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EXPLAINING CHANGES OF PROPERTY RIGHTS AMONG AFAR PASTORALISTS, ETHIOPIA

BEKELE HUNDIE

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Humboldt-Universität zu Berlin
Institut für Wirtschafts- und Sozialwissenschaften des Landbaus
Fachgebiet Ressourcenökonomie

Humboldt University Berlin
Department of Agricultural Economics and Social Sciences
Division of Resource Economics

Luisenstr. 56, D-10099 Berlin
Germany

Phone: ++49 30 20936305
Fax: ++ 49 30 20936497

Email: k.hagedorn@agrar.hu-berlin.de
v.beckmann@agrar.hu-berlin.de
http://www.agrar.hu-berlin.de/wisola/fg/ress/

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Explaining Changes of Property Rights among Afar Pastoralists, Ethiopia

Bekele Hundie

Humboldt University of Berlin,
Institute of Agricultural Economics and Social Sciences
Division of Resource Economics,
Luisenstr. 56, 10099, Berlin
e-mail: bekelehu@yahoo.com

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Abstract
This study aims at explaining property right changes in selected areas of Afar region in Ethiopia. Based on primary and secondary data, explanations are given on the existing types of land use arrangements and how the traditional communal rights of pastoralists have been changing. Both communal rights and individualized rights exist the latter being introduced with the establishment of commercial farms. The state is identified as one driving force behind property right changes especially in one study site (Ambash), which is suitable for irrigated agriculture whereas its direct intervention is minimal in other sites. The coercive interventions started in 1960s have had detrimental impacts on the livelihoods of pastoral households. In addition to the state as a change agent, natural as well as socioeconomic challenges are important in explaining the current changes in land use arrangements.

Keywords: property rights, institutional change, pastoralists, state intervention, Afar, Ethiopia
JEL-Codes: Q15, P26, P48

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1 Introduction

Property rights are the most influential institutions in livelihoods of societies. The word "right" is closely attached with everyday human life; the right to use a resource, the right to transfer it, the right to exclude others, and even beyond physical resources, the right to express one's own views, the right to get respect, etc. While one's quality of life is directly affected by resource endowments, property rights define how existing resources are utilized, who should utilize what attributes of the resource, and so on.

While discussing about property rights at least two issues are worth considering. First, property rights vary spatially depending upon socioeconomic, political and natural circumstances. Even within a certain geographical confinement, there may exist multiple forms or layers of property rights the combinations of which are subjected to change over time. On the one hand, the existence of "hybrid" or "mixtures" of property rights can be seen as an advantage because individuals can choose one or another of these frameworks as the basis for their claims (Meinzen-Dick and Pradhan 2002). By having such an opportunity they can enjoy benefits which otherwise may not be realized. The existence of multiple layers or "bundles" of rights may also enable communities to withstand natural challenges such as drought. Pastoral areas are apt examples. On the other hand, the existence of multiple property rights, can invite conflicts among different actors as overlapping claims may arise (Di Gregorio et al. 2004). Particularly when certain forms of property rights are introduced intentionally through coercive measures, the conflicts may be so serious to the extent that they cause losses of assets.

Second, property rights adjust overtime. The adjustments may occur in response to the changing opportunities (arising from markets, technology, and the like) or demographic changes (Demsetz 1967; Behnke 1985; Hayami and Ruttan 1985; Ruttan 1989). It's also not uncommon to observe changes in property rights as a result of changes in national political system or ideological dynamism (Ensminger and Rutten 1991; Hanisch 2003). In such cases, property rights are intentionally designed rather than evolving over time. While different factors may trigger property right changes, this dynamic process proceeds not in a smooth way in which every economic actor endorses each and every event of the process. Rather, the process involves, perhaps, a series of conflicts among different actors having different bargaining power (Knight 1992, Wang 2001), arising from their heterogeneity in action resources. As a result, the emerging property rights would have different, perhaps

contradictory, meanings for different actors. For those "strong" actors the emergence of new property rights may be taken as a window of opportunity to utilize existing resources more optimally whereas for the "weak" actors, it is a challenge hampering success in livelihoods.

Traditionally pastoral areas are governed by common property regime. This traditional system of resource use arrangement has evolved spontaneously to suit the ecological conditions of the pastoral milieu (Ensminger and Rutten 1991). However, nowadays the traditional pastoral property rights have been changing either spontaneously in response to new opportunities or challenges or intentionally mainly driven by external agents or a mixed factors (Behnke 1985; Grell and Kirk 1999; Swallow and Kamara 1999; Thebaud and Batterbury 2001). Ethiopian pastoralists are not exceptional in this regard.

Property rights are so fundamental to functioning of traditional as well as advanced economies that any knowledge we can garner regarding how they change or do not is beneficial. Studying changes in pastoral property rights is important because: (1) it indicates how different user groups reacted to the changes and the distributional impacts of those changes, (2) it helps to draw lessons from past interventions that brought property right changes so that appropriate policies will be designed in the future to improve livelihoods in pastoral areas, and (3) it helps to explain how current theoretical debates on property right changes fit to empirical settings. This is the first motive for this study. The second motive is related with the relatively limited research focus in Afar. That is, the existing studies on pastoral property rights concentrate in the southern region while the Afar, the third largest pastoral region in the country, has got little research focus. For instance, a selected annotated bibliography compiled by Luiseno, Swallow and Kamara (1998), indicates that out of 49 pastoral related literature focusing on Ethiopia, 26 are specifically the outputs of studies in southern Ethiopia (particularly the Borana plateau) whereas no study has been cited in this document which target Afar pastoralists. A few studies discussing specific issues on Afar may be found (e.g. Getachew 2001; Ali 1997) and, in general, Afar has been given, if any, sub topics in comprehensive studies about pastoralism.

The paper focuses on two aspects. First, it shades light on the existing traditional forms of property rights in selected areas of Afar. Based on the discussions made with different pastoral groups and key informants (such as elders), a brief description has been provided on what forms of resource use arrangements are available in the areas and how resources are governed. Second, the paper examines the current changes in customary rights of pastoralists and the driving forces for the changes. More specifically, explanations are provided on how state intervention in favor of agricultural production started about four decades ago brought

changes in customary pastoral rights in the Middle Awash Valley and pinpoint the implications of the changes to the livelihoods of pastoral households. In so doing, the existing theoretical explanations of property right changes have been traced which may provide a case on the applicability of contemporary theories of institutional change to the context of pastoralism. In addition to the state as a change agent, the contributions of natural and socio-economic factors to property right changes have been discussed.

The remainder of the paper contains five sections. Section 2 discusses some concepts of property rights. Section 3 extends a similar issue but focuses on theoretical explanations of property right changes. Section 4 introduces the study areas and data sources. Section 5 discusses forms of property rights in the study areas and contemporary changes. The last section provides some conclusions from the research.

2 Concepts of Property Rights

A number of definitions are provided in the literature of property rights. While some are quite interrelated others vary depending upon the purpose of the analysis. According to Bromley property rights are the capacity to call up on a collective or some higher body (usually a state) to protect one's claim (Bromley 1991; 1992; 2001). Similarly, Wiber (1992) defined property rights as 'claims to use or control resources by an individual or group that are recognized as legitimate by a larger collectivity and that are protected through law'. Another definition comes from Alchian (1987) which considers property rights as 'the ability to enjoy a piece of a property' which Barzel (1997) designates as "economic rights". Barzel (1997) makes a distinction between economic rights and "legal rights" the latter being what a state assigns to a person or an entity.

