-Dawa –Djibouti railroad running in the east. The woreda's boundary in the southeast is the administration boundary, of Afar National Regional state bordering Somali and Oromiya Regions. From the total area of Zone III 1,680,057 hectares, Gewane woreda covers 826,573 hectares and Amibara woreda covers 294,106 hectares. The two woredas constitutes 49.20% and 17.5% of the total land area in Zone III of Afar region, respectively.

Table 1. Land Use Development Potential of Zone III in ANRS

Description	Extent of unit (ha)	% of zone
Potential for grazing and browsing	770,999	45.58
Potential for grazing	27383	16.28
Potential for irrigated pastoral	2352	1.42
Potential for seasonal grazing	9743	4.96
Potential for crop production	43194	5.79
Un utilizable land	826386	25.67
Total	1680057	100.00

Source: - ANRS Rangelands and Water Development Study Final Report (2001)

Present land use and land cover in the two sample woredas are presented as follows:

Table 2. Land Use/Cover by Sample Woredas

Description	Gewane		Ambibara	
	Extent hectare	% of woreda	Extent hectare	% of woreda
State farm	2,652	0.32	7956	2.71
Riparian	63,771	7.72	-	-
Open bushland	24,033	2.91	40,054	13.62
Dense shrubland	139,501	16.88	53,576	18.22
Open shrubland	5,054	0.61	98,055	33.33
Open grassland	66,514	9.05	23,179	7.88
Bushed/shrubbedgrass	-	-	25,195	8.57
Wooded grassland	81,631	9.88	-	-
Seasonal swamps	13,101	1.58	-	-
Seasonal marsh	31,497	3.81	19,686	6.69
Bareland	398,819	18.24	26,405	8.98
Total	826,573	100.00	294,106	100.00

Source: - ANRS Rangelands and Water Development Study (2001)

- **Cultivated land-state farms**

From the total land cover by the state farms in ANRS i.e., 58,674 hectare or 0.64% of the total regional area, the two sample woredas (Gewane and Amibara) constitute 10, 608 hectares of land; which is about 18% of the total state farms in the region.

- **Vegetation types**

Vegetation type composed of woods or bushes found along the major perennial rivers, mainly the Awash River cover a total area of 145,000 hectares, which is about 1.58% of the total regional area. Gewane woreda constitutes 63,771 hectares, which is about 43% of the total riverine woodland or bushland cover. The vegetation in this woreda is evergreen due to continuous water supply from the Awash River and is browsed by the livestock (camels and goats) during the dry season.

- **Riverine woodland or bushland**

Grazing and browsing of livestock in Amibara woredas of Zone III is, relatively easily possible because of the availability of open bushland and there is free movement of livestock from place to place. The total area of open bushland in the ANRS is 93,892 hectares, which is about 1.02% of the total regional area. Gewane and Amibara woredas cover a total of 64,087 hectares, which is about 68% of total open bushland cover in the region.

- **Dense shrubland**

Gewane and Amibara woredas constitute a total area of 193,077 hectares of dense shrubland, which is 67% of the total dense shrubland coverage in ANRS i.e., 288,100 hectares. The tree sizes are smaller than the bushlands. Its coverage is dense and does not allow the free movement of livestock and, therefore browsing in areas covered by this shrubland is low.

- **Open shrubland**

In addition to, land coverage of Gewane and Amibara Woredas includes open shrubland, which comprised of both shrubs and herbs (grasses) with low density.

From the total area of 969,503 hectares, which is about 10.54% of open shrubland coverage of the regional area, the two sample woredas (Gewane and Amibara) constitutes 103,109 hectares, which is about 10.63% of the total open shrubland coverage in ANRS.

- **Open Grassland**

The open Grassland is found scattered in the southern part of the regional along the Awash River Valley with area coverage of about 524,446 hectares, which is about 5-7% of the total area of the region. Gewane and Amibara woreda constitute total of 89,693 hectares, which is about 17% of the total open Grassland coverage in the region.

- **Bush/shrub Grassland**

The total area of bush /shrub grassland coverage in ANRS is 251,195 hectares, which is about 0.27% of the total area. One of the samples areas, Amibara woreda, alone comprises the total grassland coverage in ANRS. Though the grass composition is the dominant vegetation in the area, bushes or shrubs are found scattered rendering both grazing and browsing provisions

- **Wooded grassland**

This type of grassland coverage is found in the side of the Awash Valley. The area coverage in ANRS is 175421 hectares, among these Gewane worked a constitute 81,631 hectares which is about 46.5% of the total Grassland coverage in ANRS.

- **The wetlands**

The wetlands, which are found along the path of the Awash Valley River, are the seasonal swamps and marshy areas. In the swamps, few scattered trees grow, while the marshes are predominantly grasses and sedges. The two sub-units are described in detail as follows.

- **Seasonal Swamps**

A seasonal swamp, which is mainly found in depressions along the rivers and their courses, is a good dry season graze for the surrounding livestock. The total area covered by seasonal swamps is 50,390 hectares, which is

about 0.56% of the total regional area where Gewane woreda constitutes 13,101 hectares, which is about 25% of the total swamps coverage in ANRS.

- **Seasonal Marshes**

Seasonal marshes are mainly found along the Awash River banks, with total area of 182,499 hectares, which is about 1.98% of the total regional area. Gewane and Amibara woredas together constitute 51,183 hectares, which is about 28% of the total Marshes coverage in ANRS.

- **Bareland**

Seventy percent of the total regional area (6,444,559 hectares) is bareland. Total of 425,224 hectares, which is 6.6% of the total bareland coverage in ANRS, is found in the two sample areas. (Metaferya 2001)

2.1.2 Population characteristics

According to the population and housing census carried out in Afar in July 1996, the population of the region was 1, 106, 383 of which 625, 839 were males and 479, 544 were females the total population, 92.2% live in rural areas and the remaining in urban centers.

Based on the Central Statistical Authority (CSA), Amibara woreda has a total 40,175 people of which 19,338 are settled in urban areas and the remaining 20,837 live in rural areas.

Similarly, Gewane Woreda with a total number of population 28, 144, of which 8,580 live in urban centers while the remaining 19,564 people settle in rural areas. (See Table 3)

Table 3. Population of ANRS (1996)

Zone	Woreda	Rural			Urban		
		Male	Female	Total	Male	Female	Total
1	Ayssaita	21332	16374	37706	8150	7325	15475
	Dubti	30988	20000	50988	8674	7836	16510
	Afambo	7286	6205	13491	—	—	—
	Mile	37565	28907	66472	2059	1886	3945
	Elidar	25935	19590	45525	2443	2180	4623
	Chifra	41316	30190	71506	868	792	1660
2	Erebt	21789	16878	38667	—	—	—
	Koneba	20553	15750	36303	459	360	819
	Aba'ala	11418	9573	20991	1613	1687	3300
	Megale	10719	8945	19664	—	—	—
	Berahile	18209	14242	32451	417	454	871
	Dalul	2302	18778	41802	—	—	—
	Afdera	8820	6834	15654	—	—	—
3	Amibara	11808	9029	20837	10229	9109	19338
	Awash Fentale	5331	4578	9909	4248	4436	8684
	Gewane	11334	8230	19564	4602	3978	8580
	Dulecha	8008	6734	14742	176	151	327
	Bure- Mudayitu	21500	6467	37967	—	—	—
	Argoba sp.	5421	4977	10398	—	—	—
4	Aura	9998	8308	18306	90	64	154
	Ewa	19557	15449	35006	66	57	123
	Teru	19752	15609	36361	—	—	—
	Yalo	11226	8273	19499	459	478	937
	Gulina	9306	7230	16536	293	240	533
5	Telalak	39130	26560	65690	—	—	—
	Dawe	33664	23776	57440	—	—	—
	Artuma	27755	18643	46398	—	—	—
	Fursi	36929	26922	63851	—	—	—
	Simurobi-Gelealo	27743	21838	49581	—	—	—
	Total	581993	438511	1020504	44846	41033	85879

Source: - Population and Housing Census of Ethiopia, CSA, 1996

Population Dynamics

Changes in population size (or population dynamics) are determined by birth rates and death rates, among others. According to 1996 census, the crude birth rate for the Afar region is 18.8 births per 1000 population. The total fertility rate (i.e. the number of children a women loved to have during her reproductive life if she experienced the age specific fertility rates) for the Afar region is 3.3 children per women.

The infant mortality rate (i.e. the probability of death in the first year of life) for the Afar region was 118 per 1000 live births. The child mortality rate (i.e., the probability of death for children in the age of 0-4 years) for the Afar region is 174 per 1000 children.

Life expectancy at birth (i.e., the average length of life that would be observed in a population) for the region is 50.3 years, i.e. 53.1 and 47.0 years for males and females respectively.

Based on the 1996 census result, the population of the region and the two sample woredas (Amibara and Gewane) has been projected for the years 1998, 2000, 2002 and 2010. The population projections were made by woredas using the exponential growth model by applying the national estimated average growth rates of 2.23% for rural and 4.11% for urban. Assumptions are also based on growth rates applied by CSA to project the regional population up to year 2000. The population of the region for the years 2002 and 2010 has been projected, using the average national growth rate, which is 2.9 percent.

According to the 1996 census, the population of the region is project to reach 1,274,246 by the year 2002 and 1,624,669 by the year 2010. The project population of the two sampled woredas (Amibara and Gewane) up to the year 2010 is also indicated in table 4.

Accordingly, the populations of the two woredas are projected to reach 102,146 by the year 2010 correspondingly the rural population is projected to reach 59502. This will create tremendous challenges interms of natural resource-use and provision of social services.

Table 4. Projected Population of the Two Woredas in the Study Area

Woreda	1998			2000			2002			2010		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Amibara	20960	21777	42737	22718	22759	45477	24625	23785	48410	29538	30689	60227
Gewane	300	20446	29746	10080	21368	31448	10926	22332	33258	13106	28813	41919
Total	30260	42223	72483	32798	44127	76925	35550	46117	81668	42644	59502	102146

Population Density

The Afar region is among the areas of the country with low population density (13 persons per km²) with population size of 1,106,383 and land area of 85, 410 km². /According to the 1996 census/, the region has a population density of 13 persons per km². The population density of Zone III, where the two sampled woredas are located is 9.4 persons per sq.km.

Particularly, one of the sample areas Gewane woreda is the least densely populated Woreda in the region, which are 3.5 persons per km². However, it is important to put in mind that the population density among woredas might vary from time to time as the result

of seasonal movement pattern of the pastoralists depending upon the availability of grazing land and water points.

Mobility and settlement / patterns of Afar pastoralists

The Afar pastoralists are follow transhumance from one grazing area and watering points to another depending on the availability of resources. Mobility and settlement pattern of the Afar pastoralists can be generally divided into permanent and temporary camps. However, nowadays the settlement pattern is structured along clan and /or sub-clan territorial unit. Hence, the Afar pastoralists usually make temporary settlement points, although they will never abandon the original or base encampment.

The Afar pastoralists have good communication traditions, which they call *Dagu*, which enable them to have up-to-date information about resource access and temporarily separated families to take timely interaction.

Mobility and Settlement Pattern in the Study Area.

The pastoralists, in Amibara Woreda spend most of the winter season in Allaideghe plain, and the summer season along Awash River banks. However, during *Karima* the flood hazard resulted from Awash River and floods diverted from the private farms displaced a number of families and obliged them to shift their camp sites away from the Awash River. The flood has also aggravated malaria infestation in the area and a good number of people suffer from the daily disease.

Before the introduction of irrigation schemes in the middle Awash, the pastoralists in Amibara Woreda used to graze their animals in and around Melka Sedi and Melka Werer areas as a dry period grazing site. In the advents of commercial farms in Melka Sedi and

Melka Werer the dry season grazing areas of the Afar pastoralists have been highly affected and their grazing pattern also changed.

The Afar in Amibara district often evacuate to Allaideghe plain, which has a vast grazing land used by all clans with less marked boundary. Although Allaideghe plain is the most common destination because of its rich resources, it has always been an area of contention among the Afar, Issa (Somali), and Ittu Oromos.

The pastoralist in Gewane woreda spend most of the winter season (*Karima*) in the vast grass plain area namely Yangudi Rasa in the North and a flood plain along the Awash River in the west. Allaideghe grassland plain, which covers 200,000 hectares, is also 40km south of the woreda. After the resource centralization by the state since 1960's, Gewane woreda has lost 2,170 hectare of dry season grazing reserve for irrigation. The government displaced the community to the hillsides and issued their land for some investors and AVA. Similarly, the Yangudi Rasa plain was enclosed during the Imperial Regime for wild animal conservation. Nowadays the remaining portion of the Ynagudi Rasa grassland plain is encompassed by the Issa (Somali). Hence, as the result of conflicts in the area, about 471, 000 hectares of grassland is under utilized and given away for fire and nature even in times of drought.

Household size and composition

While the average family size of the surveyed households in the study area is 6.6 persons, the figure for the entire region of Afar as per the 1996 census is 5.7 persons and 6.0 persons for rural areas. Compared to other zonal administration in ANRS, Zone III, where the two sample woreda are located have an average family size of 4.6 persons of which 5.0 persons for rural areas is the lowest in Afar region. (CSA1996)

The distribution of households and persons by household size in the surveyed areas showed that 20 % of the household (the largest proportion) has family size of 6 persons. About 70 % of the surveyed households have family size of 5 to 9 persons (See Table 5)

Table 5 Distribution of Households and Persons by Household Size and Average Number of Persons per Household in the Surveyed Households.

Household size person	Households		Persons	
	No	%	No	%
1	1	1.1	1	0.2
2	4	4.4	8	1.3
3	3	3.3	9	1.5
4	6	6.8	24	4.0
5	11	12.2	55	9.3
6	20	22.2	120	20.0
7	16	17.8	112	18.8
8	12	13.3	96	16.1
9	5	5.6	45	7.4
10	7	7.8	70	11.8
11	3	3.3	33	5.6
12	2	2.2	24	4.0
Total	90	100.00	597	100.00
Average household size	-	-	6.6	

A household often consists of head, spouse, their children, and some other persons residing in the household. About 3 percent of the surveyed households are female headed. The largest proportion of the population in the surveyed households is Son/Daughter, which constitutes 49.4 percent of the total (See Table 6).

Table 6. Percentage distribution of the surveyed Population by spouse

Relation to head of household or spouse	Male	Female	Total
Head	96.7	3.3	15.1
Spouse	-	100.0	15.9
Son/Daughter	68.1	31.9	49.4
Brother/sister	63.6	36.4	11.1
Father/Mother	45.4	54.6	5.6
Other relating	58.8	41.2	2.8
Non-relatives	0.5	0.5	0.1
Total	59.8	40.2	100.0

Age/Sex Composition

The pattern of age obtained by the survey is shown in table 7. As can be seen from the table, the area has 41% of its population less than 15-year age, 55% between ages 15-64 years, and 4% at the age of 65 years and above. The age composition of the surveyed population indicated that the population is dominated by the young age 0-19 years 51 %, almost half of the surveyed population being below 15 years of age. Sex composition of surveyed households indicates that there is the excess of males over females. (See Table 7).

Table 7. Distribution of the Surveyed Population by Age Group and Sex

Age-group	Male		Female		Total	
	No	%	No	%	No	%
0-4	49	13.7	35	14.6	84	14.1
5-9	57	16.0	36	15.0	93	15.6
10-14	40	11.2	28	11.7	68	11.3
15-19	34	9.5	25	10.4	59	9.9
20-24	41	11.5	16	6.7	57	9.5
25-29	27	7.6	25	10.4	52	8.7
30-34	29	8.1	26	10.8	55	9.2
35-39	12	3.4	10	4.2	22	3.7
40-44	19	5.3	9	3.8	28	4.7
45-49	7	2.0	5	2.1	12	2.0
50-54	11	3.1	7	2.9	18	3.0
55-59	6	1.7	3	1.2	9	1.5
60-64	11	3.1	7	2.9	18	3.0
65 +	14	3.8	8	3.3	22	3.8
Total	357	100.0	240	100.0	597	100.0

Literacy

According to the 1996 population and housing census, about 93% of the population of Afar region was estimated to be illiterate. Compared to the entire region the literacy level for the study area is relatively higher due to better school facilities in the state farm areas.

