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A Change in Property-Rights Regime and the Proliferation of Fenced Plots, Investigating its Implication on the Livelihoods of the Locals: A Case Study of the Guji Highlands of South Ethiopia

Abstract

This study aimed at explaining factors behind the ever increasing individualization over pastoral commons land and assesses the implication of the current change in property-ownership and land use system on the livelihoods of the Guji agro-pastoral system. Thus, three kebeles of Ana Sora woreda were selected for they conventionally appear to accommodate farming, pastoral and agro-pastoral systems. The survey method was employed to gather information on the major socio-economic condition of households. In-depth interviews and focus group discussions were also held in all the three kebele. The empirical results were interpreted by integrating institutional, livelihood and adaptation frameworks. In this study individualization of ownership of pastoral commons manifested in the form of fenced closures is on the rise among the Guji and it has been adopted as the outcome of a long run process. Factors related to ecology and rangeland degradation, socio-economic changes, land registration and certification has allowed the increasing engagement in fencing commons grazing land for individual use. Consequently, the Guji pastoral system of production demonstrated a declining trend, and are adapting to alternative livelihood strategies. Moreover, farming and other developments have facilitated pastoral land losses and land use claims and tenure ambiguities.

Key terms: land tenure, traditional institutions, property rights, fenced plots

1. Background of the Study/Introduction

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 (Meinzen-Dick and Pradhan 2002). For Yeraswork (2000) the property rights range from demarcating one's ownership of land and reducing uncertainty- to guiding and regulating social action and interaction among the rural poor. Hence, property rights adjust overtime and spatially

vary depending upon socioeconomic, political and natural circumstances (Demsetz 1967; Bahnke 1986; Bebbington 1999).

In Africa, for nearly a century, land rights systems have been subject to a constant reform (Ngaido 2005). Likewise, over the last hundred years land in Ethiopia is contentious issue and evolved through a variety of land tenure systems (PFE et al, 2010). The reforms have been intended to make clarifications on the rules dictating the indigenous property arrangement and to pursue economic development though it had brought little transformation on the well-being of the rural poor (Degefa 2005).

Land related changes on the Guji highlands of Southern Oromiya amplified after the overthrow of the imperial regime in 1974, and the subsequent reform policy in 1975 (Boku, 2010). The Guji were traditionally pastoral and communal resource has been regulated under the rubric of traditional customary institutions which are responsible for insuring access to key resources in the community. However, nowadays the traditional pastoral institutions have been eroded either spontaneously in response to new opportunities or challenges, or intentionally, mainly driven by external agents or a mixed factors. In this study we have tried to see two things. One is the quest for privatization of property over pastoral commons while the second point of emphasis is to see the relationship between a change in land tenure arrangement and its multi-faceted implications on the livelihoods of the community in the study area.

In this regard, we have tried to assess important literature to explain the relationship between land tenure and livelihood options that households pursue. A report by Economic Commission for Africa (2004) reaffirms the differential impact of unequal access to land and insecure land tenure on the livelihoods of smallholders. There is ample evidence which shows the importance of land both in pastoral and farming related livelihoods activities although the degree of its importance might not have similar effects (Bassi 1997; Ayalew 2001; Boku 2010). Having this in mind, we have tried to analyze how the ongoing land related changes affected the livelihoods of the community in study area in one hand. On the other hand, we have tried to spell out the possible driving factors associated to the change toward privatization among the Guji of southern Ethiopia.

In his study among the Karrayu, Ayalew (2009) pointed out the potential challenge related to the privatization of pastoral commons land. He said "the expanding nature of farming among the Karrayu seems to have altered the pastoral livelihood options". Ruttan (1995) also confirmed that the demands for individual titles to rangeland are driven by national policies that favor private property over common property. From the above statements we can easily recognize that both Ayalew and Ruttan emphasized state and other external forces as a sole mover for the transforming land tenure arrangement. However, learning from facts on the ground, in this study we have seen that some of the attribute (e.g. individual enclosure) of the Guji agro-pastoralists appears different from other agro-pastoral groups (e.g. the Karrayu and the Borana) known to the academic domain in Ethiopia. First, the Guji agro-pastoralists are not mobile herders unlike the Karrayu and the Borana agro-pastoralists. Second, the settlement among the Guji's except in Boltu Grisa *kebel*e was not entirely forced by the state intervention unlike the case of Karrayu, Borana and Somali agro-pastoralists' (Boku 2010; Ayalew 2009).