Property rights refer to a "bundle" of rights those individuals or groups have on a certain material or intellectual resource (Schlager and Ostrom 1992; Alchian and Demsetz 1973). These bundles of rights include the right to derive benefits from the resource, the right to exclude others, the right to manage the resource (including the right to change its form and location), and the right to transfer the resource to others through various arrangements (Schlager and Ostrom 1992; Bromley 1991; Agrawal and Ostrom 1999). The rights may be time-bounded or intermittent. An individual or a group may enjoy all of these bundles of rights or some of them.

Three concepts worth noting in Bromley's (1991) definition of property rights are: right holders, benefit streams, and duty bearers. Right holders are claimants over a resource, which

could be individuals, communities, or entities having legal personality. In most cases, there exist conflicts among different individuals or communities regarding who should command over a resource, how to use a resource, when to use it, and so on. There are a great number of cases in which different people or communities bear overlapping claims over resources.

Bromley (1992) perceives the word "property" as a secured[1] claim to a benefit (or income) stream. The benefits could be of various characteristics i.e. material or spiritual, long-term or short term, subtractable or non-subtractable, excludable or non-excludable, tradable or non-tradable and so on. According to Barzel (1997), a physical asset (e.g. land) has a number of economic attributes to which different entities have ownership rights (economic rights). He posits that the ability to receive the income flow generated by an asset in line with any of its attributes constitutes part of the property rights over that asset. For example, a herder group drawing benefits from a certain rangeland by negotiating with *de jure* or customary owners is a property right holder vis-à-vis that specific resource attribute. This implies that the ultimate interest of the rights holder or a claimant is not in a resource system *per se* but in the flow (or stock) of benefits that the resource system generates. Therefore, all negotiations regarding the type of rights that the claimant wants to be entitled in a resource take account of specific types of benefit units generated.

While rights imply the access of right holders to benefit streams, they do not guarantee the realization of benefits. Ribot and Peluso (2003) made this distinction by providing a broader framework of property right analysis. The basic idea of their framework is the distinction it makes between "property" from "access". Accordingly, 'access is about all possible means by which a person is able to benefit from things' while 'property generally evokes some kind of *socially acknowledged and supported* claims or rights' (ibid, pp. 155, emphasis original) In so doing, they showed how capability differences arising from access to different resources influence benefits generated from resources.

3 Dynamism in Property Rights

3.1 General Debates

As any other institutions, property rights are dynamic in nature and change in response to various circumstances. While the dynamism of property rights is an acceptable fact, there exists extensive theoretical debate observed in property right literature regarding the

[1] It is worthwhile to note that there is no property in open access situation as no one's claim is secured.

substantive cause of property rights change. Three schools are dominant in the contemporary theoretical debates regarding property right changes namely, the efficiency school, the distribution school and the political economy school (Hanisch 2003). Proponents of the efficiency school argue that property rights are human artifacts that change to enable the society exploit ever-changing opportunities (Demsetz 1967; Behnke 1985; Hayami and Ruttan 1985; Ruttan 1989; Barzel 1997). When the existing property rights are found to hamper benefits from new opportunities a need arises from economic actors to replace old rules with the new ones; and this will ultimately bring an overall economic efficiency improvement.

Despite their wide ranging explanations, the efficiency view failed to explain the role of economic actors in property right changes. Changes in relative factor prices may provide partial explanations to property right changes. For instance, the idea of relative price changes leading to changes in property rights is often modified by factors external to the domestic market (Joireman 2000; Platteau 1996). It is not uncommon to observe intentionally designed property right arrangements, perhaps due to state intervention. Of course, some proponents of the economic view also admit that the process of institutional change is not as smooth as one may expect (e.g. Hayami and Ruttan 1985). Indeed, the divergence of interests of the society and the government officials may curb the evolution process or shift the direction of the change. Therefore, to understand the change of property rights, we need to know how economic actors, interact in the real world.

Emphasizing the role of economic actors, proponents of the distribution school argue that efficiency improvements, which the efficiency school envisages, can be impeded by distributional inequality (Libecap 1989; Knight 1992; Wang 2001). As Knight (1992) argues changes in institutions (including property rights) involve continuous bargaining among actors in the social system. As these actors obviously vary in action resources (or bargaining savvy), reflecting different bargaining positions, the impact of the resulting institutions would be different for different actors. In the same vein, Wang (2001) argues that property rights emerge under conflicting situations, which may not result in Pareto optimal conditions. Rather, some actors lose while others gain from the process. This distributive nature of property right changes invites different conflicting responses from different actors. In deed, those losers may take measures to block the change as far as those measures are not too costly to them. On the contrary, it is equally likely that actors expecting some gain from the changes put their pressure in order to realize their goal. Thus, it is the interplay of the powers of different economic actors, which determine the final direction of the change.

The third sort of explanation for property right change takes the form of political economy. In this perspective, the state is considered as the powerful actor to bring formal institutional changes through its political institutions (McChesney 2003; Hanisch 2003; Bardhan 2005; Ensminger and Rutten 1991). In doing so, the state may not guarantee the realization of property right changes that fulfill Pareto optimal conditions, as supposed by the efficiency school. In the neoclassical world, where economists are supposed to be behind the promulgation and implementation of the so-called "first best policies" (Dixit 1996), the condition of optimality may be fulfilled. However, the choice of the "first best policy" doesn't necessarily imply the incentives and costs of politicians involved in policy making (Hanisch 2003) while it tells much on economic advantages of adopting a given policy. The Public Choice perspective, gives much room to political dimensions of institutional changes. Accordingly, political power is granted from the public to political agents based on the policy agendas and institutional changes that the agents announce during election periods. Theoretically, in this framework, institutional choices (including property rights) are made directly by voters or through their elected representatives whereas the state, as an ensemble of different public sections, ensures the realization of the desired institutional change. In practice, however, divergences between public interests and institutional change exist due to the imperfection of the real "political market"[2]. The imperfection of the political market is primarily related with the short-term rent maximizing behavior of political agents. In other words, political agents are not so benign to enforce the desired institutional change particularly when the anticipated change reduces their economic rent.

The state is not a black box in public-choice theory, but an active and a 'giant' actor in the economy directed by political agents. Thus, the state is considered to be a player, but one with an explicit goal of maximizing its own revenue. However, revenue maximization is not the only agenda behind the motive of the state to pursue institutional change. For instance, ideological motives dominate state proposals for institutional change (Joerman 2000; Hanisch 2003). When ideological motives dominate, state induced institutional changes may take a revolutionary path to bring radical changes. While many of the ideology-based interventions were meant to solve equity problems (e.g. state actions in former socialist countries) there is still no guarantee that such interventions mitigate efficiency problems.

[2] The principals (the public) do not surely know whether politicians are committed to deliver the public goods, which the former primarily voted for.

3.2 Driving Forces

The interaction of various actors, individuals or organizations, are in response to new economic opportunities (such as domestic as well as global market opportunities, changes in global economic order) and challenges (population pressure, climatic changes). When the state enters as a giant actor, ideological considerations are also worth noting. While some of these factors cause gradual and spontaneous emergence of property rights (partially or entirely replacing the existing ones) others result in rapid replacements of new property right arrangements. In other words, some are evolutionary in nature while others are revolutionary. In his well-known thesis Demsetz (1967) posits that the emergence of new property rights takes place in response to rise in demand of the target resources. Based on the memoir of Eleanor Leacock[3], he explains how property rights change from open access, where every one can harvest the resource without limit, to private property as a result of changes in demand for fur. Moreover, according to Demsetz, new property rights emerge when the gains of internalizing the externalities of the current arrangements exceed the costs of internalization. In the same vein, Behnke (1985) testifies the spontaneous emergence of property rights through empirical analysis that shows how land tenure systems change over time in response to new technical and commercial factors in pastoral contexts of Sudan.