As per the survey result, out of the total population in the age range of 7 years and above, the majority or 81.4 % are illiterate, 4.3% can read and write, and 12.7% have primary education (See Table 8)

Table 8. Percentage Distribution of the Surveyed Population Aged 7 Years and Above By Education and Sex

Education	Male	Female	Total
Illiterate	76.2	94.4	81.4
Read/write	6.1	4.3	4.3
Primary education	14.3	4.1	12.7
Above primary	2.0	0.5	1.2
Others	1.4	-	0.4
Total	100.00	100.00	100.00

2.1.3 Socio- economic Infrastructure Development

1) Education

The education facilities in the region are generally inadequate and the existing few facilities is also unevenly distributed among Zones.

The majority (more than 60%) of the elementary schools and all of the senior secondary schools were located in zone 1 and 3. Almost all (except one located in zone 2) junior secondary schools were located in zones 1 and 3. There are 24 primary and secondary schools in the two sampled woredas. However the participation level of the Afar people is very minimal. For instance, as the data from the regional Education Bureau indicates, the enrollment ratio of the Afar is only 26% and 5% of the total students enrolled in the primary and secondary schools respectively.

Table 9. Number of Schools in Sample Woredas

Woreda	Primary	Secondary	Total
Gewane	6	1	7
Amibara	6	3	9
Total	12	4	16

Source: Education Bureau of the Afar National Regional State

2) Water Supply

Safe water availability, especially in dry seasons, is an acute problem throughout the region. The total numbers of housing units present in the region are estimated to be 188,860 (CSA, 1996) out of which 167, 182 housing units are rural (88.5%).

The rural area housing units that have access total water comprises only 5,353 or 3.2 %. The main sources of water in the study area are rivers and wells. Other sources such as boreholes, ponds and irrigation canals are also used to a lesser extent.

Table 10. Main Sources of Potable Water

No.	Source	No. of respondents		% of respondents	
		Gewane	Amibara	Gewane	Amibara
1.	River	13	20	43.3	45.0
2.	Well	2	2	6.7	3.3
3.	Spring	-	2	-	3.3
4.	Borehole	3	12	10.0	8.3
5.	Pond	2	4	6.7	6.7
6.	Pipe	4	8	13.3	13.4
7.	Irrigation canal	6	12	20.0	20.0
8.	Total	30	60	100.0	100.0

3) Health Services

A health service present in the region is one of the lowest in the country. There are 4 health stations, clinics, 8 health centers, 49 health posts, and 2 hospitals with 65 beds in the region.

The distribution of health facility in the region is not equitable. All of the hospitals and the health centers, and 32 of the 50 health stations (64 %) were found in zone 1 and 3 that are along the main road and where there are cotton plantations.

Table 11. Distribution of Health Facilities in Sample Woredas

Health Facilities	Gewane	Amibara	Total
Health Station	-	6	6
Health Center	1	-	1
Health Posts	1	1	2
Hospitals	-	1	1
Total	2	8	10

Source: - RHB annual report 2002

2.2 The people

The Afar people are one of the Cushitic speaking pastoral people of Ethiopia inhabiting some of the most arid and hostile environment of the Horn of Africa. The Afar community is the pastoral society that more or less constantly moves with its livestock from one grazing area and water point to another depending on the availability of the resources.

Social characteristics

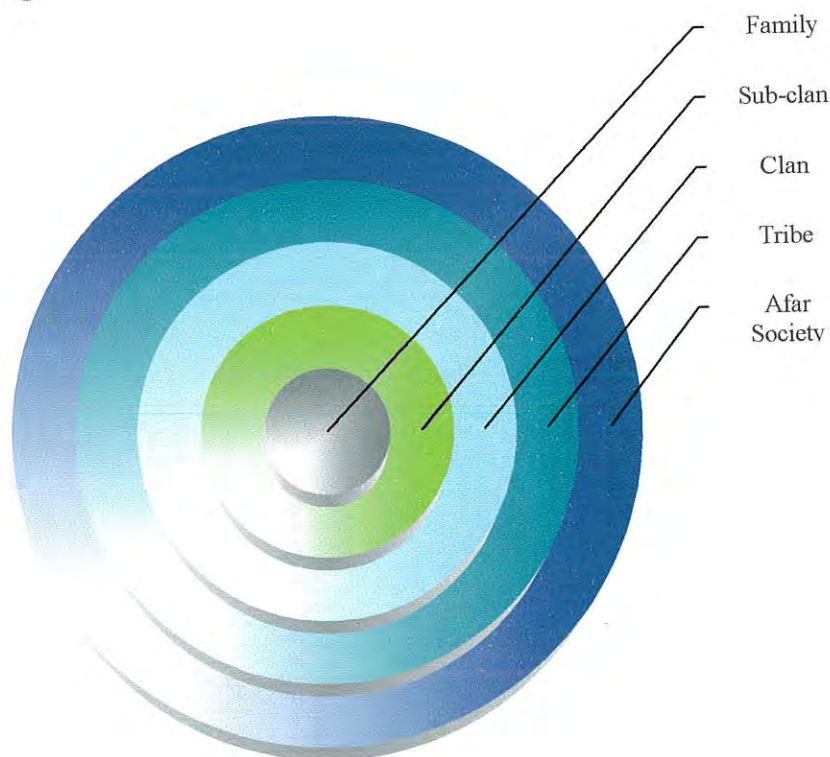
The social organizations of the Afar are responsible, among other things, for the allocation of human and animal resources to the various natural resource endowment areas. Accordingly, the Afar lands are divided into number of tribal territories (*Dinto*) demarcated by boundaries (*Dikka*), which follows natural features such as rivers, hills and rocks. However, Afar social institutions have maintained uniformity, whatever the distance between and among different Afar groups might be.

Kinship system

Kinship is the basis of social organizations among the Afar pastoral nomads. The social relation of Afar pastoralist is based on genealogical reckoning, trailing ancestors through the father or mother's line of descent or both.

Kinship systems attain a high level of organization among the pastoralist in terms of lineage and kinship structure. Hence, the kinship relationships of tribe, clan, sub-clan, lineage and family must be recognized and accounted for in every decision and issue that concerns resources shared by more than one groups among the Afars.

Fig 1: Hierarchy of Afar society



Tribe

Tribe is largest kinship group recognized by its members. Each tribe is independent and considers its leader to be of equal importance with other clan leaders, regardless of the size of the tribe.

The tribal chief (*Makabantu*-named as *Balabat* during the Imperial regime) is expected to maintain peace, although his personal influence is limited. A council of elders must make all decisions by majority vote.

The Debine and Waima tribes are represented in the Middle Awash. The Waima have come from the east within the last 50 years while the Debine have been established on their land for centuries.

Clan and sub-clan

The clans (*kedo*) that make up a tribe are the most political and social unit in terms of cooperation and belonging. Members of a clan recognize a common ancestor.

Any person to whom a man can trace any genealogical link through the line is called *Amibara*-one of the sample areas *Ambira Woreda*'s name is taken from this term.

Like the tribal leader, the clan leader (*kidoh -Aba* named as *Chika-Shum* during the Imperial regimes) does not have authority to decide and make agreements on behalf of their clan members. He more convenes the council that decides, by consensus.

The clans that are included in the Amibara woreda are Harkamela-fedihite, the sidihaburra-Airorossa the Rakbak-Deramla. There are about 28 sub-clans under the umbrella of the above-mentioned 4 clans (*see Chart 1*)

The Gewani woreda boundary takes the Debine's tribal territory. The most notable clans are Gendi, Tekail-Kurbili and Hassoba. There are more than 10 sub-clans under the above-mentioned 3 major clan groups. (*See Chart 2*)

Lineage / Family

The family (*Dalla*) is comprised of a man, his wife (or wives), their offspring and possibly married sons, their wives and children. Married sons usually live in the same locality.

In the case of a man having more than one wife, the wives usually have their own houses set up very close to each other. A girl remains a part of her father's lineage upon marriage, but her children will not unless she is married to someone of her own clan.

Chart 1. Chart of clans in the Debine and Waima tribe

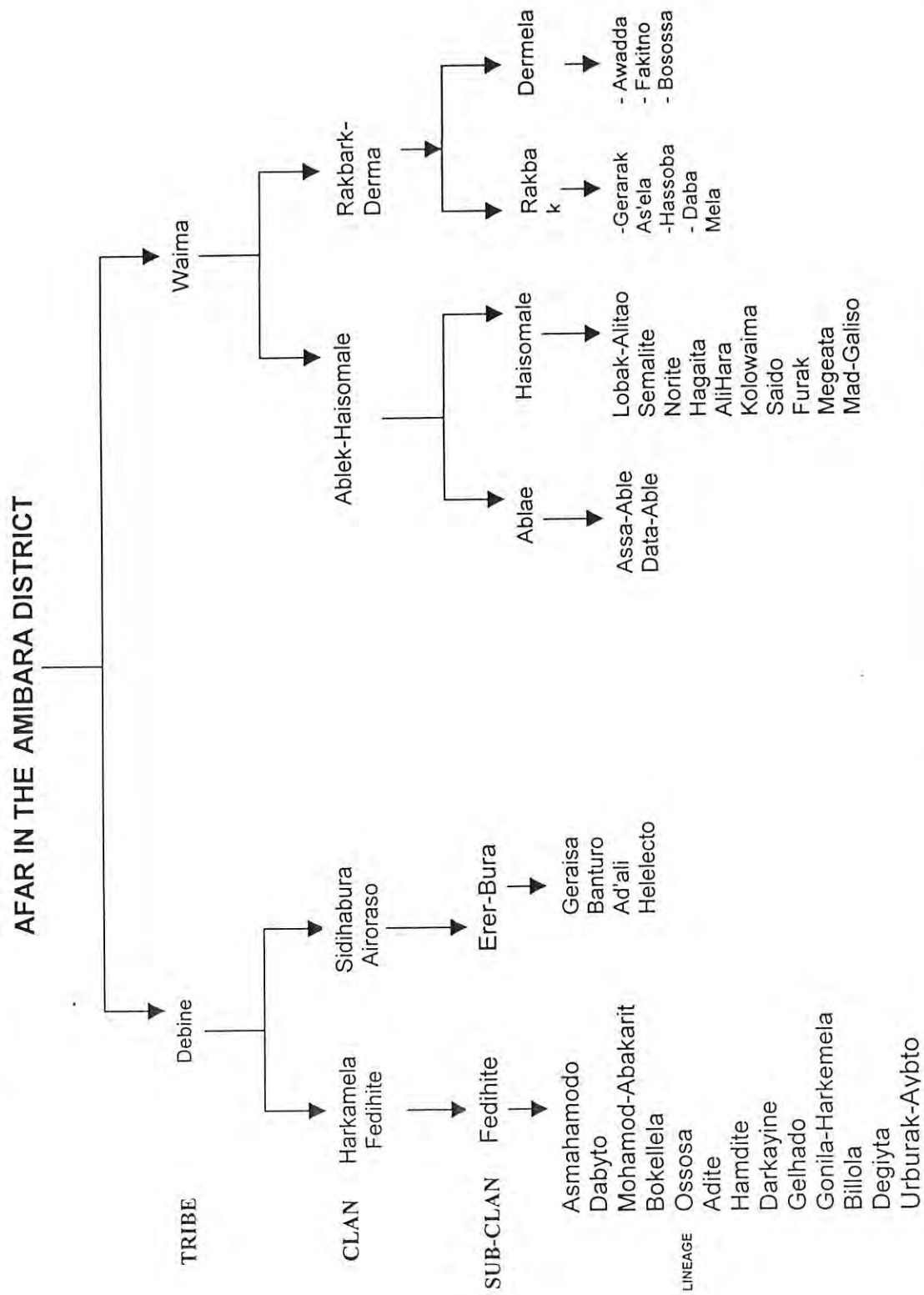
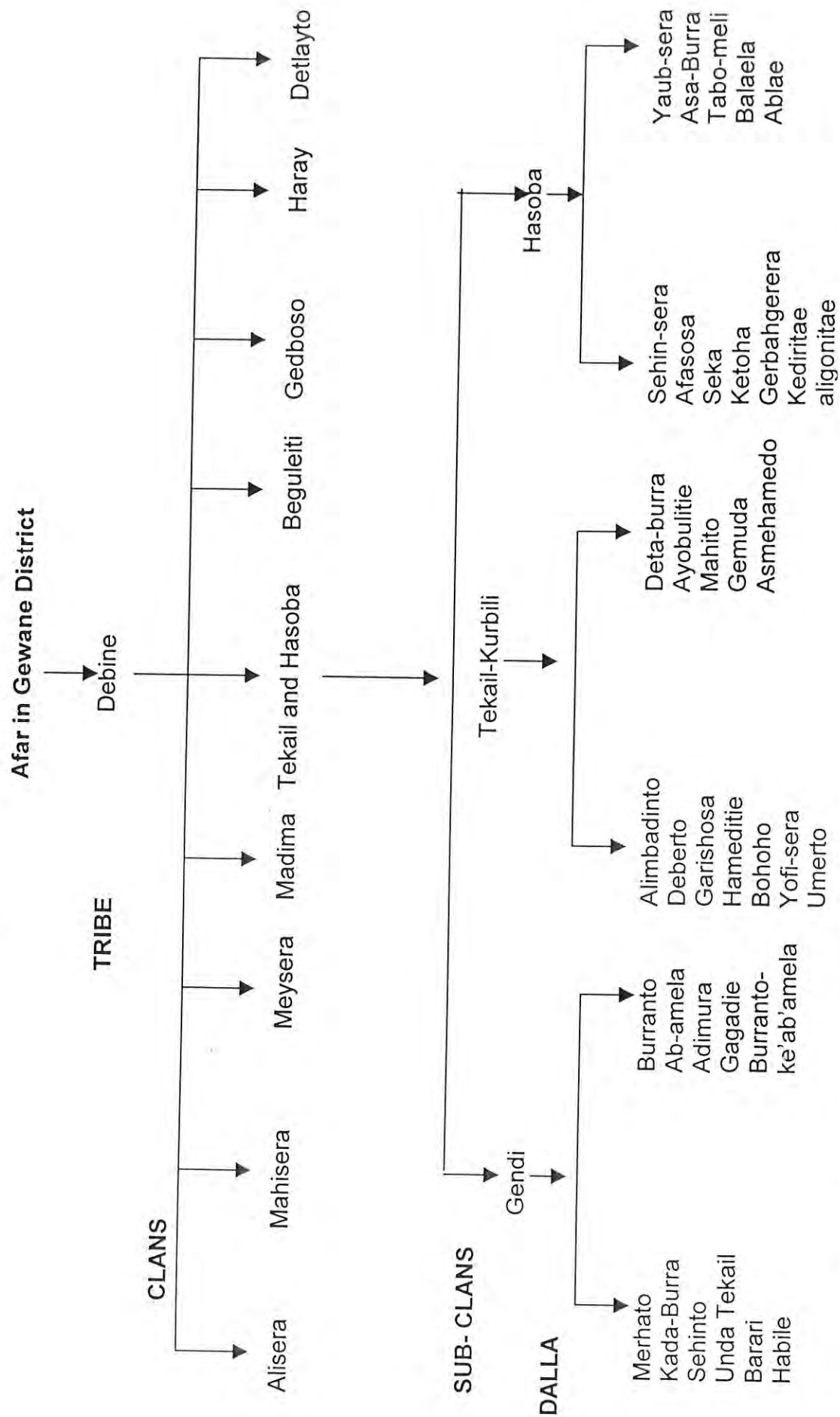


Chart 2. Clans in the Debine



Traditional Institutions of Afar

The Afars have their own indigenous (traditional self-help) institutions to look for assistance from one another in order to tackle their harsh environment and to keep up with their homogenous cultural linkages.