In addition, the way private enclosures among the Guji agro-pastoralist have been adopted can be seen as the outcome of a long run process where agro-pastoral households responded with a double side strategy. On one side, they diverted efforts for mobilizing –or demobilizing the resources needed to improve their livelihood strategies. This was true especially on the initial phase of enclosure dynamics having a motive of saving pastoralism. On another side, as it was the case on the second phase of enclosure dynamics, preferences for a particular property-right and land use could be related to the opportunities and constraints imposed from forces outside, and expected incentives from the act of private enclosures. Thus, factors related to; ecology and rangeland degradation, socio-economic changes, and population pressures seem to have facilitated individualizations of pastoral common lands among the Guji agro-pastorals.

Adding up, despite the proliferating researches relating land tenure changes with pastoral livelihoods, most studies tend to question the impact of the change in land tenure arrangement in relation to the long term viability and sustainability of the pastoral system of production (Helland 2000; Homann et al. 2004; Boku, 2008; Skinner 2010). Effort to amalgamate land tenure change and its impact on the pastoral mode of production has been often considered under the circumstance at which external interventions were given emphasis. Thus, it fails to differentiate the issues of vulnerability and adaptation and often vaguely discuss about lack of sustainability

and increased state of vulnerability by largely ignoring the shifts towards adaptation. Though previous studies were based on the sustainable livelihood framework for the holistic understanding of livelihood responses and outcomes, there was a missing gap that needs further emphasis on the correlation between property right regimes and livelihood outcomes at household or aggregate level (DFID 1998). In this study, separate outcomes of the changes in property right regimes on livelihood strategies are taken as desirable path ways instead of hanging on vague institutions' and social relations as mediating factors. Thus, property-right and land use changes are used as a catchword through which household livelihood response in the Guji agro-pastoral system is ought to be analyzed.

2. The Study Site

Guji Zone is one of the 18 Zones of Oromia Regional State. It is found in Southern part of the Oromia Regional State. The capital town of the Zone is Nagelle, which is 604 km far away from Addis Ababa, the capital city of Ethiopia. Guji Zone is bounded by Southern Nation, Nationality and Peoples Regional State in North, Somali Regional States in South, Borena Zone in West and Bale Zone in East. Guji Zone is located between $38^0 – 40^0$ East longitude and latitude 4^0- 5^0 on the North, and the altitude ranges from 500m up to 3500m above sea level. The area of the Zone is estimated to cover about 18,557.05 km^2 or 3,545,400 hectare. Of which, around 1,392,048.05 hectare is arable land, while 702,080 and 1,167,145 hectare of its land is grazing and forest land, respectively (GZLEPO, 2012).

The *Zone* accommodates three types of climate conditions- D*ega, Woina Dega* and *Kolla* and accounts 13%, 19% and 68%, respectively. The zone has bi-modal rain seasons namely the summer (June to November) and spring (March to May). In the *Dega* areas, the rain ranges from 1000mm-1500mm, *Woina Degas* 750mm-1000mm and *Kola* areas 500mm-750mm get annually (GZLEPO, 2012). Demographically, the estimated total population of the zone is 1,638,022 of which 823,564 are male and 811,140 are female (CSA 2007). From the total population 1,441,598 (88%) lives in rural area of the zone. Although, there are diverse ethnic groups live in Guji zone, the Guji Oromo is numerically the dominant one (CSA 2007).

Pastoralism and farming provides the major source of livelihood for the Guji Oromo. The society's kinship system is patrilineal, consisting of 18 spatially and temporally coalesced clans.

The lineage is organized into three exogamous clans known as *Uraagaa*, *Maattii* and *Hookkuu* which have reciprocal social and economic ties. Moreover, the Guji people are distinctively characterized by their unique customary institutions of self-rule - the Gada system. Out of the vast Guji zone this study is only confined to those that live in Anna Sora *Woreda*.