While property rights have substantial influence on the generation and dissemination of technologies they may also shape some changes in the social and economic environment of people. In other words, the introduction of certain type of technology may entail the emergence of certain type of property rights. A well-known theory of induced institutional innovation envisages that technological change takes the direction of changes in relative factor prices (Hayami and Ruttan 1985; Ruttan 1989). The theory posits that technological development goes in conformity with the configurations and relative endowments of various resources, whereas institutions are shaped to enable communities take advantage of emerging opportunities over time.

A number of literature indicate that population pressure induces a gradual change in property rights (Boserup 1965; Bromley 1991; Madulu 2005). In her seminal work, Boserup (1965) explains how population pressure results in different intensification levels in Southeast Asia. While testifying the responses of technology and production techniques to population pressure, her analysis implicitly shows how property rights change overtime from a kind of

[3] Eleanor Leacock, American Anthropologist (American Anthropological Asso.), Vol. 56, No. 5, Part 2, Memoir No. 78.

open access where everyone has unlimited access to land (for example in a system of shifting cultivation) to an individualized property right system where everyone has a fixed plot of land to command on or cultivate. Bromley (1991) posits that property rights change with resources gradually moving from open access, to state property, to common property and eventually to private property with population growth and increased commercialization. Studies in pastoral contexts indicate that land conflicts in Africa deal with farmers' encroachment on pastoral lands partly attributable to the population pressure among farming communities (Peperkamp 1986). Likewise, Wede (1987) and Staar (1986) argue that population pressure and reduced soil fertility caused the expansion of farmlands to pastoral areas and hence caused conflicts between pastoralists and sedentary farmers (or agro-pastoralists).

Another important cause for gradual change in property rights is climatic changes. This is particularly important for arid and semi-arid areas where persistent drought is a big challenge to human well being. Swallow and Kamara (1999) indicate that 'drought conditions increase the relative scarcity value of resources that produce relatively reliable outputs'. They posit that conversion of land from common to private property is most likely to occur during droughts although drought induced conversion is likely to be socially inefficient. Likewise, a study conducted in southern Ethiopia, show that climatic conditions are behind the changes in customary pastoral land rights (Kamara 1999). Furthermore, Thebaud and Batterbury (2001) indicate that pastoral societies, responding to drought and to the historic spread of agricultural frontier, started to exercise farming in different forms.

Donor influence on property rights is well discussed by Grell and Kirk (1999). They indicate that donors may exert their pressure at different levels or scales. The so called 'big donors' like the World Bank can influence property rights through their influence on national or sectoral policies and strategies or they may impose their interests at grassroots levels through 'donor-driven' NGOs. Empirical evidences also show that the activities of NGOs have significant effects on property rights and land-use changes (Swallow and Kamara 1999).

4 The Study Sites and Research Methods

4.1 The Afar Region and the Study Sites

The Afar Region is located in northeastern part of Ethiopia sharing international border with Eritrea and Djibouti. In terms of area coverage the Afar region is the fourth largest with a total

area of 100,860 square km and is structured into 5 zones and 29 *woredas*[4]. The population size is 1,216,000 as of July 2000 of which about 92% live in rural areas while the remaining dwell in truck-stop urban centers. The rural residents are pastoralists, predominantly exercising transhumance pastoralism with crop cultivation in a few locations. The Afar pastoralists raise mixed species of primary livestock, including camels and cattle and keep supplementary herds of goats and sheep usually for commercial purpose.

The topography of the region varies from hilly escarpments in the western and southern edges (with an altitude range of 1,000-1,500 meters) to lowland plains in the northeast that fall below sea level up to 100 meters. The climate of the region is arid and hot with annual rainfall ranging from about 225 mm to 561 mm and temperature from 18^0c to 45^0c (and even higher in some areas). The northern part of Afar region, around the lower Danakil plain, is predominantly a semi-desert with thorny species of shrubs and acacia, which have developed dwarf forms and is not as such suitable for livestock production. The middle part of the region is characterized by arid climate where pastoralists are more mobile. In the southern part, the density of pastoralists is relatively high as this area is better in pastoral resources.

Three districts (woredas) namely, *Awash* Fentale, Amibara and Semu Robi, have been covered in this study all of which are found in the southern and southwestern parts of Afar region. Two sites were selected purposively from each district in such a way that the sample reflects some diversity in resource endowments and use patterns, inter-ethnic relationships, state-pastoralist relations, and the like. Accordingly, four of the study sites, namely Ambash, Kurkura, Doho and Dudub, are found in the southern part of the region, located in the middle Awash valley. These are riverine areas where irrigated state-owned and private farms are located. Apart from the commercial farms pastoral households engage in crop production in some sites such as Ambash and Doho. These four sites share boundaries with Karrayou (an Oromo clan) in the east and southeast, with Issa (a Somali clan) in the north and northeast and Argoba in the southwest. The other two sites, Harihammo and Daleti, are located across the southwestern escarpments bordering the Amhara region. No extensive commercial farm exists in these sites but pastoral households practice opportunistic farming[5] in some pocket areas

[4] *Woreda* refers to an administrative unit next to regional states in government hierarchy. Four levels of administrative units exist in Ethiopia each having its own council of public representatives namely: the federal state, the regional states, *woredas* and *kebeles* from top to down.

[5] Here opportunistic farming refers to intermittent cultivation undertaken when rainfall is forecasted to be adequate for crop production.

where the rainfall pattern allows them to do so. The Amharas (west and southwest) and the Oromos (northwest) are the neighbors of Afar pastoralists in these areas.

4.2 Data Collection and Analysis

The study is based on both primary and secondary data. The primary data have been collected from individual households and focused groups. After selecting the sites (with the help of local experts), two steps have been used to identify the sample pastoralists. First, using lists of household heads in each village (generated for the purpose of this study), pastoral households were stratified into three groups (poor, medium, and better off) with the help of the local elders. Thereafter, approximately equal sample size was randomly drawn from each stratum totaling 180 households. A group of trained enumerators conducted the interviews with individual sample households guided by a structured questionnaire prepared for this purpose. In addition to questionnaire-based interviews, a series of discussions were held with elders and key informants prior, as well as parallel, to the household survey. A wide range of data were collected on resource ownership and use, decision powers, resource sharing systems and property rights, perception on current resource use and ownership, future demands regarding resource use and ownership, and the like. Moreover, secondary data sources have been explored to supplement the primary data. These include district pastoral development offices, state farms, concerned offices of the regional and federal governments, and NGOs.

Descriptions and explanations have been given on the types of property rights as well as causes and consequences of property right changes based on the qualitative data generated through discussions with various pastoral groups and secondary sources. Based on a brief narration, arguments have been made taking into account contemporary theories of property right changes.

5 Property Rights in the Study Areas: Forms and Changes

5.1 Forms of Property Rights

Property rights in Afar are based on the existing pastoral philosophy in which land belongs to community members defined by sanguinity or other social ties. Accordingly, clan is the lowest social unit to which communal property rights over land and other natural resources are defined. In principle, Afarland is equally divided among all clans of *Afar* whereas indeed the distribution depends upon resource potentials and the dominance of a clan (either in

number or political power). Each clan has its own territory, i.e. every member of a clan can tell where the boundary of his 'home land' is. The boundaries are usually marked by some physical objects such as mountains, rivers and bare-land. Actually, the boundaries tell only control rights (exclusion, alienation and management rights) of a clan, while mobility transcends clan territories. Based on the customary institutions, every member of the clan, by default, has the right to use the fruits of his clan's land once he has the livestock to utilize the resources.