The major idea behind these traditional institutions is to keep each other in socio-economic and political problems such as in herding of animals, cultivation of crops, managing offensive ethnic or tribal conflicts, local administration and many other socio-economic, cultural and political affairs.

From the field survey and discussion with clan leaders, the information obtained on the role of clan leaders is that each and every Afar is organized in any one of the clan organization (traditional institutions) that exists in the study area. Age is an important factor in the Afar socio-cultural tradition. The population is also divided according to a system of age groups associated with cluster of rights, duties privileges and status.

Mablo

It is a general council of clan leaders and elders within a tribe. It is the highest decision makers with regard to major changes in social organization, resources, re-allocation, and arrangements of self-defense and peacekeeping. The council is called and chaired by the chief of the tribe (*Makaban*).

Elders' council (Edola)

It is a clan level office comprising the clan leader, sub-clan leaders and elders of the respective sub-clans. It is the highest-level decision maker with regard to participation, resource management and social controls within a clan territory.

Fiema

Fiema is a formally organized group of men or women whose 'recruitment' is based on their age or / and the localities they come from. A *fiema* is usually a peer group, made up of young people of equal age. The leader of the group (*Fiema-aba*) is responsible for coordinating the duties of the *fiema* such as prevention of conflict, executing fines and sanctions implementing elders' council decision etc.

Division of Labor

This assessment has been done following visits and a series of discussions with Afar women living in sampled woredas. In the Afar society elders, adult men, women, children have different but some times also over lapping roles in making their ways of life work.

Mobility

Due to the aridity of the physical environment and widely dispersed nature of the natural resources, the Afar are likely to increase their movement from one place to the other in search of pasture and water.

Mostly it is the responsibility of the young people to take out animals for grazing. The rest remain near water sources caring for small stocks.

By the help of their traditional information communication system, *Dagu*, men patrolling scouts (*gibba*) are responsible for mapping out the places where animals along with the human population will migrate.

Even if the last decision on where and when to move, is decided by men, women are also responsible and actively participate in the process of moving and locating humans and also animal herds and their makeshift house, "*Ari*" into a new settlement area. They pack all household and other movable items and load them on a camels or donkey's back. In situations where only big animals move young men will be responsible for the travel and women & young children both boys and girls, stay behind and look after small stocks (e.g., goats & sheep). Generally, movements from one to the other place need a co-coordinated work and hence the Afar pastoralists perform this task in a collective manner.

Domestic work

Apart from reproductive roles such as childcare, most of domestic work activities like acquiring and processing food, women undertake managing food rationing fetching water and firewood and too many other chores.

The men do not have any role in domestic activities. The Afar woman has the whole responsibility to ensure that her husband and children get enough food.

Marketing

Marketing is commonly done jointly while women take sheep and goats to the market, men sell cattle and camel. They often go to long distance markets.

Decision-making

Usually the men and women participate in making decisions at household level. Women participate and decide on routine domestic issues such as type of animals they should sell, how to use their cash, what to buy from market and to whom, etc.

However men handle most matters that affect community when intra and inter ethnic conflicts arise due to resource use and other related manners. The men get together discuss and resolve the conflict. Women are largely left out from making decisions concerning community wide concerns.

Generally Afar men involved in selected activities while the women are tied up with a lot of activities from early dawn to the dusk. The role of women (both productive and reproductive) becomes much heavier during the dry season and whenever there is shortage of water in their vicinity. All in all, there exists no activity that is outside Afar women's domain. Despite these facts, the Afar women exclude from property right such as and ownership.

Economic Characteristics

As the majority of the Afar pastoralists depend on nomadic pastoralism, the data on occupation /type of activity/ of the surveyed population aged ten years and above, indicates that the major type of activity of the population is pastoralism 76.4%. This is followed by mixing farming 22.9% that is, both farming and livestock rearing (agro - pastoralism). The population who engage in farming alone and other non-farm and non - farm and non -livestock production is only 0.5% and 0.2% respectively. (See Table12).

Livestock Raising / pastoralism

The most important income generating activity for Afar in the study area is animal husbandry. Mainly, rearing of cattle, camel, sheep and goats for the daily subsistence need of milk and milk products, meat and hide is dominant.

Veterinary services are hardly available in the study areas as well as the region as whole. Therefore the off-take rate is directly related to good and bad years.

During the bad years, livestock particularly cattle are highly stricken by drought and a good number of them die because loss of grazing land and water prints. The off-take rate, therefore marketable during the drought period is very low.

In time of good years, the off-take rate is comparatively high and the number of livestock marketed is higher than the drought period. In addition, in time of good year, milk production would improve significantly, which covers significant portion of the household food requirement.

In general, livestock are pastoralists' capital. They earn their living from their livestock. They can easily sell them to buy the household requirement from the market. Small ruminants (goats & sheep) are usually sold to meet basic requirements of the household such as food, grain, cloth, commercial goods, and others. Large stocks (cattle and camels) are sold in emergency situations like drought and for other social affairs /such as religious ceremonies, purchase of weapons, and resolutions of conflicts between individuals and /or clans/. In addition, the diversification of livestock production gives opportunity to cope with the harsh environment of the low land area. Live stockowners in the study area discussed the importance of live stock production as indicated bellow.

Cattle

They prioritize the products from cattle as milk for home consumption and cash income by mainly selling the milk, while butter is rarely sold. Cattle particularly are important during the rainy season when feed is very scarce usually they sell the cattle. They prefer to sell the male calves for cash income than the female calves.

Camels

Camels are famous for their drought resistance to the harsh physical environment of the Afar region. They milk three times a day under normal condition. Camels are also important pack animals. The Afar pastoralists call them as the 'Vehicle of Afar'. They go through the dry season of the region without having enough water sometimes traveling for five days without water. The exchange rate of one camel is equivalent to about twelve cows. Unlike oxen camels are very important cash income source for the community.

Goats and sheep

Goats and sheep are another important livestock to the Afar community. Beyond their importance for food, goatskins are the only source of material for preparing water container and butter processing material.

The economic access of the pastoralists worsens due to the locations of market center. Livestock markets are located at distant places, which have significant impact on the body weight of the animals. The pastoralists of Amibara and Gewana woredas are forced to take their livestock to markets 2 to 4 days' walk away.

Farming

The presence of the major river the Awash and the experience gained from the state farms established some four decades ago was supposed to bring a possibility of applying the wide use of irrigation farming to the region.

In the sampled Woredas, Amibara and Gewane, 1,956 and 2,652 hectares of land, have potential for crop production respectively. In addition a total area of 9000 hectares of land in the study areas has a potential for irrigated pasture.

Several studies have confirmed that purely pastoral economy can no longer support the Afar. From the interview in the two sampled woredas, it's learned that, many Afar recognize the importance of integrating themselves in irrigation agriculture.

Crop production in these areas can provide sufficient food supply, subsequently, ensuring food security in the area. Moreover, abundant crop residues will reduce long distance travel in search of grazing land, which leads in turn to agro-pastoralism and subsequently to a sedentary life.

Nowadays, Afar pastoralists are recognizing the importance of mixing livestock raising with crop production for various reasons such as increasing resource-use conflicts due to scarcity of grazing land and water points, past experience of drought which left many pastorals with no cattle remain on hand, large amount of profit generated by private cultivators on their land are some among many reasons. However, in the study area, there are insignificant number of households engaged in crop production for home consumption, sale in a nearby market and irrigate pastures to feed their animals.

The major constraints to integrate the Afar in irrigation activities are shortages of financial and human capital as well as contractual agreement with investors and clan leaders that set an obligation regarding access rights of other stakeholders. In the two sampled woredas, Amibara and Gewane, only 0.5 % of the surveyed activity on farming alone. (See table 12)

Farming and livestock /agro-pastoral/

As it is briefly discussed in the farming sub-topic above, nowadays the pastoralists are likely to be aware to increase their chance of survival by taking up non-pastoral activities. The rational behind this fact is the case their cattle wealth declined due to drought or shortage of grazing land and water points.

There are a few numbers of Afar pastoralists practicing crop production. From the data collected in the study area, the major type of the economic activity of the population in the two sampled woredas Amibara and Gewane is pastoralism (76.4%). About 22.9% of the surveyed households are mixing livestock and crop production. (See table 12)

Table 12. Percentage Distribution of the Economically Active Surveyed Population Aged Ten Years and above by Type of Activity /Occupation /

Type of activity /occupation	Male	Female	Total
Pastoralism/livestock	67.3	84.0	76.4
Farming	0.4	-	0.5
Farming & livestock (agro-pastoralist)	32.3	16.0	22.9
Other	0.4	-	0.2
Total	100.00	100.00	100.00

3. Review of Theoretical Literatures on Communal Land Tenure and Sharecropping on Pastoral land

For a thorough understanding of communal pastoral land tenure issues it is important to review the theoretical considerations and central concepts regarding the tenure system and practices in pastoralist areas.

Land tenure is defined as the terms and conditions on which natural resources are held and used. (Bruce 1986). Birgegard (1993) expands the definition of tenure beyond man's relationship to land, and argues that tenure is a social institution in which there is a relationship between individuals and groups, which govern a series of rights and duties with respect to the use of land. As such it touches all aspects of life through its role in people's survival, the distribution of wealth, political power and cultural expression.

Usually pastoral lands are held under controlled access tenure regimes, often Communal in form. The term communal has been used in a variety of sense. Usually it should be made applicable only to cases where the holding or use of land is shared by several individuals none of whom have exclusive rights to it. This includes lineage or kinship, clan and collectivized households. Communal tenure relates to that system or rights in which access to land (is) based upon membership in a group such as lineage... defined by common descent (Bruce 1986)

The assumption of Hardin's "tragedy of the commons" theory argues that indigenous communal land tenure systems are incapable of efficient land use as herders with the means and desire to expand their livestock holdings will ultimately destroy the range through overgrazing. As each individual has unrestricted access to the common and is motivated by a wish to maximize his herd, so tragedy is inevitable. The logic that lies behind this is that for each animal a herder adds to his herd on a common, the extra consumption of resources will provide a direct benefit to him alone but the cost that increased consumption will be shared by all. As the benefit enjoyed by the

individual exceeds the shared cost, the herder is encouraged to continue increasing his herd size even if it results in the destruction of the range and a general loss for all. This theoretical argument has been tremendously influential- amounting to dogma- and has been used to justify policies for tenure reform for the privatization of land and the registration of title deeds.

This is because of the widespread and continuing confusion that exists in the literature and in policy over 'open access' resources, which are not by definition owned by anyone and are not subject to tenure rules (and therefore are not property at all), and 'controlled access' resources which may be owned by several overlapping categories of rights holders.

In most pastoral areas land belongs to a group or 'family' that is linked by descent or cultural affiliation. It is not 'owned' in the sense that users enjoy unlimited rights to exploit and dispose of it at will. It is held in trust by the living for future generations. To ensure that they inherit land currently enjoyed by the living, levels of use are limited by the right of usufruct – the right to enjoy the product of land only in so far as it does not cause damage and reduce its future productive capacity. It is in this way that pastoralists are custodians of the commons. (Charles 1998)

Common property rights should not be confused with open access regimes. That is why Eggertsson (1996) remarked: "I prefer the term 'communal' property to the more popular 'common property' because the latter is often confused with 'open access-unregulated access to productive resources. In addition Dejene (1999) remarked 'Tragedy of the common' should rather be replaced by the 'tragedy of open access'

It's necessary to conduct a systematic analysis of the adequacy of indigenous communal tenure system for investment security and efficient resource allocation. Usually it is through the sharecropping system that the private cultivators can get access to land. Infact sharecropping is a geographically widespread and historically tenacious form of lease. It has drawn comments from economists at least since the time of Arthur Young and Adam Smith in the late eighteenth century.

The attitude of the early Commentators was universally one of disapproval and occasionally of strong condemnation. Economically, they found sharecropping, which they commonly described by the French word ' metayage', defective in that it did not provide adequate incentives for investment. The fact that one-half of any increased crop would be taken by the landlord was what Adam Smith believed, an effectual bar to all agricultural progress. Other economists like Alfred Marshall (Marshallian Model), P.K.Bardhan and T.N. Srinivasan (1971) have developed fairly complete schemes of analysis regarding 'inefficiency' of sharecropping.

'Marshallian' model hypothesized that sharecropping leads to Pareto-inefficient allocation of labour. This argument was as follows: the rental share paid to the landlord was tantamount to an excise tax on the sharecropper to reduce his output below the level where the marginal product of the sharecropper is equal to the (fixed) real-wage level.

On the other hand, a second approach is that originally formulated by S.N.S. Cheung and subsequently extended and generalized by D.M.G. Newbery (1973) provided a striking analysis to show that, under certain realistic assumptions, sharecropping was indeed efficient.

Its existence has been justified as a mechanism for risk-sharing and cost sharing i.e., by reducing transaction costs, providing incentives, and facilitating screening (see Cheung 1969; Newbery and Stiglitz 1979; Stiglitz 1986; Binswanger and Rosenzweig 1984; Bliss and Stern 1982). Eswarn and Kotwal (1985) consider the role of sharecropping in terms of its use in overcoming market imperfections other than that of land. In particular, this is presented as an outcome of capacity differences between the parties to the contract, i.e., the landlord and the tenant, in acquiring and effectively providing two important factors in production, namely management and supervision. The leasing arrangement as itself is being an economic variable to be chosen by the mutual consent of both parties.

4. Introduction to the History and Land of the Afar

The Cushitic - speaking Afar are one of the major pastoralist ethnic groups of Ethiopia. With the exception of the flood-fed plains on the river Awash, most of their lands have an annual rainfall of less than 700 millimeters. Until a few decades ago, the Afar of north-eastern Ethiopia were able to feed themselves and secure their basic needs and exchange parts of their products (local and regional trade) through livestock production. Their pastoral land tenure and their production based on mobility, as well as their social and political institutions have been efficient in preventing environmental degradation and increased competition and conflicts. (Getachew 2001)

The Afar pastoralists in the Middle Awash have developed effective social organization that enhances decision-making and enforcement through traditional political authority (clan leadership).

Communal ownership at the lineage (dalla/qulubu), clan (kedo) and tribal levels constituted the only form of tenure throughout the Awash Valley. These traditional land tenure arrangement stresses mobility, efficiencies, resource - sharing and cooperation that enable them to adapt with the vagaries and limitations of their environment.

In the two sampled woredas, Amibara and Gewane districts, the flood-fed land and wet-season pasturelands are subdivided in to a number of clan lands. Each clan land is separated from neighboring clan lands by natural boundary marks (fanteina) such as trees and water points. Therefore resource use, control and management in the study area, is not 'open access' as envisaged by outsiders. Even if the incidence of Resource - use conflicts were too minimal in the study area, and water disputes were arbitrated at the clan and tribal levels. Traditionally, the Afars in the middle Awash Valley have two basic migration patterns: relatively short movements between dry-season villages on the flood plains and wet-season pastures on the higher plains outside the

river lands, and more extensive movements between dry-season villages and more distant arid areas and highland pastures.

The Afar continued their traditional tenure arrangement for long aged without any interference from the highlanders. However after the 1940s, the Ethiopian government began to view the politico-economical significance of the Afar land. The strategic location at the entrance to the Red Sea and the agricultural resources along the Awash Valley are some among various factors that forced the central government to intervene in to the Afar land.

4.1 The Middle Awash Valley and the Regime of Haile Sellassie

It was during the Imperial Regime that the highlanders, for the first time, considered economical benefit of the Awash Valley. Until about 1950s they considered Awash Valley to be a malarious, economically useless region and hence avoided it whenever possible. However, during the Imperial regime the central government has shifted it's perception towards the Awash Valley from 'economically useless' region to 'economically useful' region.