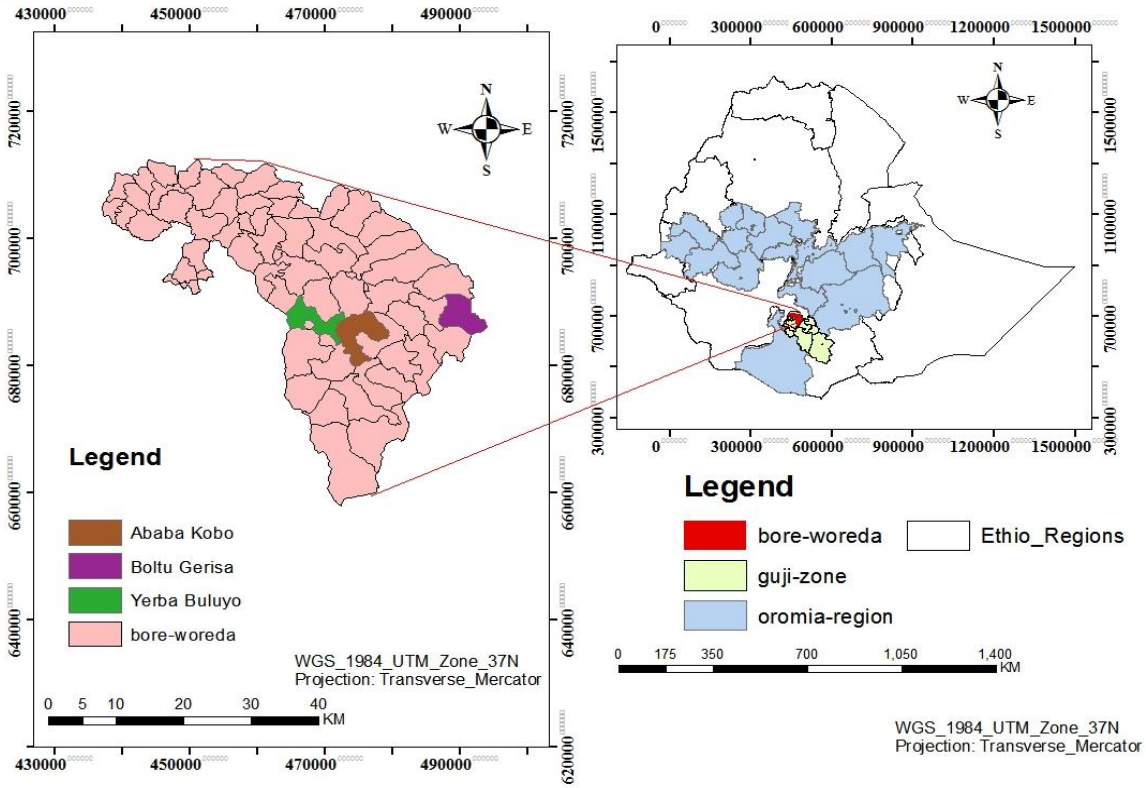

Figure 1. Location of the Study Area in Ethiopia

3. Research Methods

Both primary and secondary methods of data collection were used to obtain relevant information. A cross-sectional survey design was employed with the stipulation that approximation of longitudinal survey design. After Borena zone was divided into Borena *Zone* and Guji zone in 2003, Guji zone came into existence as an independent *Zone* having 7 *Woredas*[1]. Currently Guji *Zone* has 13 *Woredas* and 2 urban administrations. This study was conducted in three *kebeles* (*Gandas*) of the newly established *woreda* in (2006), known by the name Ana Sora**.** The *Woreda*

[1]*A woreda is a sub Zonal an administrative division with a population of about 30–50,000.*

was selected purposively because it relatively appeared to experience enormous changes to their ways of life, expansions of private enclosures over the last two decades which makes them suitable for the purpose of this study.

The sampling procedure draws on both probability and non-probability sampling techniques. The rationale for employing probability sampling was to ensure representativeness while non-probability sampling was used for it allows flexibility and reflexivity which is core of rural studies (Chambers 2007). Thus, using non-probability sampling, three *kebeles namely,* Irba Buliyo, Boltu Grisa and Ababa Kobo were selected since they relatively appear to accommodate farming, pastoral and agro-pastoral system of production, respectively.