Clan land often comprises strategic resource such as grazing areas including dry season retreats, browsing resources, and water points. In addition, each clan has also communal graveyards, settlement areas (*metaro*) and ritual sites. Each clan has a well-established gerontocracy where the decision power regarding land and other natural resources rests on the village council, consisting of the clan leader, elders, the *feima*[6] and local wise-men. The decisions given to the village council include exclusion of non-members, allocation of sites to non-members and determining resource use pattern.

Table 1: Perception of the Sample Pastoralists regarding Who Decides on Land Matters.

	Percent (number) of respondents	
	Traditional Council	Kebele Council
Ambash	100 (30)	60 (18)
Kurkura	90 (27)	53.3 (16)
Dudub	89.7 (26)	44.8 (13)
Doho	96.6 (28)	58.6 (17)
Daleti	44.8 (13)	100 (29)
Harihammo	60 (18)	100 (30)

Source: survey data

As indicated in Table 1, most of the sample pastoralists believe that the decision power on land matters rests on the traditional council. Nevertheless, the respondents in two of the study sites namely Harihammo and Daleti, have a different perception. In these sites, all of the respondents perceive that local government council (the kebele council) decide on land matters while less than fifty percent of them have indicated that the traditional council has also some power. This could imply either the weakening of the traditional decision body or its integration into the modern administrative structure due to the intervention of the state.

6 *Feima* is a body, which is responsible for rule enforcement.

Whereas the perceptions of the respondents in other four sites confirm that traditional councils have the *de facto* power on land matters.

Four categories of land are clearly observed vis-à-vis the bundles of rights that members enjoy (see Figure 1). For the sake of convenience, they are termed in this paper as primary communal land (A and B), secondary communal land (C), tertiary communal land (D) and individual land (A). The arrows in the figure imply the possibility of movement for pastoral groups in all directions and categories of land use arrangement. The breadth, duration and assurance of rights decline as one moves from the first category through to the third one. A primary communal land, also locally known as *waamo,* refers to the land over which a clan has use rights as well as exclusion rights. Moreover, *waamo* rights entitle a clan (or a lineage) to alienate resources within a specified territory. Each clan manages its resources collectively based on customary principles. Accordingly, herd management follows rotational grazing. When rainfall is normal for successive seasons, clan members are communicated not to use reserve pasture areas. These areas are accessible to the members after assessing that other areas are exhaustively used. Although each clan member has an inalienable use right over the resources, intra-clan customary laws bind his/her use rights.

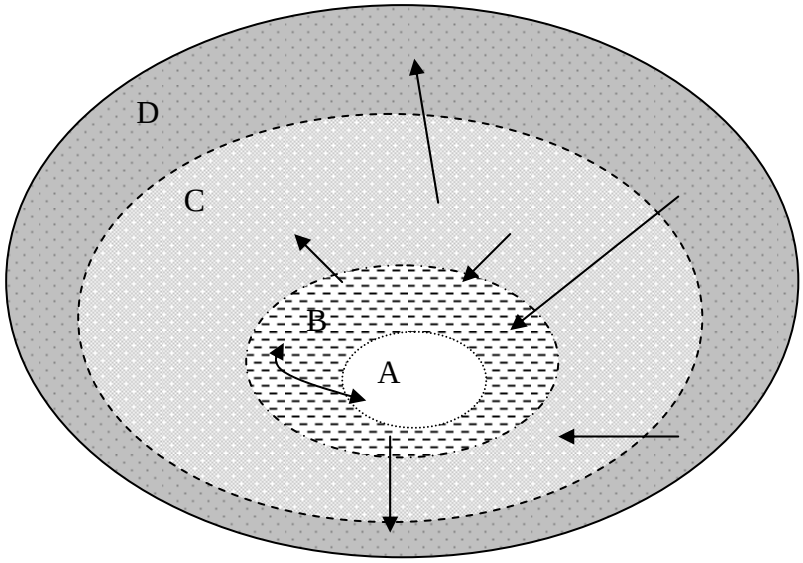

Figure 1: Schematic Description of Land Use Rights and Pastoral Action Space

Source: own figure

Secondary communal land refers to the vast area to which clan members have only access rights encompassing all migration routes during normal as well as drought years. These

resource sharing arrangements maintain the priority use rights for the owners while allowing access by other pastoralists in accordance with strict rules aimed at controlling and managing pastoral resources. On the basis of long-term reciprocity principle, each Afar clan is entitled to secondary communal rights over other clan's land. Hence, negotiation may not be strictly required to access the pasture once agreements are established. However, the secondary right holders need to respect the customary laws of the owners to exercise their right. For instance, they are not allowed to cut trees or allow other herders to use. Moreover, the entire clan land is not usually open for the guest herders. It is a common practice that specific corners, such as settlement sites, ritual sites, reserve pasturelands, and farmlands, are protected from outsiders. These secondary rights, also known as *isso* rights, allow consistent seasonal migration patterns and resource sharing during normal and drought years.

During a prolonged drought, which is common nowadays, pastoralists in the study areas migrate to distant places controlled by other ethnic groups such as Oromo, Amhara, and Argoba once informal assessment has been made for the existence of adequate pasture and browse. In this case, negotiation is strictly required. If negotiation is successful, the new comers are allowed to use the grazing and browsing resources for some time depending upon the condition of the resources and climatic situations. Perhaps, the guest herders are required to abide by the customary rules of the host group. Such types of rights are termed here as tertiary communal rights. In most cases, agreements for tertiary rights are made between ethnically distant groups and hence personal networks help to succeed. For example, an individual who has marriage relationship with a member of the host clan may get preferential treatment to use the pasture.

The forth category of land includes specific sites operated by individuals for production of crops. Apart from communal rights, some households are entitled to private land to produce various types of crops. In this case, the right holders enjoy not only the right to use the resource but also the right to exclude other clan members. The bundles of rights on the individual plots include also alienation rights although the latter is limited (in extent) to the transfer of land through inheritance or as a gift to clan members.

The extent of individual holdings varies across locations. In Ambash, the percent of sample pastoralists enjoying private rights is the highest of all target sites. Here more than two-third of the respondents are entitled to at least one hectare of farmland (Table 2). In Doho, Harihammo and Daleti, closer to 50 percent of the sample pastoralists have exclusionary rights over individual plots. The least in terms of the individual holdings (and hence least in sub-division of communal land) are Dudub and Kurkura. The latter two areas are relatively

less suitable for crop production; neither rain is sufficient nor irrigable river is available in these sites.

Table 2: Do you have private plot of land?

Location	Per cent (number) of "yes" responses
Ambash	70.0(21)
Kurkura	6.7(2)
Doho	46.7(14)
Dudub	3.3(1)
Harihammo	46.7(14)
Daleti	44.8(13)
All sites	36.3(65)

Source: survey data

5.2 Triggers and Motivations for Property Right Changes

5.2.1. The Role of the State as a 'Giant Actor'

In this section the role of the state in introducing and enforcing property right changes in the study areas will be discussed. There exists a wide variation among the selected study sites with respect to the level of state intervention. In *Ambash*, the extent of state intervention has been high while in other sites (although farming exists), the role of the state has been minimal. Hence, the discussion will be made under two sub-topics with the main focus on the state-driven property right changes in Ambash.