Accordingly, numerous land proclamations were issued under the Imperial regime. All proclamations conceived, the pastoralists land, as 'no man's land', and hence considered as state land. Ayalew (2001) has clearly pointed out the major ones with significant bearing on the Ethiopian nomadic pastoralist. Proclamation Number 1 of July 1944 granted a '*gasha*' of land to each patriot who fought during the war against Italy, to nationals who spent the period of Italian occupation in exile, and to survivors of persons who fell in battle. Accordingly pastoral land was distributed in the manner described above.

Proclamation Number 70 of November 1, 1944 Article 3 defined a 'land owner' as 'a person whose title to ownership of the land recognized by law'. Thus pastoral land continued to be owned by the state, and pastoralists, by its definition, were not landowners.

Article 130, sub-article (d) of the revised constitution of 1955 stipulated:

All property not held and possessed in the name of any person, natural or legal, including all land in escheat, and all abandoned properties, whether real or personal, as well as all products of the sub soil, all forests and all grazing lands, water resources, lakes and territorial waters, are state domain.

As Ayalew further classified the concept behind this article, pastoral lands ('all grazing lands') were transferred to government property and came under direct state domain. On the other hand the Ethiopian Civil Code of 1960, Article 1168 of the civil code of the Empire of Ethiopia stipulates the following in respect to land tenure:

The possessor who has paid for 15 consecutive years the taxes relating to the ownership of an immovable [property] shall become an owner of such [property].

According to this provision pastoralists could not qualify for land ownership because they did not pay land tax. All they paid was animal tax due to the government's non-recognition of pastoral land as belonging to the pastoralists. Consequently the confiscation of Afar land was made possible with the help of national decree and financial support of capitalists.

In this regard, S.George in Abdalla (1993) writes:

Tribal customs that had designated vast pasture lands as communal property for hundreds of years was erased with a stroke of Minister's pen, HVA (a Dutch argi business) and others were entitled for to occupy thousands of hectares; the Afars were obliged to seek new pastures and there was nothing left for them but rain fed land, distant from the river.

At that time, irrigated agriculture was expanded in the Valley by displacing many Afars from their land. As a result, the Afar pastoralists suffered losses of grazing land. This is because, both the investors and pastoralists were interested on the same pieces of land, which is close to the river and could easily be irrigated and fertile as well.

Even though both the capitalists and the pastoralists have common interest on the same pieces of land, the rationale for interest on that land was different. The investors were targeting to get high profit by minimizing their cost of production while the Afars struggle, between life and death, with the harsh environment they inhabited.

In 1962, the government formed the Awash Valley Authority (AVA) to administer and develop the natural resources of the region. The major objectives of AVA were to conduct a survey of local resources and work for their maximum utilization through coordinated efforts of various ministries and concerned authorities.

Accordingly, there was rapid growth of commercial agricultural investment in the area, which displaced thousands of pastoralists. The Afar in the Middle Awash became victims of 'development' schemes undertaken by AVA not only as a result of direct agricultural investment, which alienated them from their land but also by investment patterns in the upper Awash that regulated the flooding of the Awash River at Koka dams which as a result, sharply reduced the seasonal floods downstream. In this context Abdulmejid in Abdalla (1993) writes:

The Awash has been tamed and regularized for the farms, but the effects of this reduction in the river's potential to flood are obvious throughout the valley. The irrigation process, too, takes much water from the river and allows it to drain away or evaporate in the fields, where it is lost to the herdsman. Less water reaches the inland delta of the Awash nowadays, so that the vegetation balances have been distributed and the desert is allowed to encroach. (Abdulmejid Hussein 1976).

Three dams have been built on the Awash since 1960: Aba Samuel, Koka 1 and Koka 2. The purpose of these dams is to provide hydroelectric power for Addis Ababa as well as to regulate the flow of the river in the interest of capitalists by sharply reducing the seasonal floods downstream.

Therefore, the Afar considered any development intervention by the central government as a threat to their livelihood. As Kloos states this attitude " The Afar inversely viewed non-Afar concessions and migrant farm laborers and settlers with suspicion, considering them a threat to their economy, culture and security. (Kloos 1984)

Despite a large development interventions undertaken on Afar land, there was no a single objective which concerned the development of the pastoral-sub sector. There has never been re-investment of cotton revenue in order to transform the Afar pastoralist's livelihood. The sum of all these factors led the Afar to develop resentment against the outsiders, which later became an incidence for conflicts.

In 1966, AVA came to consider settlement schemes as a way of solving land disputes with the local Afar. In line with this background, three main nomadic settlement programmes were launched. The first settlement farm, Dubti started operation on a 95 hectares of land allocated by the AVA, comprising of twenty Afars. The second settlement form had been Amibara, which started its operation in 1967. But again there numbers of settlers were only 214 within a total land are of 535 hectares. Abdullah explains the situation in settlement programmes as 'setting the Nomads without settlement objectives'.

Despite limited number of local people involved in settlement programmes, they were composed of selected pastoralists from families of chiefs or member of those clans willing to support AVA. In this context Ali (1997) writes:

The loss of resources proved a common source of resentment against the outsiders, which later developed into full ethnic conflict. One of the reasons why it took time for this resentment to become a political force was the friendly relation between the emperor and the sultan, the sultan and the other Afar notables became immensely wealthy through the ownership of cotton plantations.

On this background, the sultan of Awssa and his friends became more powerful while other pastoralists in the Awash Valley became victims of 'progress'. Eventhough the resettlement scheme offered a large number of employment opportunities, the imported laborers out numbered local population. Let alone other opportunities, the major objective 'settlement' could not make the Afar beneficiaries.

By 1973 only about 300 Afar families had been settled by AVA on 2.5 hectares cotton plots on the Amibara and Dubti settlement farms as compensation for loss of their land to the schemes. (Kloos 1984)

In addition to the AVA expansion programmes of irrigated agricultural development, at almost the same time, the Afar pastoralists have also been alienated from their grazing land due to the establishment of Awash Game Park in total area of 80 thousand hectares of land which consequently led to conflict between the Afar and Kereyu pastoralists, who became major competitor for grazing land and water sites in the remaining land.

4.2 The Derg and Land Tenure in the Middle Awash Valley

"The socialist rhetoric of the Dergue between 1974 and 1991 did not bring about any improvement in the conflict ridden Awash Valley. The land reform policy proclaimed in 1975, which stated 'land for the tillers' did not leave much space for the Afar who did not practice cultivation". (Abdallah 1993)

Of course, lands, which were owned and fully controlled by the capitalist as well as traditional chiefs, were appropriated by the state. However, this proclamation did not entirely give response to the tenure insecurity along the Awash Valley. As a matter of fact the name " commercial farms" has shifted to " state farms " and also the owners feudal lords and capitalists has shifted to the new lord, called the state.

Article 24 of chapter 5 stated:

"As of the effective date of this proclamation, nomadic people shall have possessory rights over the lands they customarily use for grazing or other purpose related to agriculture".

In contrast to the radical land reform proclamation, the government has expanded its irrigated Agricultural Development schemes and has established large scale state farms on the Afar pasture land which by its turn led to frequent clashes between the people and the state armies. In these armed conflicts, in the middle of Awash Valley alone many hundreds of Afar were killed, imprisoned and their livestock confiscated. These situations have led the Afar to join opposition political parties and struggle to reclaim their alienated land as well as to defend the remaining land from further expropriation.

Hence, many Afar youngsters joined the ALF (Afar Liberation Front), TPLF (Tigray people's liberation front) and fought the Derg regime for about 2 decades. The sultan of Awssa rejected the new government's programme of nationalization of rural land. This soon led to the Afar revolt of June 1975 and the formation of the Afar Liberation Front (ALF). The central government used air and artillery power against the pastoralists and agro-pastoralists in the delta and the surrounding area. Some 4,000 Afar became refugees almost overnight and moved to Djibouti. The war, which has been going on for fourteen years, has resulted in unprecedented destruction of the pastoral

economy, and many pastoralists have now swelled the ranks of the unemployed in the slums of Djibouti and elsewhere in the Red Sea region. (Abdallah 1993)

During the Derg regime, settlement programmes were again considered as a way of transforming Afar pastoralists to agriculturalists. Accordingly, settlement farms were established in both Middle and Lower Awash Valley. The major settlement areas were Gewane, Amibara, Dubti and Assaita. The central government was responsible in funding finances on a yearly budget for running the settlement farms.

However, as Abdulhamid (1989) investigated the implementation of these settlement schemes, the farms were loss making farms run with government subsidies as well as they faced difficulty in settling pastoralist people on crop farms. The major reasons for these failures were lack of clear policy on how to settle pastoralists and limited participation of settlers in farm work. For instance, in two sampled woredas as Amibara and Gewane, out of the total 3,257 employees, the majority 2,432 (74.7 %) were imported laborers while only 825 (25.3%) were settlers.

In sum, the Afar have been deprived access to water and pasture by the state's refusal to recognize their land rights by legal instruments and hence, it produced negative socio-cultural and politico-economical impacts on the pastoralist's livelihood. The irrigation schemes in the Middle Awash Valley displaced thousands of Afar pastoralists, resulting in crowding, overgrazing and destruction of the remaining pastures. (See Table 13)

Table 13: Estimated Reduction of Afar Grazing Land by New Types of Land use in the Middle Awash

Land Use	Area (ha)
Dry season grazing/irrigation schemes	
Middle Awash Agricultural Development Enterprise (MAADE)	17880
Settlements	3011
IAR, Melka Werer	360
Irrigated pasture project	1200
Subtotal	22,451
Wet season grazing	
Alledghe Animal Holding Center	6000
Northern part of Awash National Park	23,000
Subtotal	29,000
Grand Total	51,451

Source: Middle Awash Agricultural Development Enterprise (MAADE) Records, MAS, 1991

In addition, to the destruction of plant species those are useful to livestock under normal range conditions, severe salinity problems were associated with the use of irrigation. According to Ali, up to 1990/91 a total of 3440 hectares of irrigated land had been abandoned due to salinity problems on the different schemes in the MAADE (Middle Awash Agriculture Development Enterprise). It is also estimated that about 8000 hectares of land on the Amibara irrigation project will be severely affected by high ground water tables and salinity.

Various studies have also been made on the health aspects of irrigation in the Middle Awash Valley. Without strict control measures, the expansion of irrigation as well as excessive use of biocides, herbicides and insecticides have led to increased incidence of diseases such as malaria, encephalitis, yellow fever, cholera, typhoid and various gastro intestinal disorders. (Ali 1997)

Eldrin, DDT and organophosphate pesticides on the cotton plants allegedly contributed to increased livestock mortality. (Kloos 1984)

The dislocation of Afar pastoralists from their traditional seasonal residence and denied access to the Awash River and its immediate environs rendered them extremely vulnerable to drought.

Evidence suggests that the severe loss of life experienced by Afar in the 1970s and 1980s was not caused entirely by failure of the rains or a policy of deliberate overstocking by pastoralists, but rather by dam constructions and large-scale irrigation development that resulted in loss of grazing and water resources and environmental degradation. Livestock and Meat Board estimated the 1974/75 drought to have reduced the cattle population by 90 percent, goats by 30 percent and the Afar population by about 25-30 percent. (LMB 1974).

Changes in resource use regimes and the consequent shrinking resource base of pastoralists has led to mushrooming conflicts in the Middle Awash Valley among pastoralists as well as between the pastoralist groups and the government on the other hand. The Afar of the Middle Awash frequently faced inter-tribal fighting with the neighboring pastoralist like Issa (Somali) to the east, the Kereyu to the south, the Ittu Oromo to the southwest.

As Ali clearly identified the number of Afars killed and animals raided by different ethnic groups in a sample of 83 households between 1981/82 - 91/92, a total of 86 Afar were killed and about 1788 animals were raided. Conflicts also break out among various Afar clans in the Middle Awash. Sometimes there were armed conflicts between the Afar pastoralist and the workers in state enterprises for instance MAADE reported that from 1979/80 to 1989/90, 71 state farm workers were killed and 47 wounded by the Afar. In addition the value of crops damaged by Afar herds were estimated on the other hand, the Afar themselves also paid a high price at 9.2 million ETB with their own lives as well as the lives of their animals.

Afar living close to the park expressed with bitter emotion that the park guards had held their animals several times until they had paid the required fines. (Ali: 1997) Moreover many Afar in the Middle Awash claim that the development intervention by outsiders has brought cultural change within the Afar society. Prostitution and petty-theft (robbery), which were unknown some years ago, are now widespread in the area due to the formation of small towns with large number of highland migrant workers.

4.3. Post -1991 Land Tenure Situation of the Afar Region

After overthrowing the Derg regime in 1991, the transitional government of Ethiopia designed an economic policy, which stated:

- a) All land remains the property of the people of Ethiopia through the agency of the state.
- b) Areas with special problems require special attention and treatment

As Ayalew reviewed these provisions in his study of the state policy concerning land ownership right, the first provision reaffirmed the custodianship of the state over natural resources including those in pastoral area. And the second one, though, suggests that populations neglected hitherto should be given special considerations in development policies.

The 1994 constitution-Article 40 sub-article 3 states the following regarding land:

- (3) The rights to ownership of rural and urban land, as well as of all natural resources, are exclusively vested in the state and in the peoples of Ethiopia. Land is a common property of the nations, nationalities and peoples of Ethiopia and shall not be subject to sale or to other means of exchange.

However, the fact on the ground indicates that, regardless of the national policy of resources in which the right of ownership of all land is exclusively vested to the state and the peoples of Ethiopia, the land tenure system widely accepted and understood by all Afar pastoralists is communal ownership right. As Yirgalem (2002) clearly pointed out in his study on managing common property resources in Gewane woreda, there is a gap between the statutory (de-jure) and the customary (de-facto) property system in the Afar region.(see table 13)

Table1. Gaps between statutory (de-jure) and existing in fact (de-facto) tenure systems in Afar .

Resources	Property systems			
	Private	National	Common	Open access
Land		De-jure•	De-facto•	
Grazing reserves		De-jure •	De-facto• Dry season, clan based wet season, tribal	
Enclosure	•			
Forest		De-jure •	De-facto• Riverine,clan based out of riverine, tribal	
Well, pond & spring			•	
Grass land plains		De-jure •	De-facto • Tribally owned	
River water		De-jure •		De-facto •
Wild-life		De-jure •		De-facto •
Wet land		De-jure •	De-facto•	

Source: - Yiragalem 2002

After the 1991 change of government, the Afars Claimed the return of irrigated dry season grazing land alienated and put under cultivation by the state farms in their land. Hence, in 1991 the Transitional Government decided to return a total of 16,524 hectare of irrigated state-owned farms in both Lower and Middle Awash Valley to the Afar pastoralists.(See table 14)

Table 14. List of Farms Handes Over to Afar Region

No	Name of Farm	Woreda	Hectare
1.	Lower Awash		
	1.1 Ayssaita	Ayssaita	2641
	1.2 Sembeleta	Ayssaita	2502
	1.3 Tanagay Kuma	Dubti	3153
	- Dubti	Dubti	1200
	- Ditbahri	Dubti	630
	Sub Total		10126
2.	Middle Awash		
	2.1 Meteka(Gewane Farm)	Gewane	467
	Kuda (Gewane Farm)	Gewane	625
	Gefrem(Gewane Farm)	Bure Modaytu	450
	2.2Amibara	Amibara	1952
	2.3 Doffen Bolhamo	Dulecha	1400
	2.4 MelkaWerar	Amibara	1004
	2.5 Melaka Sedi	Amibara	500
	Sub Total		6398
	Total		16524

Sources:- Report of ANRS Agriculture Bureau

In the study area, Amibara and Gewane districts, about 4,000 hectares of irrigated state farms were returned to the traditional owners i.e., Afar pastoralist. However they could not maintain the large-scale farms due to shortage of human and financial resources, lack of efforts to bring attitudinal

change among the Afar pastorals towards integrating livestock herding with farming as well as weak bureaucratic system of the regional administration were some factors which contributed for the failurity of the community as well as the regional administration to well-manage the returned state farms.