Then after, by using up to date list of households obtained from the *woreda* administrative office as a sampling frame, households within the three *kebeles* of Ana Sora *woreda* were drawn randomly through lottery methods. Households at each *kebele* were given a 10% representation relative to the number of total households they comprise. In this way, 40, 25 and 45 randomly selected households from sample frame of 401, 251 and 455 in Irba Buliyo, Boltu Grisa and Ababa Kobo *kebeles*, were taken respectively. Thus, a total of 110 households were included in the sample.

In-depth interviews were held with 9 key informants from the local community and local government office. In addition, six separate focus group discussions were held at each *kebele* with separate group comprising both men and women. Moreover, data gathered through observation appeared exceptional and unique, and it helped to triangulate the data. Various written and archival documents including journals, books, and bulletins related to the study topic were assessed. The review of these documents has been crucial in identifying the gaps in the subject matter of the study. Finally, the gathered data were analyzed through thematic approach in which results of various methods put in order to fine tune and synthesize diverse sources of knowledge. To analysis quantitative data, a statistical package for Social Sciences (SPSS version 20) was utilized. Results of open-ended question in the questionnaire were blended together with statistical tests to draw a possible link and provide remarkable flexibility.

4. Results and Discussion

4.1. Division of Pastoral Commons, Expansion of Fenced Plots and Enclosures

4.1.1. Individualizations Related to Ecological Changes

Traditionally, Guji were said to be attached to the key pastoral resources. This attachment implied in the way resources such as *lafa* (land) and water has been used. Until very recent time, resources among the Guji has been under the domain of common property where use rights granted upon 'proper' observation of the rules. According to informants, changes in property rights and the expansion of cultivation and closures of land are among the major developments that took place among the Guji since 1980s and seem to have two phases.

The first phase roughly takes place in the early of 1980s, and has been partly attributed to the forces related to ecological degradation and changes in rangeland composition, and gradually developed as a change in response to climate variability. The second phase began nearly in the late 2000s and continued since then and associated with social, economic, demographic and other related factors. Here, the two phases are separated not only because of the time variation but also the different motives behind the enclosures. Hence, they are viewed as two separate but interrelated phases.

In the selected study site of Guji *Zone*, therefore, changes in ecological conditions such as climate variability and drought are not overstated and it appears to be important behind the first phase of enclosure episode in letting the gate open for the gradual individualization of pastoral commons. Although climate variability has been usually associated with dry lands in conventional terms, it has now become potent onto all agro-ecological zones (Galvin, Randall and Boone et al. 2001). Respondents[2] associated climate related changes with the gradual decline in the expropriation of resources over pastoral land and the subsequent weakening of the pastoral since early 1980s. Interview informants also associated climate variability as a possible driving force to initially ignite *de facto privatizations*.

[2]Gamada Gilo, Asafa Adula, Areri Doko, Galchu Adula, Galo Nenko and Dinqu Dida (Irba Buliyo on February,12,2013); Butaro Udo, Nagesa Areri, Guye Hirba, Fayisa Kebed, Adula Aga and Baneta Bido (Ababa Kobo on February, 7, 2013) and Adola Busua, Boru Kesi, Tadasa Boru Gimbu Sorsa, Dammisee Gimbu and Ware Udo,(Boltu Grisa On February, 23, 2013) respectively.

Traditionally, the Guji were known for practicing diverse coping mechanisms to deal with shocks and stresses. The used to practice herd diversification and split and migration out of the pastoral system until the perturbation passes. According to elders[3] the gradual decline in rainfall and natural resources motivated some pastoral households to put closures. One of them said:

> *Before 1990s, we were predominantly pastoral, wandering with our cattle and constantly exploring new terrains at distant for securing our animals. At that time, there were only few neighbors who primarily rely on farming. Gradually, droughts and climate change have worsened the trends of pastoralism and our relationships with land. As the main rainy season gradually become shorter and unpredictable, many households known by their large number of livestock started to enclose larger areas for private grazing defying the traditional rules.*