5.2.1.1 The Role of the State in Ambash

Generally speaking, the intervention of the state in Afar was very limited prior to the 1960s. Farming was also limited to the lower Awash flood-fed plains where the Aussa clan, the royal clan of the Aussa Sultanate, had been practicing a mixed crop-livestock farming for generations (Getachew 2001). However, after 1960s government interventions in these areas have increased. The rise in government interventions, in fact, was part of much broader development strategies that most developing countries adopted during the 1950s and the 1960s. Taking into account the global economic order of the time, the Imperial government in Ethiopia designed an industry-focused economic development strategy. Expansion of large-scale commercial farming was taken as a means to supply raw materials to domestic industries as well as to produce surplus food for factory laborers. While pursuing extensive land to locate the envisaged commercial farms, the Afar plains were among the areas that

attracted the attention of the designers of the strategy. Some 70,000 ha of the dry-season grazing areas of the *Afars* were selected in the middle and lower Awash valley and put into large-scale irrigation in late 1960s (*ibid*). Because of its suitability for irrigated agriculture, *Ambash* was among those areas that received much attention of government officials. The Middle Awash Agricultural Development Enterprise (MAADE) was established in 1968 under auspice of the Awash Valley Authority (AVA), which had been established earlier by decree on January 23, 1962. That is, AVA is an agent of institutional change that took several responsibilities including establishment of state farms through negotiation with the local people, coordination and financing of settlement and other schemes, and monitoring of the proposed changes. After the collapse of the Imperial regime in 1974, MAADE was expanded from 300 ha in 1968 to 13,116 ha in 1985 by clearing more land from dry-season grazing sites (MAADE unpublished document).

From the point of the theories of institutional change, the emergence of new property rights in Ambash can be thought as a result of strategic conflict between AVA (the state functionary) and the local people over the benefits generated from land. As Knight (1992: 126) posits 'social institutions are a by-product of strategic conflict over substantive social outcomes'. Accordingly, he argues, 'economic actors produce institutions in the process of seeking distributional advantage in the conflict over substantive benefits' (p. 126). Getting back to the specific case of *Ambash*, conflicts arise because both AVA and the local people claim for the same resource (land) while different institutions back these claims. AVA strives to enforce its *de jure* rights based on statutory laws. The ideological basis for this claim is that the state rather than the community is the origin of ownership and title (Bruce 1989; Ribot and Peluso 2003). It is also commonly presumed that the state has stronger enforcement power to secure rights, enhance sustainable resource management, and improve social welfare. On the contrary, the demand of the local people is to retain their customary rights. The claim of the local people emanates from the fact that each clan of Afar has been managing and protecting its own inherited land from outsiders for generations. The legitimacy and logic of this claim has got both theoretical and empirical support from scholars studying common-pool resources and common property regimes (Ostrom 1990; Ostrom et al. 2002; Meinzen-Dick and Knox 1999). Therefore, we have two conflicting demands here: introducing new property right arrangements, favored by AVA, and maintaining the status quo, desired by the local people. On the one hand, the design was to put some part of the land under strict state ownership where the state derives direct benefits through the establishment of three state farms. On the other hand, the aim was to introduce individual ownerships

through settler farm schemes. Both of these plans are in contradiction with the previous *de facto* rights, in which the local people had communal rights over the existing resources.

How do contemporary theories of institutional change explain this phenomenon? In the following few paragraphs, I will focus on how the interaction between these two actors, AVA and the local people, resulted in new property right arrangements taking the bargaining theory of institutional change into consideration. The bargaining theory of institutional change emphasizes the role of bargaining power in institutional transformation (Knight 1992). Power is defined here as the capacity of an actor to constrain others' strategy.

We have two actors here, AVA and the local people striving for their strategic advantage. Our case represents a situation in which AVA is more powerful than the local people. AVA's power arises from the fact that it has more financial, human and material resources, which help it to constrain the preferred strategy of the local people. For instance, by using its financial resources, AVA could finance the settlement farms from which the local people derived benefits. Moreover, by using financial and material resources, AVA could divide the local people by attracting some elites. In addition to financial and other resources, AVA had military support from the government to enforce the new orders.

Table 3: Bargaining Game between Pastoralists and AVA

		AVA	
		Status quo	Change
Pastoralists	Status quo	(Xss, Yss)	(Xsc, Ysc)
	Change	(Xcs, Ycs)	(Xcc, Ycc)

Source: own presentation

The situation can be discussed with the help of a simple non-cooperative game where each player has a specified payoff for selecting a given strategy. The payoffs are shown in Table 3 in a general form and the terms are defined as follows: (1) Xss = the net benefit of pastoralists (as a group) when status quo is maintained while AVA plays the same strategy. This is equivalent to the total benefits of the pastoralists if the land is used for livestock production minus the costs associated with it. (2) Yss = the net benefit of AVA (the state) under the status quo while the pastoralists play status quo. Perhaps, this is equivalent to the total tax revenue from the pastoral land use without direct involvement of the state in commercial farming. (3) Xcs = the net benefit of pastoralists if they go for property right change without the intervention of AVA (i.e. when AVA plays status quo). (4) Ycs = the net benefit of AVA

if it plays status quo while pastoralists pursue change. (5) Xcc = the net benefit of pastoralists if AVA introduces the proposed change with their agreement. This includes the benefits associated with settlements farms, employment opportunities in the commercial farms, the livestock development project intended to make the existing livestock production more market-oriented, and other incentives while taking account of the opportunity cost of the land expropriated by AVA. (6) Ycc = the net benefit of AVA if change would be introduced while the pastoralists pursue change. This includes the total net proceeds derived from the state farms minus the costs incurred to run settlement farms and other schemes for the displaced pastoralists. (7) Xsc = the net benefit of pastoralists if they play status quo while AVA enforces change. This is equivalent to Xcc minus the costs incurred by pastoralists to resist AVA's actions (or maintain status quo). (8) Ysc = the net benefit of AVA when it plays change while pastoralists demand status quo. This is equivalent to Ycc minus the cost incurred by AVA to control the resistance of pastoralists and sustain the new property right.

Assuming the principles of rational choice to hold, voluntary change could be possible when the anticipated benefit from the new proposal is satisfactory from the viewpoint of both actors. From the side of the pastoralists, this could be possible if: $Xcc - Xss \geq \theta \geq 0$, where θ is the minimum benefit that makes pastoralists to accept the proposed change. In other words, θ refers to the opportunity cost of the pastoralists for adopting the new change. It may also include the notion about fairness and justice as perceived by the pastoralists. Likewise, for AVA it would be rational to proceed with the change if $Ycc - Yss \geq \beta \geq 0$, where β is the minimum benefit from the proposed change to be acceptable to AVA given the investment costs and risks associated with the new venture.

In the context of power symmetry, any proposed change occurs when the two actors have similar demands regarding the implementation of the change i.e. when at least the threshold levels (θ and β) are met for both actors. However, when power asymmetry exists or when the bargaining ground is not leveled, change can be introduced as far as the powerful actor is capable of imposing the new change through the offer of a reward, the threat of penalty, or combination of threat and an offer[7]. Virtually, the mechanism by which AVA's power through threat and offer influences the decision of the pastoralists to accept or reject the proposal is in its effect on the credibility of the commitments in the bargaining interaction. In selecting their strategy, therefore, the local people need to evaluate the credibility of AVA's commitments and capability in enforcing the proposed change. This credibility depends up on

[7] The latter has been termed as "throffer" by Taylor 1982.