Apart from the vacuum in the de-jure and de-facto ownership title of land, interview in the study area, revealed a discontentment with the ways re-allocation of the returned land among different clans. For instance, in Amibara district, all returned state farms were given to Debine tribe while clans in Waima tribe have got nothing. The discontentment by the Waima tribe is used to be the major reason for intra-ethnic conflict in the area. Eventhough there is a general view that the Debine tribe has got the ownership right of all returned lands there is still dissatisfaction among different clans and sub-clans within Debine tribe itself. Harkemela-fedihite clan is one of the largest clan in the Amibara district estimated to be 400 households and is influential in the current political system and reported to have got 1400 hectare of irrigated land.

The regional government attempts to resolve these conflicts among clans through their own traditional conflict resolution mechanism. Consequently, the new returned land from state farm, which is about 500 hectare of flood-fed field around Melka-sedi, was handed over to the Waima tribe that did not get any land till then. However, this 500-hectare of flood-fed field allocation again became a reason for incidence of other intra-clan conflicts with in the Waima tribe itself. The dissatisfaction of Ablek -manita over the allocation of the returned flood-fed field that make the Erer-bura clan to fully control the land was the cause of the conflict which resulted in the death of eight people on July 2001.

In Gewane district there was a conflict among clans belonging to the Debnie tribe. The reason given was lack of consensus on what should be done on the returned Metaka state farm. The Gendi

clan had a strong position to keep the Metaka returned state farm as a communal property. While the Tekail-kuribili advocate land allocation at sub-clan level.

Generally, from the interviews conducted in the study areas, it can be understood that the re-allocation of returned state farms was not equitably distributed to every clan in the area. It was handed-over to an influential clan whose members are the supporters to the political system in the region.

Box 1. The Case Study Of Bilen

In order to compensate the displaced grazing land taken by the state farms in and around Amibara and Melka Werer areas, the former regime commenced the development of irrigated pasture at Bilen. Accordingly the Angelele irrigated pasture development project started some 15 years ago by Water Development Authority (WDA). Even though, the construction activities of the project were completed, due to the change of government in 1991, the project could not be operational. It's clearly stated in the constitutions of both the federal and the regional government's that the land is the state property and put as the land policy of the country. However, in the case of the Afar region the clan leaders are the decisive bodies to determine the ownership of the land, which usually leads to conflicts among various groups. Here we can cite as an example the conflict that arise between the Debine and Waima tribe due to the contention for the possession of communal grazing land in Belin which lastly was settled by negotiation between the clan leaders of the two tribes (without any involvement of the regional government) and the land ownership title is given to the Waima tribe. This indicates that the land policy of the country that stipulates all land is exclusively vested to the state and the peoples of Ethiopia is not applicable in the Afar region. In addition, the regional government's failure to adopt the regional land use plan has hampered the proper use of the available land for different development activities. The convergence of the 3000-hectare of irrigated pastureland into crop production farm that was leased out to private investors that in turn leads to conflict as a result of scarcity in grazing land. Therefore, the case of Belin can be a good indicator for the urgency of designing land use plan in the Afar region.

The attempt made by the central government to make the Afar pastoralists beneficiary from their land by designing a project called Afar Agricultural Development Project has unfortunately phased out within 3 years of operation. AADP with the main objective of attaining food self-sufficiency in the region through the participation of the Afar pastoralist in irrigated agriculture was first designed by the central government in 1991/92. Awash Agricultural Development Corporation (AADC) under the Ministry of State Farms Development was designated to administer the project. A new task force comprised of previous state farm management staffs and skilled manpower was also assigned in order to co-ordinate and technically assists the project. It started with an initial capital investment of 4.1 million Birr, which was allotted from the central government and managed by the AADC. After one year i.e., in 1992/93, the full ownership of AADP was transferred to the regional administration and hence a capital budget about Br.2.3 million was earmarked by the regional administration. In 1993/94, i.e., in its third year, the task force was totally withdrawn from the management as well as provision of technical assistance to the project.

The project was aimed at enhancing crop production in the area with the active participation of the Afar, introducing planted pasture and vegetable gardening to the Afar agro-pastoralist and gradually to implement the settlement schemes in selected areas.

Among the three specific objectives, AADP has achieved only on its crop production scheme on an area of about 6,446 hectare from which about 80,000 quintals of maize was produced within two consecutive years of cultivation, i.e., 1991/92 and 1992/93. However the region could not succeed to revitalize operation of the project and achieve the objectives of introducing irrigated pasture and implementing participatory settlement schemes. The central government returned the well-developed large-scale farms to the Afar pastoralist without making any preparation to enhance the human and financial capacity of the local people and also there was lack of co-ordination and

effectiveness among various institutions at the regional level. In addition, low participation of the local people in the implementation process and rampant corruption in the region are some factors that hindered the achievement of planned goals. Moreover, by the time of the handing over of the farms, the regional administration was not stable and responsible bureaus like Agriculture and Water were not fully organized and adequately staffed to assume management of ex-state farms.

Currently, in most returned farms, shelters, clinics, schools and drinking water points are literally, destroyed and non functional. For instance, farms like Doffen-bolhamo (about 1,400 hectare) and partially Gewane farm (about 1,000 hectare) are out of production. In addition, non-suitable plants species such as *prosopis juliflora* or *calotropis procera* (a toxic vegetal for both human and animals) commonly known as Woyane invaded the farms and grazing areas. In a few years, large areas in the marshland became a sort of "green desert". *Prosopis juliflora* chased away all valuable vegetation and endangers biodiversity. Moreover, the Afar's attitude towards the value of land has shifted from the range use to leasing for private cultivators.



The luxurious prosopis juliflora (Woyane) invading the uncultivated state- farms around Gewane.

Moreover in the study area it is found that the Afar pastoral groups are alienated from their wet-season grazing due to the military camp expansion schemes of the federal government. These actions is contrasting with article 40, sub-article 5 of FDRE constitutional guarantee against displacement of the pastoral groups from their land (5) *Ethiopian pastoralists have a right to free land for grazing and cultivation as well as a right not to be displaced from their own lands.*

By the time when this study was undertaken a huge construction work is undertaking by Lalibela Construction Company, on the Afar pastoral wet-season grazing area around Awash -arba. At times both Afar herders and their cattle were shot down at sight when they approached the military zone. When they follow another route crossing the asphalt road, is also a problem that frequently confronts them with car accident and as a result a number of livestock has been killed.



Cattle crossing the highway (Addis-Assab/Djibouti) to access grazing land. Note it takes 10 hours to move from kebeles in Amibara woreda to this area.

In general, the Afar's quest for land and the immediate response of the central government ended-up by making the Afar beneficiary from the annual lease income which never contribute for sustainable socio-economic transformation towards pastoral livelihood. Furthermore, the state still control about 8000 hectare of irrigated land and cultivate large-scale cotton plantations in the Middle Awash Valley.



Sultan Ali-mirah Hafare the 13th ruler of Awsa. This picture is taken during the interview at his home in Addis Ababa, on May 19, 2004

Sultan Ali-mirah Hanfare's response for the question regarding the historical, the current and the future prospect of the Afar in relation with private cultivation on their land is presented as follows:

We started cultivating our land (i.e. the sultan's family land), which was semi-desert at that time by borrowing money from the private bank in Addis Ababa. Our initial capital was 100,000 Birr. We were successful and our transaction with the bank had reached 50 million Birr. I believe that strong control and management of the farm activities by ourselves was the major factor that brought us into success. In addition the Mitchell Cotts group, a British firm, which managed the Tendaho plantations in Dubti used to give us technical and financial support. Looking at our success, the

Afars in Awsa started to follow our footsteps and began to cultivate their clan land and they were successful too. As I said it before, there was a good credit facility for the community from the private bank that opened a branch down there in Asayita. I used to borrow money from the bank and distributed to those Afars who were interested to cultivate their own but faced financial constraints. Besides, they also began to lease-out portion of their land to private cultivators according to the contractual agreement that recognized mutual consensus as well as benefit of the two parties. Moreover, we had traditional land use system in which we allocated the land into grazing and cultivation in order to avoid misutilization of resources. After 1974 revolution, the Afar people rejected the new government's (i.e., the Derg) program of nationalization of rural land. This soon led to the Afar revolt of June 1975 and the formation of Afar Liberation Front (ALF).

The Derg used air and artillery power against the Afars in Awsa and its surrounding area. Many died and about 4000 Afar became refugees almost overnight and moved to Djibouti. I myself went to Djibouti at that time. Then, after the overthrow of the Derg Regime, the Afar claimed the return of their land. Consequently, portion of state-owned farms were returned to the Afars. I think the returning of the land was a good step forward. However, if the intention was to benefit the Afars, they did not achieve their objective because nowadays some non-Afar private investors become prosperous at the expense of the majority of Afar pastoralists and agro-pastoralists. Both the federal and the regional governments should have first changed the attitude of the Afar towards farm practice and make them beneficiary from their land through training and providing them credit facilities. Furthermore, the government at any level should design land related policies by making participatory discussion with the community at the grass root level. Otherwise, the Afar will never accept the constitutional sentence that states, "Land as a state property". Finally, I would like to advise the Afars to organize themselves in different associations and cultivate the land on their own.

5. Private Agricultural Investment in the Study Area

Despite its positive contribution, private agricultural investment in the Study areas brings negative externalities on the Afar people and their land. In this chapter, the socio-cultural, politico-economical and Environmental losses of the Afar and their land due to the commercial cultivation since 1991/92 is analyzed. Apart from reviewing theoretical and empirical literatures, primary data were collected from 90 Afar pastorlist households in two sampled woredas i.e, Amibara and Gewane. Besides, discussions were held with clan elders, clan leaders, and some government officials at the regional and local level. The attempt made to include the say of the private cultivators who operate in the Middle Awash could not be successful enough due to their unwillingness to provide information about their operation in the area. Eventhough some regional government officials, private investors and clan leaders attempt to propagandize the façade benefit obtained from private agricultural investments on the Afar land, the survey result indicates that out of 90 surveyed households, 83.3 percent of the household heads reported the current private agricultural investment on their land do not bring a sustainable benefit for their livelihood. One Afar elder mentioned an Afar proverb which he believes, indicates the situation. He said "*geba sini bara sega maiyta'lei gale*" that means "it is normal if a woman with two hands milks a cow for a woman with no hand".

5.1. Currently Cultivated Land by Private Investors

In the two sampled woredas, i.e. Amibara and Gewane, there are about seven registered medium and large-scale private farms, which are included in the study. This study also includes those individuals who cultivate small plots of land, which do not yet leased out to the private cultivators. In Gewane district, some individuals organize themselves in an association and cultivate their clan land while in Amibara district; some Afar youths cultivate small-scale plots individually. A total of 12

small-scale farmers in Amibara district and one association in Gewane district were included in the field survey. Despite its large size of potential cultivation land, the number of private cultivators in Gewane district is low. This is due to firstly; the area has high risk of insecurity as a result of frequently irrupting Afar-Issa conflict. Secondly, during dry season, when the flow of the Awash River declines, there is usually risk of water shortage for irrigation and during wet season, flood is another major problem for the farmers in the area. Consequently apart from small number of agricultural investments, the Afar in Gewane woreda has low barraging power in the principal-agent relationship.

The survey identifies two major types of lease system: net profit sharecropping and fixed-rent leasing system. Profit sharing approach is an agreement between two parties that the landlord get percentage share out of the net profit gained by the sharecropper. While the fixed-rental approach is an agreement where the principal and the agent agreed upon a certain fixed rent price over a hectare of land.

In Amibara woreda the leasing system is net profit sharecropping. That is the landowners (the Afars) get 30-35% of share from the total net profit obtained by the private cultivator. Similarly, there are highlanders who live in the area for long time and cultivate small-scale plots of land upto 2 hectare under the agreement with the landowner (i.e., the Afars) to give them 50% shares from the total net profit.

On the other hand, the leasing system in Gewane woreda is on fixed-rent basis in which the Afar rented a hectare of land for a fixed-rent price. The rates vary from 150-200 Birr per hectare of land. The private investors pay for all inputs, get all the benefits and bear all the risk from production. From the discussion with the clan leaders, it is learned that almost all private investors who cultivate in Gewane woreda deceived the Afar by presenting an income statement that shows they are operating under loss for the last decade.

farming for the sake of renewing the contractual agreement and to guarantee the private cultivators sustenance for some years on the Afarland.

5.1.1 Land size and Location

In Amibabra woreda six kebeles/localities are chosen as sample areas where there are relatively large private investment activities. A total area of 5206 hectare is under cultivation by private investors. On the other hand in Gewane woreda three kebeles/localities were chosen as sample areas. In these kebeles there are only about four major private cultivators with a total area of 2500 hectare. (See Table 15)

Table 15 Land Size and Investment Location in Amibara and Gewane Woredas.

Woreda	Kebeles/Locations	Land size (ha)	Name of cultivators
Amibara	Ambash	100	Africa Global
		100	A/ A/D/P
		400	K/ G/A/D/P
	Bedelu Alia	500	Africa Global
		470	H/ D/ A/D/P
	Dahitele	296	Sofi International
	Hassoba	500	Africa Global
		400	A/ A/D/P
	Kedigadora	2200	A/ A/D/P
Gewane	Sublale	300	A/ A/D/P
		200	S/ A/D/P
	Ayroli	500	Gewane Enterprise
	Egile	1000	G/ A/D/P
	Gala-ela-dora	500	African Global
Total		500	G/ A/D/P
	9	7706	8

Source: various sources

5.1.2 Contractual Agreement

The contractual agreement, which is signed between the landowners and the private investors, is the only legal instrument required when a group of clan leaders lease-out their clan land to cultivators. The regional government does not play a vital role in this contractual agreement. Its role is simply "restricted" to approving the contractual agreement between the clan leaders and the private cultivators by just putting the stamp of the regional justice bureau on the contract paper for the sake of formality. Surprisingly enough, in the whole process the investment office at any level do not have any participation. Some of the salient features of rights and obligations stipulated in the contract are the following:

- The duration of the contract ranges from 5 to 15 years;
- The private cultivators have a right to use the land for any kind of crop production;
- If the private cultivator is in any kind of constraints, he/she can cultivate portion of leased-out land for the time being. However, gradually, he/she should put all the land under cultivation;
- The Afars are supposed to supply the land and protect the crop from cattle damage;
- The first year is free of payment as the preparation needs significant amount of human and financial capital investment;
- In Amibara district the landowners i.e., the Afar gets up to 35% of the share from the net profit and in Gewane district the Afars rent their one hectare of land for 200 Birr and;
- In case a conflict arises between two parties it should be solved by arbitration, if this can't work then it should be referred to the regional administration.

Apart from the nature of the leasing system i.e., net profit sharecropping and fixed-rent, the contractual agreements in Amibara and Gewane woredas have some differences in their features.

According to the contractual agreement between the Afar and the private cultivators in Gewane woredas, the private cultivators are restricted to cultivate crops that could not cause land degradation and depleting the soil fertility such as broomcorn. However, in Amibara woreda, the private cultivators have full right to use the land in any kind of crop production.

5.2 The Expected and actual contribution of the private Agricultural Investment on the Study Areas

The expected and actual contribution of private agricultural investment on the Afar land together with its drawbacks is analyzed in this sub-topic. One cannot conclude that the Afars are beneficiary from the private agricultural investment on their land by just looking at the lump sum net profit share rather it is important to analyze each family's share. In addition, employment opportunities, socio-economic infrastructure development, technological diffusion and revenue generation capacity of the regional state should be well analyzed.

5.2.1 Income Generation to Pastoral Households

Since the central government returned some portion of ex-state farms to the local people, a number of private cultivators invest their financial capital and human resources on the Afar land. They also collected a large amount of return on their investment. On the contrary the Afar get little or in some areas no benefit. The survey findings indicate that the average rental share the landowner gets ranges between 30-35 % and is lower than the average rental share of 40-50 % recorded in early 1970s. This is an indication as to how nowadays private cultivators exploit the landowner.

In addition, from the interview conducted in the study woredas, it was learnt that most private cultivators do not usually show their actual loss and profit statements to the party (landowner) with whom they enter into a contract. As a result the Afar gets less or no profit from leasing out their land. For instance in Gewane woreda from 1994 upto 2001/02-production year, no single cultivator declares profit from his/her cultivation. Hence, for the last decade, starting from 1993/94 to 2002/03, the Afar in Gewane district leased out their land "for free". Sadly enough, some greedy private investors became prosperous at the expense of the Afar people and their land. One of the largest private agricultural investments in Gewane woreda, which is called Gewane Agricultural Development Project (GADP), declares profit for the 2002/03-production year that is for the first time in its 10 years of investment activity. Accordingly, GADP distribute a total of 70,000 Birr as an annual share for the Mahisera clan, which has 334 households i.e., about 2204 individuals. Accordingly, the annual share of each individual in the Mahisera clan is expected to be 32 Birr and hence the clan leaders have decided to distribute the money only for those households who are in a serious problem.

As far as the management of the farm is fully controlled by the private cultivators, it's difficult to believe that the private investors provide an accurate income statement. In some farms, elected individuals among the Afars participate in the management. However because of the lack of academic skill or back door agreements with the private cultivators, again the Afar are obliged to lose the benefit that they should have gained.

Similarly, large-scale private agricultural investments in Amibara woreda like Amibara Agricultural Development Project (AADP), which cultivates cotton farms in various localities. The farms were established in 1995 on 850 hectares of land and recently, it has increased to 3000 hectares of land. According to the agreement between the investor and the Afar of Harkemela-fedihite clan, for

instance, in 2002/03-production year the landowners have got a total of about 2 million Birr, which is 35% of what AADP has got in this production year.

This 2 million Birr share for the Harkemela-fedihite clan may seem a large benefit. However, if we distributed this amount among the 15 families (dallas) in the clan, which has a total number of about 1231 people within it, the result would be 135 birr per month for each family that is insignificant to change their livelihood. As the number of population increases, share of each individual will also decrease and gradually might reach to nil.

5.2.2 Employment Opportunity

In every contractual agreement made between the landowners and cultivators, it is clearly indicated that the Afar has priority in enjoying employment opportunities in every aspects of the farm's activities.

In reviewing payroll account of the selected agricultural investments in Amibara and Gewane districts, there are 475 permanent and around 9000 temporary employees. Commonly it's during the picking season that the number of temporary employees increases. Most of them are non-Afar laborers who came usually from the southern part of Ethiopia. Out of the 475-permanent employees of the seven major private Agricultural Investments that cultivate a total of about 7706 hectare of land, only 30% i.e. 142 employees are Afar and of which 83% i.e., 118 are employed as farm-guards. While the rest 24 are employed as vehicle drivers and farming machine operators.

5.2.3 Revenue Generated by the Regional Government

In fact, the major contribution of private Agricultural investment on the Afar land should have been enhancing the revenue generation capacity of the regional state. On the contrary, the Afar National Regional State do not generate significant amount of Revenue from the private Agricultural

Investments in the area. There are various reasons for under collecting revenues by the regional government. Among these, weak auditing system to verify the accuracy of income statements presented by the private cultivators and rampant corruption among the private investors and some government officials are the major ones. In addition, there are many private investors who cultivate the land with out appropriate investment license. Hence, the regional Internal Revenue Service does not know them. As a result the region lost a significant amount of revenue, which could have been generated and allocated for various developmental activities. (For detail see table 16)

Table 16: Revenue collected from selected seven private cultivators in Amibara and Gewane woredas (in Birr)

Type of Tax	2001/02	2002/2003
Sales Tax	212,600.00	221900.02
Income Tax	68,794.01	83,651.20
Land use Tax	57,500.00	61,060.00
Total	338,894.01	366.611.22

5.2.4 Socio-economic Infrastructure Expansion

One of the positive contributions of private investment is believed to be the social and economic infrastructure development in the investment zone. In most cases, private cultivators contribute their financial and human capital in order to construct roads, schools, health centers and other infrastructure facilities. Furthermore one would expect diffusion of technology into the area.

Even if the targets were not the Afars during the Derg regime, when the existed farms were nationalized and fully controlled by the state authority. Various Socio- economic infrastructures were constructed. The existing hospitals and high schools in the Afar region are located in zone 1 and 3 where there were large-scale states farms. Contrary to these backgrounds, there is no single construction of socio-economic infrastructure in the study woredas by the support of the private

cultivators. Instead of encouraging and supporting the local people in order to expand various social and economic infrastructure facilities, some private investors particularly in Amibara district, bought a vehicle to transport the Afar patients from their home to Addis Ababa. Unfortunately, the cost of purchasing the vehicle, the health expense and the daily allowance are deducted from each family's share of the annual net profit. From the interview of household heads in Amibara woreda, it is learned that 42 percent (i.e., 25 households) are indebted and they will not get annual net profit share for the coming 2 consecutive years.

5.3 The Drawbacks of private Agricultural Investment in the Study Areas

5.3.1. Income lost due to façade benefits

It is clearly indicated in all contractual agreements made between the Afar and the private investors that the Afar gets 35% of share from the annual net profit, and after 5 years they can build their financial capital. Hereby they are expected to take over the land they lease-out to private cultivators.

However, practically there is no single clan who takes over its clan territory land back from the private investors and cultivate on its own. The possible reasons are some clan leaders might have hidden alliance with the cultivator and hence they impose their clan members not even to raise the idea of self-cultivation. In addition, most of the clan members have taken loan from the private cultivators, so they are always indebted and hence do not have any moral and/ or legal right to takeover the land from the cultivator without paying their debt. Rather they offer additional hectare of land even by clearing the forests assuming that they could get enough share for the coming years. For instance, from the discussion with the Harkemela-Fedihit clan leaders, in Amibara woreda, it's revealed that for the production year 2001/02 – the 201 households during that year have got an annual share of net profit 1230 Birr each which is 102.5 Birr per month. Nevertheless,

individual Afar household have got only less than 60 Birr per month because the investor deducted the health expense which includes the cost of the vehicle bought to take patients to the hospitals in Addis and daily accommodation expenses while being treated in Addis. Therefore, it's too difficult to conclude that the Afar pastoralists are beneficiaries from the private agricultural investment on their land by earning less than 60 Birr of monthly income. It was learnt from the interview in the study areas that the clan members who earned 60 Birr per month are considered as lucky. Because most of the clans in the area do not get any benefit from their leased-out and as far as the private cultivator do not declare profit.

In Gewane woreda, there is one association composed of 11 private cultivators among the Afar themselves, which cultivated 17 hectares of land in Eta'adoita kebele, and they gain a net profit of 120,000 Birr from the total yield of 420 quintal of cotton for the production year 2002/03. They said that the yield per hectare (i.e., 24.7 quintal/ha) is too minimal for this year because it's their first year of production and there was water shortage for the irrigation. In addition, they were too late to start the farming process. By the next production year they expect a maximum yield/ha that is 45 quintals/ha. For the same production year the private cultivator gave a total of 70,000 Birr as a net profit share from the 360 hectare of cotton cultivation. Here, one could compare the benefit lost by the Afar by leasing-out their land instead of cultivating on their own.

Moreover, the yield/ha, presented by private cultivators under different nature of contract vary widely. Findings of the study revealed that as the sharecropping theory states, the yield per hectare for owned plot is higher than the fixed rent and the yield per hectare for fixed rent is higher than the sharecropping. It is 27, 40 and 45 quintal per hectare for sharecropping, fixed-rent and own operators respectively. Here we can conclude that fixed-rent leasing system is a better alternative for both the land owners and private cultivation because the Afar are not going to be deceived as before due to shortage of technical and managerial skill and also the private cultivator will make

his/her maximum effort to get more yield per hectare which it turn increases the total out put for each production year.

Table 17. Average yield per hectare of land

Nature of the contract	Average yield/ha	
	Amibara	Gewane
Net Profit Sharecropping	27	25
Fixed-rent	40	37
Owned plots	45	42

5.3.2 Environmental Degradation

The major drawback of private agricultural investment in the Middle Awash is degradation of the soil fertility. As the main objective of the private cultivators is maximizing profit, they might neglect the socio-environmental costs incurred as a result of their operation. Accordingly, almost all private cultivators that practices fallowing to conserve the productivity of land. In addition, each private cultivator has shifted the crop pattern to cotton cultivation. For instance, the MAADE has already stopped its banana production and shift the cultivation to cotton plantation. On the other hand, the Afar cultivators in Eta'adoita kebele of Gewane woreda who are concerned both to maximize profit and at the same time preserving the land for the next generation practices both fallowing and crop rotation. Eventhough both the federal and regional governments constitution as well as investment proclamation of the Afar region states that land is owned and controlled by the state, the Afar regional government has no participation in land related transactions. The contractual agreement regarding land related issues are dealt between the private cultivators and the clan leaders in the respected area while the regional government is indifferent as to whether these investments have positive or negative impact on the land. Apart from the private cultivators the clan leaders has also

contributed to the land degradation in such a way that they are clearing forests, dry and wet season grazing in order to expand their clan land territory and lease-out more land to private cultivators.

The Case of Land Degradation in Dahitele kebele

A private investor cultivated a land size of 400 hectares in Dahitele kebele. The crop type under cultivation was reported to be broomcorn. From the discussion with members of the community in the area, it's learnt that the land, which was cultivated, has completely stopped to give yield for any type of crop production. The clan leader in the area said that the soil became infertile due to salinity problem incurred as a result of broomcorn crop cultivation on their land for two consecutive years by the private cultivator. Moreover, members of the community who live near the farm confirm that they have had skin allergy. One elder in Dahitele Kebele said "It's sad, we are double losers, we can never use this land again neither for crop production nor for grazing as well." surprisingly enough; the Afar regional investment and agricultural bureaus have no idea about what was going on in Dahitele. In sum, there might be many Dahiteles in the Afar land soon. So care should be taken in analyzing the socio-environmental impact of investment on land prior to giving license to the private cultivators. Moreover timely supervision of their operation is very crucial.

5.3.3 Intra-Ethnic Conflicts

One of the major drawbacks of private agricultural investment in the Study areas is mushrooming conflict among the Afar pastoralists. From the survey result, it's found out that two kinds of conflicts are seen due to private cultivation. These are conflicts among various Afar clans and between a clan leader and clan members.

Conflict among Various Afar Clans

The interview with the clan leaders in both Amibara and Gewane woredas, make it clear that most of the clan leaders are competing to expand their clan land territory to lease-out to private cultivator. And hence, they usually enter to conflict among themselves.

For instance, in Amibara woreda, there was conflict between Rekbak-deremela and Ablek-haisomale on August 2002. The cause for the conflict was the claims to prior allocation when the irrigated land is returned on area around Melka-sedi. In addition, the Rekbak-deremela clan was clearing forests in the land which do not yet allocated as a property of any clan in order to lease-it out to private investors. In sum this conflict demanded the death of 4 people and injuries of the same number from both clans. A conflict between Harkemela-fedih'te (Debine tribe) and Rekbak-deremela (waima tribe) also ended up by the death of 24 people and injuries of hundreds from both clans. Here again expanding land territory was the cause of the conflict. Another incidence is also reported between Errer-bura and Ablek-mandita that resulted in the death of 8 people on July 2001. The cause of the conflict is reported to be discontent by Ablek-mandita over allocation of returned flood-fed field around Melka-sedi. Both clans competed to get the defacto ownership right of the land and immediately to lease-out the land to private cultivators. Moreover, conflict over access to the remaining uncultivated flood-fed plain around Bilen was reported between Sidiha-bura and Ablek-haisomale. The attempt by Ablek-haisomale clan to fully control Bilen and hence denying other clans who got their share from returned irrigated land was reported to be the cause for the conflict. Bilen was previously designed by the zonal administration as the common irrigated pasture while today Bilen is fully leased-out to one private cultivator.

Recently, while this study is being undertaken there was conflict again in Amibara woreda between Rekbak-deremela and Ablek-haisomale both from the Waima tribe. Conflict irrupted when the two clans competed to clear the forests on the land allocated traditionally as a common pasture and to

lease-out more land to private cultivators. It ended up by the death of 3 people and injuries of the same number from both clans.

On the other hand, number of conflicts among various clans in the Gewane woreda is reported due to competing land ownership title. For instance, there is conflict between Mahisera and Meysera clans (both from Debine tribe) for a number of years. Again the cause of these frequently interrupted conflicts between the two clans is the claim of Meysera clan to get their share of land allocation and lease-out the land to private cultivators.

Generally, the private Agricultural Investment on the Afarland results the incidence of conflicts among various clans. The major reason for these is each member of every clan needs to maximize the leased-out land size and increasing their benefit comes from the cultivator. Nowadays, from the observation in the study areas, it is learned that there is a high internal competition and conflicts among various clans of Afar to expand their territory and lease-out their land to cultivators, which unfortunately give them little or no benefit.

Conflicts between Clan Leaders and Clan Members

Principally the so-called returned land is held by influential clan members and a few powerful clan leaders, and was not returned to the majority of pastoralists who badly needed it. Instead the returned land was leased by this minority Afar to commercial farmers for rents. This practice of leasing communal (clan) lands to private farm investors by powerful clan leaders and clan elders is further reducing the pastoral householders' access to the flood-fed prime dry-season pasturelands, farm residue, water points and fertile lands for farming or grazing.

For instance, in Amibara woreda, one private investor who control and cultivate a total of about 3000 hectares of land trying to fully satisfying the powerful individuals among the Afar and

monopolize the land and also restricted other individuals among the Afar to cultivate a small portion of land.

The discussion in the study areas indicated that some private investors cultivate upto 50 ha of land to the clan leaders as a reward for their role in discouraging Afar Youths to cultivate land by their own. Some investors corrupted the powerful Afar elders, clan leaders and some elite in local administration. Nowadays these powerful individuals become well off than they were before these private cultivators came to the Afarland. Most young clan members in the study area expressed a demand for further division of clan irrigated land to individual households and those clan leaders rejected their demand. Hence, there are incidents of disputes here and there between the clan leaders and members of the clan. From the total surveyed households 51.4% responded that they have disagreement with their respected clan leaders particularly in land related issues. Consequently, one would expect that the Afar Social institutions will be ruined gradually and interval disputes among various classes in the Afar society will increase rapidly.

5.3.4 Dependency Attitude

Out of 90 households surveyed in both Amibara and Gewane woredas, only 7 household heads reported that they cultivate their own individual land. Further there is only one association constitute of Afar individuals who cultivate their own clan land.