AVA's power as perceived by the local people. There is sufficient reason for the local people to believe that AVA would enforce the change. First, they expect that AVA has adequate financial, material and human resources to establish the commercial farms and settlement farms. Second, given their poverty and numerousness, they may foresee their vulnerability to AVA's "divide-and-rule" strategy. Third, they have ample information that AVA has military support from the government to enforce the order. In general, it creates no difficulty for the pastoralists to foresee AVA's power as the latter belongs to the "omnipotent" body- the state. Given the above conditions and AVA's commitment to enforce the order, the best option for the local people is to accept AVA's order.

This was what happened in Ambash during the establishment of state farms. The pastoralists were given an offer, which they couldn't refuse. They, as customary right holders over the rangeland, were neither invited to sign a contract with government officials nor were they given the chance to comment on what was going on in their traditional territory. Instead, they were given a duty to respect the state property. Although they lost part of their land without fair compensation (Getachew 2001), the deprived pastoralists decided to accept AVA's order. As compensatory measures, various pastoral development schemes were developed, at the beginning of the plantations, which included, among others, development of irrigated pasture and settlement schemes. Huge financial injections were made by the state to build irrigation infrastructure for the settlement farms in order to convince the local people. The displaced pastoralists were allocated land to cultivate crops while raising livestock. Close supervision and material assistance were given to the settlers in order to convert them to sedentary farmers. To provide a coordinated assistance for pastoralists in their sedentary farming, the Amibara Settlement Project was initiated in 1967. Initially, AVA took the responsibility to manage the project whereas later on (in 1980) the Relief and Rehabilitation Commission (RRC) shared this responsibility. Under the management of both AVA and RRC, all costs of the settlement farms were covered by the state functionaries while the settlers contributed nothing except their labor. In addition, MAADE provided casual employment for clan leaders and other influential people. As a result, these pastoralists could generate benefits from crop production[8] for the first time in their history.

The introduction of the settlement farms didn't contradict with the notion of common property regime in this case. Actually, the settlement farms were organized in a system of

[8] Cotton and maize were the major crops produced. The cotton was to be sold to a ginning factory for processing and the maize was to be consumed.

collective farms[9] where all plots were managed together and all registered pastoralists shared the final outputs. However, the new land use arrangement implied the existence of two variants of common property regime. The non-riverine part of the area remained under the control of the pastoralists (entirely allocated for livestock grazing) while pastoral customary rights were no more *de facto* in the riverine sites. Putting it another way, the introduction of the state brought legal pluralism, to be more specific legal "dualism", into picture. Claims over the riverine sites were governed and protected by statutory laws whereas the non-riverine sites remained out of direct state protection and legitimacy.

Despite its continuing role the state couldn't support the settlement farms endlessly. Being enforced by the acute drought that devastated the whole country, RRC withdrew from the management of the settlement project in 1984 while AVA was forced to concentrate on the state farms. Consequently, all the technical personnel and farm implements were transferred to the state farms that made the settlement farms apparently nonfunctional.

After the withdrawal of RRC, AVA started to reorganize the settlement farms. In this case, the collective settlement farms were subdivided into blocks and given to groups of pastoralists organized on kinship basis. The main purpose of this 'group farm development scheme' was to increase the participation of the pastoralists in the management of the farms and actual production. This intervention reduced the group size of communal landowners and put the common property regime closer to private property.

The above explanation indicates how the state through its functionaries influenced the direction of property rights and land use arrangements. By the power vested in them, the two state functionaries defined and redefined the land use rules without the consent of the pastoralists. Some questions may be posed at this point. Were the pastoralists powerless? What action did they take to reclaim their rights? Has AVA sustained its power?

In fact, the pastoralists were not powerless. Their power was mainly attributable to their numerousness and the assistance they got from neighboring pastoralists. Indeed, throughout the 1980s and 1990s the local people imposed series of pressure on the administration of the state farms. The pastoralists expressed their dissatisfaction and opposition to the implementation of the commercial farms schemes mainly by damaging mature crops in the field. A typical example could be the recurrent damages caused by local people on banana plantation, eventually, which forced the state farms to abandon banana production. The resistance was inevitable because the compensatory attempts couldn't satisfy the pastoralists

[9] Of course, this was in line with the socialist mode of production which the government of the time followed.

who lost their most valuable heritage. Moreover, the introduced change installed a giant barrier to those who had secondary use rights and hence these groups were on a continuous motion to reverse the change. Initially, the state farms allocated adequate budget to be paid to clan leaders and elders in the form of employment benefits so that they could take care of the resistance. This reward system couldn't stop the resistance partly because of the gradual decline of the budget allocated for this purpose.

It is worthwhile to note that the relative power of the two actors has changed in favor of the pastoralists in the course of time. At the beginning, AVA had the power to mobilize resources to constrain the choices of the pastoralists. However, it couldn't maintain the liquidity of its power resources to continuously influence (through the reward, punish or reward-punish system) the choices of its counterparts. This is partly attributable to the decline of the attention of the government towards state-farms after 1989. Especially after the economic reform, following the downfall of the socialist regime in May 1991, the stake of the government in business ventures has dramatically declined. Most of state-owned enterprises, including state farms, small and medium scale manufacturing industries, and hotels have been gradually privatized. As a result, AVA couldn't get financial and other supports from the government to maintain its power. In addition, the shift in the national political structure towards ethnic-based federalism and the concomitant establishment of the Afar National Regional State calibrated the power balance in favor of the pastoralists.

This change in power balance has brought some effects on the property right arrangements. With the efforts of the Afar regional government and the decision of the Transitional Government of Ethiopia, MAADE handed over a significant part of its land (with all of its irrigation infrastructure and facilities) to the local people[10] in 1993. This, in turn, brought two distinct property relations thereby increasing the number of actors. First, the pastoralists

[10] The state farms handed over about 6547 ha, with its entire irrigation infrastructure, to local pastoralists in 1993, which the latter leased to emerging investors (MAADE unpublished document). As realized from group discussions, investors pay 30% of their annual profit to pastoralists in the form of rent. The pastoralists have formed a standing committee (including an accountant) to monitor all transactions of the investors. The committee has been entrusted to defend the rights of their principals and take actions when errors persist. However, the capacity of the committee to do so is questionable because the members have no accounting knowledge and even some do not read and write. Hence, every thing is done based on trust. In addition to financial payments to the pastoralists, the investors have promised to improve local infrastructure including schools, watering trenches and health stations. However, the pastoralists complain that none of the investors has honored his words regarding infrastructure development.

subdivided part of the returned farm and started private farming in collaboration with highlanders. In this case, the highlanders are the “tenants” and, due to their rich experience in sedentary farming, are responsible for all farm operations, while the Afars are the “landlords” who share the final outputs without involvement in farm operations. Second, part of the farm was leased-out to investors whereby the latter pay 30% of the net farm incomes to the pastoralists.

In general, continuous changes have been observed in the riverine site of the Middle Awash Valley while the non-riverine sites remained under the customary rule. This is because of the better resource endowments of the riverine sites that attracted additional actors to realize different forms of property rights therein. In addition, the above explanation indicates that power is embedded in property right changes and, hence, claimants divert the rules in favor of themselves whenever the power balance tilts towards them.

5.2.1.2 The Role of the State in other Study Sites

Despite its large stake in property right changes in Ambash, direct state intervention doesn’t explain property right changes in other five sites of the study. Rather, these areas are characterized by absence of state intervention and marginalization in the realm of economic development. Two of the locations, namely Harihammo and Daleti, are quite far (about 35 km away) from the main irrigable river (Awash). Even those sites found in the Middle Awash Valley (Kurkura, Dudub, and Doho) are not convenient for irrigation given the irrigation technology adapted by AVA in Ambash and similar areas. In terms of the payoffs given in Table 3, $Ycc - Yss \leq \beta$ and hence it is not economically attractive for AVA to propose and enforce commercial farms in these five sites. While irrigation seems unattractive in these areas, rain-fed agriculture is also precarious to exercise commercial farming.