From the discussion with members of the Afar society in the study woredas, it was learnt that most of them (37% in both woredas) would like the government to hand-over the remaining portion of state farms to them as well as to clear the forests on their land inorder to lease out to the private cultivator and to collect rent annually, for instance one private cultivator- Amibara A/D/P, cultivated a total land area of 3000 ha. The traditional owners of the land-15 families/dallas of the Harkemela-fedihitie clan with an estimated population size of 1231 people become immediately rent collectors

and depend totally on the private investor. Their ultimate ambition is to increase their leased-out land size and maximize their annual share of net profit instead of take-over the land from the private cultivator after some years of human and financial capital accumulation. As a survey result shows, this dependency attitude among the Afars increases from time to time. The study by IPS in 1999 indicated that out of 96 respondents in both Amibara and Gewane districts, 22%, 52% and 26% of total surveyed households have chosen the alternatives to cultivate by their own, by the government assistance and to lease-out their land to private cultivators respectively. However, after all these years of expanding private agricultural investment in these woredas the percentage is changed. Out of 90 respondents in the two sampled woredas, 22.2%, 41.1% and 36.7% of total surveyed households chooses to cultivate by their own, by government assistance and to lease-out their land to private cultivators respectively. Furthermore among the total households who have chosen to lease-out their clan land to private cultivators in both woredas, 64% i.e., 21 households prefer fixed-rental agreement while the remaining 36% i.e., 12 households prefer net profit sharecropping. Most individuals who were chosen the net profit sharecropping agreement are those who have educational background and strongly believe that the private cultivators regarding the profit and loss declaration would not deceive them. (See Table 17). Generally the private agricultural investment undertaken on the Afarland has resulted in developing dependency attitude in the minds of the Afar people.

Table 18. Household Needs on how to handle the Land Development

How does the household want to do the job	Amibara woreda		Gewane woreda		Total	
	No.of respondents	%	No.of respondents	%	No.of respondents	%
By their own	11	18	9	30	20	22.2
By government Assistance	27	45	10	33	37	41.1
Lease to private entrepreneurs (sharecropping & fixed-rental)	22	37	11	37	33	36.7
Total	60	100	30	100	90	100

6. Conclusion and Policy Implications

The traditional Afar pastoral production system based on the keeping of multi-species livestock in a semi-arid environment has survived for centuries. Seasonal herd mobility, changing herd composition, and traditional institutions of mutual help used to maintain the sustainability of the system both ecologically and economically.

However, the ill-conceived agricultural development policies persuaded by the Imperial and the Derg régime that aimed at the establishment of large-scale commercial farms in the Awash Valley and the refusal to recognize the land rights of the Afar have had severe impact on the Afar and their production system. In the Middle Awash alone some 23,000 hectare dry season grazing and 29,000 hectares wet season grazing has been taken up by large-scale state cotton farms, settlement schemes and National Parks.

Loss of such large magnitude of critical grazing lands has had numerous detrimental effects on the Afar life and their production system. Overstocking and eventual range degradation, disruption of the Afar's traditional social and resource utilization systems that evolved through centuries of adaptation to the ecosystem, mushrooming conflicts between different clans among the Afar, between the Afar and their neighboring pastoralists and intensified confrontations between Afar and state farms, the frequently occurrences of drought and negative impacts on the health of the Afar and their animals due to chemicals used in farm practice are the major effects of external interventions on the Afar land.

Following the overthrow of the Derg regime in the 1991, some change has taken place in Awash. A total of about 16,547 hectare of irrigated and mechanized lands owned by the state farms was handed over to the ANRS. In the Middle Awash alone, a total of about 6398 hectare of irrigated land was returned. However, neither the community nor the regional government has shown their

capacity to manage returned farmlands in any form. The major reasons were firstly in 1992, when these ex-state farms were returned, responsible bureaus at the regional level were not established and the region was totally incapable to manage these large-scale cotton farms, which require competent managerial and technical skills as well as high financial capital. Secondly, the Afar pastoralists' attitude towards farming in general and crop production in particular was not changed. Moreover, the attempt by central government to make the Afar pastoralists beneficiary by designing a project called AADP, was failed due to mainly lack of coordination between the federal and regional government as well as lack of participation by the community.

Eventhough both the regional and federal governments' constitutions stipulated land as a state property, the Afar strongly believes and express their attitude towards land similarly as the Nigerian herders in such a way that "land belongs to a vast family of which many are dead, few are living and countless members are still unborn". (Charles 1998) Accordingly, the ANRS re-distributed the returned land to clans and sub clans among the Afar as a response to their long aged quest for return of their land. There was discontentment with re-allocation of returned land among clans due to the action of some local officials who want to enhance their legitimacy and authority by encouraging the believe that clans who do not actively support them will be disadvantaged in giving legal ownership title to their traditional claimed land. On the other hand, the clans who have got "legal ownership title" leased-out their clan land to private cultivators by entering into a contractual agreement which lasts for the first 5 years if both parties interested it will extend to 15 years. The expected role of private agricultural investment in the area is to bring about socio-economical change to the Afar pastoralists. However, the past 12 years flow of private agricultural investment in the Middle Awash is very low. About 20 private investors have stopped to operate in the study area due to various problems such as shortage of human resource and financial capital, inaccessibility of socio-economic infrastructures, unethical manner of some private investors who tried to deceive the local people, and the communal tenure system which require the consensus among all clan

members in land related issues are major factors that discourage the private cultivators to invest more on the Afar land. Moreover the landowners i.e., the Afars have got little or no benefit from the private agricultural investment on their land. Rather they incur severe socio-economic and environmental loss. Findings of the study show that the Afar's benefit from the income and employment generation opportunities due to the operation of the private cultivators is very insignificant. Similarly, the revenue generated from taxation of the private farms by the regional government almost for the last decade is too small. This is due to weak controlling system and rampant corruption spread out through out the region. In the study woredas, i.e., Amibara and Gewane there is no single social and economic infrastructures established either by the private cultivators their own or by supporting to the community. Instead the private cultivators deceive the Afars by presenting an income statement, which shows loss for consecutive years, and exploit the Afar land for "free". Despite its positive contribution, the private agricultural investments rather led to land degradation as a result of high toxic chemicals use through the farming practice. In addition, survey findings indicates that the private cultivators do not practice fallowing and crop rotation in order to conserve the land. On the other hand, the survey study in Gewane woreda found out that those Afars organized in association and cultivate their clan land do practice fallowing and crop rotation. Further finding of the study indicates that some private cultivators deliberately give loan to the Afars and intentionally make them indebted and guarantee the renewal of the contractual agreement.

Besides, the Afar people are developing a dependency attitude and this time they are competing in expanding their clan land territory in order to lease-out the land to private cultivators instead of cultivating by their own. A total of 39 people are dead and 51 people are injured due to conflicts among clans in the Middle Awash for the last decade. The cause for the incidence of these conflicts is reported to be competitions among different clans in order to expand their clans territory and lease out the land to the private cultivators.

Generally, there is neglect by both regional and federal governments as well to consider these drawbacks of private commercial farms on the Afar land. This neglect is one of the biggest threats currently affecting the environment as well as the well being of the majority of the pastoralists in the Amibara and Gewane districts in particular and the whole areas of Afar region in general.

Finally, the study suggests the following policy implications:

1. The regional government should reconcile the constitutional land ownership right with the traditional communal tenure system in order to bridge the policy vacuum between de-jure and de-facto tenure arrangement in Afar region. Most importantly, however, there should be an effective land use policy in the region, which could protect the unprecedented degree of land degradation through overgrazing and misutilization of the land by private cultivators as well as which could enable the Afar pastoralists be gradually transferred to agro-pastoralists.
2. The Afar gets more benefit if they lease-out their land on fixed-rent basis rather than net profit sharing. They also benefit if they decide up on flexible as well as competitive fixed rent price by putting in to account factors such as experiences of other regions, productivity of the land, accessible irrigation water for infrastructural facilities, distance to and from the market centers and so on. Hence, these should be recognized by the ANRS and responsible regional government bodies should review the contractual agreement between the Afar and private cultivators in order to guarantee the benefit of the people as well as the private investors.
3. The responsible bureau at the regional level should control and verify the accuracy of profit and loss statement presented by the private cultivators.
4. The investment bureau at the regional level should strictly analyze the socio-environmental impact of private agricultural investments prior to giving investment license to the private

cultivators. Furthermore, apart from promotional activities, the bureau should supervise the operation of the private cultivators on timely basis.

5. The regional government should strengthen their legal system and also should work together with the traditional institutions in order to make, rapid and just decisions, when conflict between the Afar and the private cultivators arises.
6. The regional government officials together with traditional institutions shall discourage those individuals who inappropriately expand their clan land territory even by clearing dry and wet season grazing areas.
7. The regional government should initiate and encourage the Afars in organizing themselves in an association and provide them with necessary financial and technical support as well as credit facilities in order to transform gradually to be agro-pastoralists.

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2. Ato Awol Arba, Head of ANRS pastoralist coordination Bureau. Feb 19,2004
3. Ato Hamed Yosi, Head of ANRS cooperative bureau, Feb 19, 2004
4. Ato Hassen Abdulkadier, Head of ANRS Investment Bureau, Feb 21,2004
5. Ato Humed Mussa, Head of Agriculture Bureau of zone III of ANRS Feb 21,2004
6. Ato Asrat Gudisa, Head of Middle Awash Agricultural Development Enterprise, Feb 25,2004
7. Ato Assefa Hairbassa, Head of Awash Basin Water Resource Administration Agency, Feb 25,2004
8. Ato Wondossen Gulelat, coordinator of Afar Pastoralists Development projects. March 1, 2004
9. Haji Ali Dersa, one of the elders in Dubti woredas March 1, 2004
10. Ato Abdulkadire Haji Mussa Clan leader of Debine Tribe Around Amibara. March 2, 2004
11. Ato Taha Ali Kheriy, clan leader of Waima Tribe around Amibara. March 3, 2004
12. Ato Mohammed Ali Koki, one of the elders in Amibara woreda march 5, 2004
13. Ato Mohammed Sheim Nure, one of the elders in Amibara woreda March 7, 2004
14. Ato Metsa Berhanu, Crop production and protection expert in zone III of Agriculture Bureau March 8, 2004
15. Lt. Ali Dine, one of the land owners who leased out land to private cultivator around Gewane woreda March 10, 2004

Appendix 1. Pastoral Household Questionnaire

Section 1. Household Information

1. Name of household head _____ Sex Male () Female ()
2. Household size (no. of persons in the household) _____
3. particularities of household members

No.	Name	Sex	Age	Relation to head (see code)	Level of education (see code)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

Level of Education	Code	Relation to HH head	Code
Illiterate	1	Wife	1
Read and Write	2	Husband	2
Grade 1-4	3	Son	3
Grade 5-10	4	Daughter	4
Grade 11-12	5	Close Relatives	5
Grade 12+1	6	Dependent	6
College Education	7	Hired worker	7
Others	8	Others	8

Section 2. Anthropology Part

1. Are there traditional religious shrines/sites in your locality? Yes/not

1.1. If yes, are they related to your production practice? If yes how is it related?

1.2. Do you sacrifice animal for religious reasons? Yes/No

2. Dietary /Food Habits

2.1. What are the most staple foods in your locality?

2.2. Are you accustomed to eating wild fruits and animals? Yes/No

2.3. If yes, what are they?

2.4. What types of food are prohibited/forbidden to eat in your locality? Why? Please list them and write the reasons.

3. Do you have traditional labor organization? Yes/No

3.1. If yes, mention the types:

a. Labor exchange

b. Festive

c. Other specify _____

4. What are the activities performed through labor organization?

a. water management

b. Pasture land management

c. livestock herding

d. crop production

e. other specify _____

5. Who coordinated are controls the different activities?

a. clan leaders

b. Volunteers

c. Selected people

d. other specify _____

6. Where do you obtain your livestock feed?

a. Private pasture land

b. Community pasture land

c. Clan pasture land

d. Irrigated pasture

e. No man's land (every where)

7. How do you manage pasture land?

8. Traditional, how people classify each other are

a. Rich

b. Middle

c. Poor

9. What are the recent changes in terms of wealth category as a result of drought?

a. _____

b. _____

c. _____

10. In your community who is in charge of controlling such as land, trees, water?

a. Farm land

b. Water

c. Trees

11. If people enter into conflict within the community to control resources what are the causes of conflict?

11.1. Have you ever-encountered conflict with neighboring ethnic groups? Yes/No

11.2. If yes, what sort of conflict

- a. _____
- b. _____
- c. _____

11.3. Who were involved in the conflict?

- a. _____
- b. _____
- c. _____

11.4. What was the rationale/reason for the conflict?

- a. _____
- b. _____
- c. _____

11.5. How do you solve the conflict/

- a. _____
- b. _____
- c. _____

Section 3. Range/Grass land part.

1. What is the ownership position of the grazing land in your vicinity? /tick

_____ Private

_____ Clan/Communal

Both

2. Do you have traditional range/land grass land management? If you answer is tick from the given alternative and mention if you have different from the listed alternatives?

Grazing Management	
Moving animals in each season	
Moving animals only during sever drought	
Moving animals in dry season	
Keeping animals in settlement area during wet season	
Division of herd in to village group and moving herd	
Burning grazing land	
Demarcation of grazing and settlement areas	
Conservation of grazing area for dry season	

3. What are the traditional coping mechanisms during sever drought?

4. In the extreme drought condition did you forced to migrate? Yes/No

4.1 If yes, where and how long do you stay away?

4.2. Have you faced any problem during such movement? Yes/No

4.3. If yes what are the problems you encountered?

5. Where do you get forage for your animals? Tick _____ Road side

_____ Bank lands

- _____ unused crop land
- _____ Weeds from cropping land
- _____ From hilly areas
- _____ Leftover cropping land
- _____ Crop residues

6. Is the shrinkage of grazing land a problem in your area? If yes what are the major reasons? / tick

- _____ Increase land population
- _____ Increase land cultivation
- _____ Increased crop residues usage
- _____ Overgrazing
- _____ Decreased in livestock
- _____ Others mention

7. For which animal is feed still relatively available in dry seasons? (Tick)

- Cattle _____
- Camel _____
- Small ruminant _____
- Donkey _____

8. Where is the main grazing area?

Seasons	Cattle	Camels	Goats/Sheep
Long Wet season			
Long dry season			
Short wet season			
Short dry season			
Severe drought year			

9. Do you have signs of range/grass land degradation in your area? Yes/No

10. If yes, can you mention the most important reasons for rangeland degradation? Rank them

Drought/Lack of rain	
Land alienation	
Overpopulation of livestock	
Overpopulation of humans	
Tree clearing	
Runoff/erosion	
Other	
Other	

11. What name of plants available in your area?

Local name of the plant	To which livestock (cattle/shoats/camel/donkey)	Types of diseases

12. What is the water source for the people and its distance from village?

are the permanent water sources during the dry season? 13. What

For human being Type

Pond/well/river

Distance from settlement _____ km

Ownership

private/group/other

For livestock Type

pond/well/river

Distance from settlement _____ km

Ownership

private/group/other

14. When it is far, what is the system of transportation? Donkey/ Camel/Other means

Section 4. Livestock part

1. Who is primarily responsible in the household (male = M, or Female = F or children = C):

a. To search for animal feed _____

b. To sell the animal _____

c. To make decision on where to go in case of migration _____

d. Herding of _____

Small ruminant _____

Cattle _____

2. Do you have different stock of animals? If yes what are the purpose of keeping livestock?

Species	Reason for keeping							
	Milk	Meat	Prestige	Income source	Ploughing land	Transportation	Breeding	Riding
Cattle								
Sheep/Goats								
Camel								
Horse/Mule								
Donkey								

3. If you have answered the above question, could you tell us the daily milk off take, lactation off take and weaning age of camel, cattle, goats and sheep?

	Cattle	Camel	Sheep	Goat
Daily milk off take				
Lactation off take				
Number of months milked				
Weaning age				
Age at maturity of male				
Age at first calving (cow & camel)				

4. Do you have cattle? If yes could you tell us the herd structure?

Number of cow's _____

Number of bull's _____

Number of heifer's _____

Number of steer _____

Calves _____

5. What is the trend of livestock numbers in your herd over the last 5 year?

Species	Increasing	Stable	Decreasing	Reason
Cattle				
Camel				
Small r.				
Donkey				
Other				

6. Did you migrate during the last drought? If yes, which route _____ where did you go? _____

7. Losses of livestock in the last drought

	Cattle	Camels	Small ruminant
Number before drought			
Died in the village during drought			
Died during migration			
Died during return to village			
Number after return			

8. What do you understand by drought?

8.1. How often does drought occur?

8.2. How did you manage to survive in drought?

a. _____

b. _____

c. _____

9. What are major causes of death in the last drought?

a. shortage of water _____

b. shortage of grass _____

c. Animal disease _____

d. Toxic plant _____

e. All _____

Other mention _____

10. Do you have feed shortage for livestock? If your answer is yes, can you tell us the causes? Tic from the table given below?