The absence (or inappropriate state intervention) could be linked with the nature of the political system that generates the decisions. In public choice perspective the central theme is the tradeoff that politicians face between economic incentives that favor the implementation of a policy and political incentives that favor protection of public interests (Bardhan 2005). In democratic systems, where various public interests are reflected in the political arena, divergence of policy reforms from public interests may endanger political agents to pursue their future political career and economic interests. In such cases political entities have to reconcile the economic advantage of promulgating a policy and its political consequences. Nevertheless, in undemocratic systems, where the public in question are not represented in the political system, the divergence of public interests from policy reforms may be large since

political decisions are made mainly on economic grounds or pure ideological motives. This is why the imperial government in Ethiopia passed the decree of the 1962, which affected the livelihoods of pastoralists in Ambash, without the consent of the latter. In this case, the establishment of AVA served two main objectives: the economic objective of generating revenue for the state and the ideological objective of transforming pastoralists into sedentary farmers. Indeed, economic objective was overriding (Getachew 2001) which Ambash and similar areas fulfilled. In the other sites of the study, although launching projects related to farming could fulfill the ideological objectives, economic rents could not be anticipated by political agents due to non-suitability of these sites for wide-scale irrigated farming.

5.2.2 Other driving forces of property right changes

Despite its crucial role, state intervention doesn't explain the entire process in all of the target sites. Rather, individual motivations are quite important in the study areas, which accelerate the sub-division of communal lands. While slight inter-site variation may exist the desire for farming was found to be high in the study areas. Overall, about 80 percent of the respondents required a privately owned plot to start farming.

The impetus for farming, and hence subdivision of the communal land, is provided by livelihood changes and challenges. Firstly, an increasing natural calamities (mainly drought) and socioeconomic changes made pastoralists to demand for a more diversified economic activities- just as a traditional "portfolio management". During group discussions pastoralists indicated that their livestock-based economy is becoming more volatile nowadays; the recurrent droughts and conflicts are mainly to blame. It has been also documented by Getachew (2001) that the dwindling yield in the livestock sector pressured pastoralists to have additional income sources such as farming, trade and wage employment. Moreover, the natural challenges and socioeconomic changes might have triggered changes in food consumption patterns among Afar households. Nowadays, most Afar households depend on purchased foodstuffs (grains) for a great deal of their subsistence, as access to milk (and also meat) has been greatly reduced due to recurrent droughts (and also to some extent livestock raids). The expansion of truck-stop towns, increased commercialization, and food-aid (which is in the form of grains and supplements), are also among forces those might have contributed to change in consumption patterns and the resulting upward shift of demand for grains (and other commercial goods). The multifaceted challenges to livestock husbandry and a spontaneous shift from dairy-based to grain-based cuisine might have necessitated crop

production, in areas where conditions allow doing so, at least to partially fulfill family food requirements.

Secondly, farming has been preferred as a means of stopping the expansion of neighboring ethnic groups. Particularly, this strategy is more important for pastoralists in Harihammo and Daleti where sedentary farmers from Amhara region are expanding towards the Afar territory as a result of population pressure. Elders in Ambash also explicitly expressed their desires to start farming in Aleideghi plain where Afars and Issas frequently confront each other. Despite their desire to consolidate their former customary rights over their ancestral land, they requested to get support from the government; perhaps, the support includes getting external legitimacy to have exclusionary rights over this contested rangeland and intervention in case coercive intrusion encounters. On the other hand, the demand for sub-division of collective holdings implies the influence of state policies on the attitude of pastoralists. That is, since the national policies favor sedentary farming, people may apparently advocate the subdivision of communal lands as a strategy of getting state legitimacy and support.

Finally, the growing interest for sub-division of communal land might have some link with evolutionary changes in pastoral mode of life. In highly mobile societies, it is difficult to implement private property regime because this requires the physical presence of the right holder (or associates) to ensure exclusionary and management rights. Three to four decades ago, when the clans in the study areas were highly mobile, private ownership was held on portable assets such as livestock and weapons while more fixed resources such as land remained communal. However, more than any time in the past, Afars are settled now. Although there are temporary settlement areas at different corners across their migration routes, pastoralists in the study areas have permanent villages (*metaro*) where part of their families reside throughout the year. As these communities become less mobile (or semi-sedentary), some individuals have started opportunistic farming practices causing the erosion of CPR over time.

While the above explanations give some insights on why pastoralists currently opt for the sub-division of part of their collective holdings, this interest doesn't imply pastoralists' decision to abandon pastoralism. Ironically, about 60% of the sample pastoralists are satisfied with their occupation despite all challenges and hence intend to continue with transhumance way of life side by side.

5.2.3 Reflection of the Changes on Livelihoods

Property rights imply legitimate access to benefit streams. However, rights alone do not guarantee the realization of benefits from resources. In this regard, rights and benefits are related but not synonymous. In fact, generation of benefits requires both rights (but not always[11]) and the capability to extract benefits from a resource (Ribot and Peluso 2003). Benefits are important because individuals, organizations and communities live on them. It is the capability to extract benefits from a resource that determine the livelihoods of people and rights are important to the extent of capabilities of individuals, organizations and communities to generate benefits. In short, rights are less appealing without the capability to exercise them. For a person without livestock, for instance, rights to a communal grazing land may be meaningless unless he/she has the capability and right to make a different land use arrangement. The same applies to a person without farm implements but who has the right to till the land.

While basic natural resources, such as land, can be appropriated in different ways, each way of appropriation requires both the right for such type of appropriation and the capability to do so. The use of the land for open-grazed animal production requires different property right regime to land used for crop production. The two types of land use system also require different resources and, hence, capabilities of benefit extraction.

The change in ways of land appropriation from traditional livestock production to irrigated crop production has brought new forms of rights and interactions in the study areas. Moreover, the new land use system necessitated the deployment of new resources. Taking the case of Ambash, the new resources, embodying the capability to extract benefits, were entirely supplied by the state. The irrigation infrastructure and the road network were built by the state with a large outlay. Similarly, farm machineries and other facilities were purchased by the state. The technical personnel and the management staff were also there by the efforts of the state. All of these resources were “packages” required to make the new land use system functional in Ambash area. In other words, these resources embody and define capabilities to exercise right in the new land use system.

However, following the withdrawal of RRC from the management of the settlement farms all machineries and facilities have been transferred to the state farms, which apparently debilitated the capability of the pastoralists to extract benefits from their land. Lacking the knowledge and physical resources needed for farming, the pastoralists couldn’t continue with

[11] Access to benefit streams is also possible through illicit means (see also Ribot and Peluso, 2003)

crop production despite their enthusiasm to do so. As a result, the entire settlement farm has been out of production and is covered, at present, by a non-palatable exotic plant (*Prosopis juliflora)*. Moreover, pastoralists are not full beneficiaries of the newly subdivided land (reclaimed from the state farm) given the limited capabilities they have to exercise farming by their own. Their poor knowledge of farming techniques and lack of other resources enforced them to give up to 70 per cent of the net farm proceeds to highlanders. Had the state functionaries provided assistance in a way the pastoralists build capabilities to exercise farming, the latter could enjoy the full benefits from cultivation.