Causes	Rank
Loss of dry season grazing land	
Shortage of rain	
Overgrazing	
Shortage of grass/pasture	
Bush encroachment	
Increase in livestock population	
Long distance from water source settlement	
Conflict within tribe/with Afar	
Other causes/mention if any	
Other causes/mention if any	

11. Do you have any practice of conservation of grass/livestock feed? If your answer is yes choose from the alternatives given, if yours practice is other than the points given mention?

Conservation method	
Hay making	
Crop residues	
Hay and crop residues	
Standing hay	
Standing hay and crop residues	

12. How often (once per day/two days etc.) do you water camels cattle/small ruminants in the wet/dry/drought season?

	Long wet	Long dry	Short wet	Short dry
Distance (hours?)				
Camels				
Cattle				
Sheep/goat				
Donkey				

13. What are the types of housing used for livestock?

_____ Back yard enclosure

_____ Open camp

_____ Other, mention

14. What are the important problems that limit productivity of livestock? Rank by giving number one to the most important.

Constraint	Rank (in normal years)	Rank (in drought years)
Water scarcity		
Livestock disease		
Rangeland degradation		
Feed shortage		
Livestock market		
Predators		
Labor		

15. What are the forms of utilization of crop residues in your area?

_____ Feeding animals

_____ Selling

_____ Giving to relatives

_____ All the above

Section 5: Farm Land Tenure and Related Questions

1. What is the current size of land of the household _____ ha (or in local units _____)?
2. What is the current number of parcels/plots of land of the household?
3. Could you please tell us the size of plot, distance from your home and the means of acquisition of your current holdings?

No	Means of acquisition	Area of plot					Distance of plot from home				
		1 st	2 nd	3 rd	4 th	Unit	1 st	2 nd	3 rd	4 th	Unit
1	Inherited or gift from family										
2	From land redistribution										
3	Sharecropping										
4	Mortgaged										
5	Cleared land										
6											

4. Could you tell us the changes in your holdings in size and mode of land you gained or lost in the past years?

Reform or Change	Year	Size of Holding Gained	Mode of Acquisition (see Code below)	Size of Holding Lost	Size Lost	Mode of Loss	Household Size at the Time
Reform							
1 st change							

Codes for mode of acquisition/loss	
1	Redistribution
2	Inherited
3	Bought
4	Others

5. Do you have enough land for producing enough food for your household consumption?
6. If No, with your current farming technology, how much land do you require to meet your household food self-sufficiency? _____ ha (or _____ local units).
7. How much land do you require if you use improved technology (fertilizer, improved seed.....)? _____ ha (or _____ local units).
8. Please give details of land voluntarily transferred to others (temporarily or permanently) from the household?

Plots	Duration (temporary permanent transfer)	Size transferred	Benefit code	Mode of transfer (see code)	Data of transfer	Length of transfer if temporary (in years or in months)
1 st plot						
2 nd plot						
3 rd plot						
4 th plot						

<u>Codes for benefits</u>	<u>Codes for mode of transfer</u>	<u>Codes for transferred to</u>
a. Crop sharing	a. Mortgaging	a. A neighbor in the same PA
b. Money income	b. Rented out	b. A relative in the same PA
c. Exchange	c. Sharecropping	c. A reined in the same PA
d. Inherited	d. Sold	d. A friend out side the PA,
e. Mortgaging	e. Gift	but rural
		e. Relative out side the PA
		but rural
		f. Other person in the PA
		g. Other person out side the
		PA
		h. Any other person in the
		town
		i. Others

9. Do you think the current land holding system is good for you?

_____ Yes

_____ No

10. If yes, in what way (multiple answers possible)?

1. You can acquire land easily

3. Have no problem with landowner

2. More secured than before

4. Fair distribution of land

5. Other specify _____

11. If No, explain the reason why? (Multiple answers are possible)

1. No security

3. Cannot sell or buy land

2. Have problem with local authorities

4. Difficult to acquired land

5. Other specify _____

12. Do you think that other farmers are happy with the current land holding system?

_____ Yes _____ No _____ I don't know

13. If yes, what are the reasons?

1. More secured than before

3. Fair distribution of land

2. Can acquire land easily

4. No problem with land owner

5. Others _____

14. Can you tell us other alternatives that you thin would be better that the current land tenure system?

(Start with the most favorable and indicate the order of importance)

1st

2nd

3rd

a. Free hold/private ownership

b. System that allows better security (e.g leasing for a longer period such as _____ year

c. Public ownership but secured rights

d. other specify

15. Do you think all of your current plots will remain with you for the future?

Yes

No

do not know/not sure

16. How long do you expect your current holdings to remain with you? _____ years.

17. Do you expect that there will be land redistribution in the future?

Yes

No

I don't know

18. If yes, when do you think it will happen _____ E.C.

19. From where did you get the information? (Multiple answers possible)

1. Local authority such as PA, extension agent
2. From higher authorities such as Zonal regional or federal
3. From other bodies, specify

20. If redistribution takes place, will it be beneficial for you?

Yes

No (if yes, go to 31)

I don't know

21. If No, why do you think it will not be beneficial for you?

1. Land size will decrease or (not enough land for every body)
2. I don't think I will benefit from it
3. There is no need for redistribution all
4. Other specify _____

22. If land is not redistributed, what do you think the young generation or the landless in general should do?

1. Should go somewhere and settle
2. Engage in non-farm activities
3. Migrate to urban areas to seek work
4. Work somewhere else
5. Have no idea/I don't know

6. Other specify _____

23. Who owns land in the current land tenure system?

1. The government /state

2. The people

3. My self

4. Other specify

24. Suppose you are given the plots of land are currently holding as your own private property to do what ever you want; would you consider selling any of them?

Yes ()

No ()

Not sure ()

25. If No, why not?

1. I don't intend to sell my land no matter what

2. I cannot live with out it/no other alternative

3. Other specify _____

26. Suppose, you have a bad harvest and you do not have enough food for your family, or you cannot repay your debt on time, what do you think will you do with your land?

1. Keep it what ever it comes

2. Montage it

3. Sell it our

4. Rent it out

5. Other specify

27. Would you sell part of it or all of it?

1. Part of it
2. All of it
3. Depends on the situation

28. Can you please tell us what rights you have your holding (Multiple answers possible?)

1. Can sell my holdings
2. Can rent it out
3. Can mort age it
4. Lease it out
5. Sharecrop it
6. Other specify

29. Under what situation or why do you want to sell your land? (Multiple answers possible)

1. To repay debt or other problem / Distress selling
2. To buy food with the money I get
3. To do other business such as trading
4. To re-invest on machinery etc.
5. Other specify

30. Do you want to buy land; if for example, credit is available for you?

Yes

No

31. If no, why not?

1. I am too poor to buy and pieces land
2. Land must be given for free (it is my right to get land for free)
3. Land belongs to the people and should not bee sold
4. I have enough land
5. Other specify _____

32. Have you ever had any problem with the local authorities regarding land?

1. Government/State
2. Government and the people
3. Have no idea
4. The people
5. Locally elected official
6. Other specify _____

33. Have you ever had any problem with the local authorities regarding land?

Yes

No

34. If yes, what kind of problems

1. Unfair distribution of land
2. Lack of settling land dispute

3. Other specify _____

Section 6. Crop Production

1. What measure did the household take to maintain soil fertility?

- | | | |
|-------------------------------|--------------------------------|------------|
| 1. Apply manure | 2. Apply commercial fertilizer | |
| 3. Practice terracing | 4. Crop residue | |
| 5. planted trees and/or grass | | |
| 6. 1 and 3 | 7. 2 and 3 | 8. 2 and 4 |
| 9. 3 and 4 | 10. 1, 3 and 4 | 11. None |

2. Does the household use chemical fertilizer? Yes No

a. If yes, is it available when needed?

- | | |
|--------------|----------------|
| 1. Available | 2. Unavailable |
|--------------|----------------|

3. Agricultural production calendar (give the peak production season)

1. Jan 2. Feb. 3. March 4. April 5. May 6. Jun 7. July 8. Aug 9. Sep 10. Oct. 11. Nov 12. Dec

4. Agricultural Production Calendar (give the peak production season)

1. Jan 2. Feb. 3. March 4. April 5. May 6. Jun 7. July 8. Aug 9. Sep 10. Oct. 11. Nov 12. Dec

Name of crops	Land preparation		Sowing		Harvesting	
	Small rain season	Main rain season	Small rain season	Main rain season	Small rain season	Main rain season
Barely						
Wheat						
Maize						
Sorghum/millet						
Pulses						
Oil seeds						
Vegetables						
Spices						
Fruits						
Root crops potatoes, cassava, yam						
Others						

4. How many times does the household harvest crop in a year?

1. Once

2. Twice

5. a. Does the household practice fallowing?

1. Yes

2. No

b. If not what is the reason

1. Shortage of farm lands
2. Lack of knowledge
3. Discouraged by high current crop prices

4. Others, specify _____

6. Does the household practice crop rotation?

1. Yes

2. No

7. a. Does the household practice terracing on own farm?

1. Yes

2. No

b. If not what is the reason?

1. Laborious

2. Hide out crop damaging rodents

3. Insufficient farmland

4. The farmland is plain

5. Other, (specify) _____

8. Does the household use inter-cropping?

1. Yes

2. No

9. Ask the household about the following for the last two consecutive years

A) Last year

Name of crops	Cultivated (ha)		Yields (Qt.)		Amount of produce sold	
	Small rain season	Main rain season	Small rain season	Main rain season	Quintals	In dollars
Barely						
Wheat						
Maize						
Sorghum/millet						
Finger Millet						
Pulses						
Oil seeds						
Vegetables						
Fruits						
Others						

B) Current Year

Name of crops	Cultivated (ha)		Yields (Qt.)		Amount of produce sold	
	Small rain Season	Main rain Season	Small rain Season	Main rain Season	Quintals	Dollars
Barely						
Wheat						
Maize						
Sorghum/millet						
Finger Millet						
Pulses						
Oil seeds						
Vegetables						
Spices						
Fruits						
Others						

C. What was the retail price of these crops during the given years?

Item	Unit of measure	2001	2002	2003
Barely				
Wheat				
Maize				
Sorghum/millet				
Finger Millet				
Pulses				
Oil Seeds				
Vegetables				
Spices				
Fruits				
Root crops potatoes, cassava, yam				
Others				

D. What was the retail price of the following commodities in your area in the given years?

Year	Unit of measure	2001	2002	2003
Sugar				
Salt				
Soap				
Kerosene				
Cooking oil				
Fertilizers				
Clothing				
Others				

Section 7. Household Economic

1. If the household has sold any animal in the past year, what was the reason for selling?

- | | | |
|-------------------------------|-------------------------|---------------|
| 1. To buy food for the family | 2. To buy clothing | 3. To pay tax |
| 4. To buy fertilizer or seed | 5. To buy other animals | |
| 6. Due to drought | 8. Other | |

2. Specify number sold and total money obtained

Animal	Number sold	Total income
Cattle		
Sheep		
Goats		
Donkeys		
Horses		
Mules		
Camels		
Chicken		
Beehives		

3. Did the household obtain additional income from sale of animal products last year?

Animal product	Unit of Measure	Quantity sold	Total income
Hides	Number		
Skins	Number		
Butter	Kilogram		
Honey	Kilogram		
Milk	Liters		
Eggs	Numbers		

4. Ask if the HH received any credit in the past few years

Production year	Source of credit	Purpose	Interest rate	If the lone is returned 1. Yes 2. No
2001				
2002				
2003				

a. Source of Credit:

1. Government 2. NGO 3. Individuals 4. Banks
5. Saving society 6. Others, specify _____

b. Main purpose for the credit:

1. To buy food 2. To buy Ox 3. To pay tax
4. To by fertilizer/improved seed 5. Others

5. If the household had an income (in cash/or in kind) from non-agricultural activities during the current year, what was the estimated amount in local currency? _____

6. Time and Labor input in Housework Activities by women

Type of Activities	Total time & labor spent by Men	Total Time & Labor Spent by Women
- family food processing & cooking		
- food milling		
- food grinding		
- food storage and/or preservation		
- provision of water		
- provision of household fuel		
- house care and cleaning		
- washing & care of clothes		
- child & extra care of the sick		

7. Is there a durable item listed below in this housing unit?

a. Radio/Radio tape

b. Bed/Modern

1. Yes

2. No

1. Yes

2. No

c. Watch

1. Yes

2. No

d. Box

1. Yes

2. No

e. Table/chair

1. Yes

2. No

8. How much does the household spend for the following item per year?

Item	Expense in local currency
Household utensils	
Kerosene	
Coffee, Sugar, Salt, Edible oil, Spices	
Social contribution	
Improved seeds, fertilizers, insecticides	
Farm implements	
Land Rent/Labor/Ox	
Grain for food and seed	
Transportation	
Health	
Education	
Milling charges	
Clothing	
Government tax	
Veterinary service	
Others	

9. a. Are you involved in trade? Yes/No

b. If yes, what type of items you trade?

a. _____

b. _____

c. _____

10. a. Do you go to distant area to trade? Yes/No

b. If yes mention the trade roots that are available in this area?

Thank you very much for sharing your practical knowledge and for providing information

Appendix 2. Interview Guide at Institutional Level

1. Geographical location of the study area
2. Administrative classification of the study area
3. Climate of the Study area
 - Rainfall
 - Temperature, etc.
4. Total Land size of the study area
5. Social and Economic Infrastructures in the study area
 - Schools (number of schools and students)
 - Health Services (number of services)
 - Potable water (number of services- pipe, river, spring, wells, etc.)
 - Financial Institutions (number of institutions)
 - Communication (Tel, Post, Radio, etc)
6. Land use
 - Area under cultivation
 - Land coverage (fallow land, pastureland, forest, bushes, National park, River and lakes etc.)

7. Regional land tenure policy and attitude of the local community
8. Role of the regional government regarding investment on land
 - Land market
 - Conflict resolution
 - Environmental protection
 - Revenue collection
9. Coordination with traditional institutions
10. View on past development interventions
11. Any other comment/opinion concerning land related issues

Appendix 3. Interview Guide for Professionals and Experts

1. The communal land tenure system and agricultural private investment.
2. The gap between the current regional land policy and communal tenure practices.
3. Evaluating past development interventions from the pastoralists' livelihood perspective
 - Large-scale farms
 - National parks
 - Military camps
 - Settlement programmes, etc
4. Expertise opinion regarding the existing communal land tenure system vis-à-vis private investment on pastoral land.
5. Any other comment/opinion concerning land related issues.

Appendix 4. Interview Guide for Clan Leaders

1. Historical trend of land (before and after 1950s)
 - Grazing
 - Cultivation
 - Resource-use conflicts
 - Leasing system
 - Contractual agreement
 - Property right
 - Credit facility
2. View on Returned ex-state farms
3. Views on Private Agricultural Investment
 - Income
 - Employment opportunities
 - Environmental degradation
 - Social attitudinal change
4. Any comment/opinion on land related issues

Appendix 5. Interview Guide for the Private Sector

1. Personal Identification
2. Year to start investment in Afar region
3. Investment history in other regions
4. Information channels about investment opportunities in the Afar region.
5. Perception about the region and the reality on the ground
 - The people
 - The land
 - The administration
6. Preference to get land for investment (from the government or clan leaders)
 - Financial cost
 - Security
 - Land size
7. View regarding traditional tenure system
8. Suggestion for alternative land related transaction
9. Any other comment/opinion on land related issues