The capability to exercise rights is also a barrier in the other study sites. Although 76.7 percent of the pastoralists have ambitions of mixing pastoralism with crop production (mainly because of the existing climatic stress), only 29.7 percent are used to farming. In Daub and Kurkura, a few sample respondents had farmland mainly because of the absence of irrigation infrastructure. In Doho, some pastoralists started crop production following a small-scale irrigation project financed by FAO. Pastoralists in the remaining two sites (Harihamo and Daleti) also cultivate crops under unreliable rain-fed condition.

The fact that irrigation is required to exercise stable farming in all of these sites created an environment where capability is more important than rights to derive stable benefits. Although the issue of capability can be pronounced in relation to crop production, some pastoral households do not have the capability to exercise their rights in line with the traditional livestock production system as well. Surprisingly, about 80 percent of the pastoralists reported to have less than the minimum livestock holding (~4.5 TLU) required for sustaining pastoral livelihoods without supplementary occupations. The low capability in the latter case is related to several factors most of which are attributable to weak external support (state and NGOs) and recurrent drought.

The capability issue is also important when it comes to analyzing individual households with respect to their access to farmlands. The underlying logic is that heterogeneity exists among individuals in their capability to exercise rights. Social identity is one major factor attributable to the differences in the capability to exercise rights (Ribot and Peluso 2003). Indeed, social identity reflected in the form of status (social and economic), gender and, to some extent, age has played some role in discriminating households in Ambash against their customary right. In this respect, many pastoral households couldn’t generate benefits from their communal heritage because of lower capability to exercise their right in line with the new production system while others with better capability have benefited from the new arrangement. For instance, since the state was found to be a strong enforcer of rights, elites

abandoned the customary rules and facilitated their own entitlement to private land. Others used their own action resources (such as connections with project leaders or local elites and physical fitness[12]) to acquire farm plots.

The mistreatment is even worse for women. Women are treated as *de facto* minors in Afar customary laws. They have no ownership right to land as well as other resources, including livestock, but are entitled to the benefit streams via their husbands. While about 36% of the sample households are beneficiaries, in one way or another, female-headed households derive neither pecuniary nor non-pecuniary benefits from the sub-division of communal land. For example, women are not considered when the revenue from land lease is annually distributed among clan members since the tradition-based criteria exclude female and children from consideration. In general, women's position is precarious because they are forced to lose their entitlements to the benefit streams from communal resources as well as household assets after the death of their partners or during divorce[13].

Although every clan member is endowed with the communal land and resources embedded in it, only those individuals and households with better capability are entitled to generate benefits from part of the communal land. To get access to private farmland, the landless households may have two options: either to develop a new land for farming or to acquire a developed land through any of the access arrangements (e.g. renting or sharecropping) available to them. The first option is closer to impossible for these households given their low capability to build irrigation infrastructure, which is required to cultivate new land in the middle Awash valley. Even if this option is possible, the question of legitimacy may arise for using the common-pool resource for private purposes. Getting legitimate access requires the approval of the local leaders, again, which is subjected to social identity. In short, although no one questions the existence of equal rights for clan member on communal land, everyone's application may not succeed due to capability differences. For instance, about 24 percent of the sample respondents perceive that traditional leaders wouldn't permit them to enclose communal pasturage for cultivation. This percentage figure rises to 70 for Ambash where the land value is relatively high. Taking per capita livestock ownership as an index of poverty, these respondents are poorer (2.2TLU) than those respondents who were confident for getting

[12] It has been noted by Getachew (2001) that, the first settlers, who were heavily supported by the government, were selected based on physical fitness and ability to communicate with the officials.

[13] For example, when a woman's husband dies all jointly owned assets including livestock transfer to her husband's family and the widow loses control rights over 'her' former resources. In deed, she can take the livestock given to her as presents by her husband during their marriage.

the approval (3.4TLU). The second option is also less probable given that these deprived households have low financial and material capacity as well as poor agricultural knowledge to go for renting or sharecropping arrangements.

6 Conclusion

Common-pool resources generate livelihoods in many parts of the world particularly in pastoral areas of arid and semi-arid tropics. It is also well documented that almost all grazing lands in pastoral areas are common-pool resources over which a multitude of pastoral groups have *de facto* rights. Despite this fact, there is a wide range of changes in property rights and resource use patterns in these areas nowadays. National governments contributed a lot to the change in the customary property rights in many pastoral regions either through direct involvement commercial farming or through their policies against the traditional pastoralism (Markakis 2004; Ahmed 2001; Ensminger and Rutten 1991). While the issue of food security (through own production) has become an overriding concern in Ethiopia, particularly since the 1960s, the strategies of food self sufficiency (mainly under the socialist regime) entailed excessive state intervention in pastoral areas in favour of agricultural production which had detrimental effects on pastoral livelihoods.

The following points can be drawn from the experience of state intervention in the study areas. First, the actions taken by state were based on the principle that land belongs to the state and pastoralists have no right to block the former from using land in a specified way. This intention arises partly from the fact that pastoralists are insufficiently organized and not represented in the political structure of the country. All state development activities were without prior consultation and agreements of the local people whose livelihoods have been severely affected by such actions. Such ‘colonial measures’ have inflicted conflicts between the state functionaries and the pastoralists who lost their customary rights. Second, the state enforced transformation of pastoralism into sedentary farming without building the capacity of pastoral households to produce crops. More specifically, the development schemes initiated and financed by the state couldn’t enhance the capability of pastoral households so that the latter could generate full benefits from their land. Being devoid of public participation, these schemes fostered dependency syndrome among pastoralists, which has sustained even after their termination. Third, the state intervention created a window of opportunity for some pastoralists while others were deprived. While the customary law entitles every clan member to benefit streams from communal land, only a few pastoralists (the elites and their allies)

could get access to private plots. Fourth, the role of the state was inconsistent in assisting and constraining pastoral livelihoods. More specifically, state development schemes have been limited to those areas suitable for commercial farming while areas with low resource endowments for agriculture have been deprived of state support. This may magnify the belief that the ultimate target of the state was to extract benefits from pastoral resources whereas "improving pastoral livelihoods" was a pseudo agenda on the table. Fifth, state development interventions might have exacerbated conflicts among various pastoral groups thereby (1) worsening scarcity of pastoral resources and (2) excluding pastoral groups who had secondary and tertiary rights.

Despite its crucial role, state intervention doesn't explain the entire changes in customary communal land rights. There are also indications that the individualization process is driven by the motives of the pastoralists themselves. Indeed, the impetus for subdivision of the communal land is provided by livelihood changes and challenges. The deterioration of livestock productivity due to recurrent drought, more settled way of life, and demand for state legitimacy for land ownership are among the major factors that have contributed to the desire for crop cultivation.

Finally, many scholars consider that pastoralism is a sustainable way of life under the fragile ecological conditions of most dry lands and, hence, should be protected from external pressure (Behnke and Scoones 1993; Niamir-Fuller 1999). The so called 'mobility paradigm,' also supports the notion that extensive, mobile pastoral production can be both sustainable and environmentally friendly (Niamir-Fuller 1999). However, empirical contributions show that pastoralism is getting weaker in its capability to generate adequate inputs to the survival of the people who depend on it (Blench 2001; Markakis 1993; 2004; Ensminger and Rutten 1991; Helland 2002). Whatever the future of pastoralism may look like, the current accounts on pastoralism, altogether, indicates that pastoralism is under pressure coming either from the state or from the nature necessitating a careful understanding and action to avert the negative consequences of the changes on the livelihoods of pastoralists. This is what the findings of this study complement.

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