The expansion of private enclosure over commons grazing land in turn has increased provocative claims over access rights to farmland and (*Bobbasa Lonii*) /cattle routes. According to the informants, the Guji in *Irba Buliyo* used to escape grazing shortage at *laayo* (one of the former important grazing spot) around Ababa Kobo, but gradually as the main rainy season become progressively shorter – the pastoralists started fencing private closures over communal grazing areas (including *Laayoo).* On the other hand, the rampant growth of venomous plant species has brought ecological stress and override traditional nutritious grass species especially after the ban on bush burning since the time of Derg regime. The elders at had the following to say:

> *Before the ban on bush burning during the Derg regime, indigenous grass types such as "Mujja[4]", "Aaleeda[5]" and "Looti[6]" were common because we used to manage its growth by burning and clearing some noxious bushes. But since then, our grazing land has almost been swallowed by an increased bush species and animal predators such as, "Cirri", "Battii" and "Michiichaa", and now, those indigenous grasses are only noticeable deep into the forests.*

The above changes all together fueled enclosure and brought significant changes in patterns of land use and the rules dictating over pastoral commons. Thus, it can be said that massive

[4] Elephant grass type used for animal fodder
[5] Grass type often preferred for calf found around forests
[6] A very prestigious grass type common in all season

individualization and the proliferation of fenced plots in the study area was initially motivated to save pastoralism in the advent of climate change and grazing shortages.

To support the above argument, we have identified two types of enclosures *(kaloos)* in all the three *kebeles.* The first type was a typical show case of the first phase of enclosure dynamics locally known as '*kaloo oolla*' or a *village-communal kaloo.* It was said that it has been initiated by the local community due to grazing shortage and ecological deterioration. *The village communal enclosures were* delineated near to the local villages and simply demarcated by hills and rivers, and never been physically fenced as opposed to the enclosures in the second phase. The rule of the game instituted across the village has been referred as '*Ardaa Dheeda Olla Ebeelu'* or *grazing spot of someone's village.* The exclusion of non-members has been specific on some usufruct rights and the non-members/non-villagers were strictly forbidden from grazing their animals onto others village. Here, the use of other natural resources, cattle routes, and livestock watering spots has been free to the non-members. This means, the former semi-private *kaloo* has been motivated to fine tune to the pastoral situation of the time.

The second type of enclosure has evolved in the second phase of enclosure dynamics and which is still a common practice in the area. These enclosures are locally known by the name *'Kaloo Dhuunfaa*' or private enclosures. Speaking of the situation an informant[7] in *Boltu Grisa* said:

> *At the time when kaloo ollas or semi-private village closures were operant we never heard the word 'Dhuunfa' or private, but gradually village level kaloos were abandoned. As you can see, all the village kaloos are disrupted and replaced by the kaloos owned by individuals fenced for farming purpose. Today, only peripheries of the main farming land are enclosed for livestock grazing and they are all owned by individuals.*

The study showed that those traditionally privileged and well established rules and practices over pastoral commons locally known as '*Ardaa dheeda*' or *grazing Council* are not currently vibrant. Today no one is prohibited to fence his land and individuals are allowed to put fences and the rule appears quiet open. The traditional system whereby the applicant goes through the clan elder system and secures elders' approval has been eroded. Generally, it could be said that fences

[7] Gambe Adula (Boltu Grisa On February, 23, 2013)

seen in the lands of the Guji today are typical manifestations of a change in the forms of property rights arrangements.

4.1.2. Socio-Economic Changes: Factors Initiated Change over Pastoral Commons Land

The socio-economic factors to mention but a few are: fragile sense of security, long term plan to invest over the land, and expectation of future livestock grazing shortage could be associated with the ongoing land use related change in the study area. The aggregate survey result (See Annex, table 1) supports the view that households fear of eminent land redistribution/potential insecurity, benefit from investing in long-term natural resource management and the expected future livestock grazing shortage with a response rate of (60.1%, 26.4% and 8.2% respectively) could have motivated households to put fences. This being the case, however, independent sample result has shown somehow a unique result. For instance, in Boltu Grisa *kebele* 40% of survey result appeared to contradict the above generalizations. In Boltu Grisa the expansion of crop production over the past 5 years seems to have resulted in the growth and expansion of fenced enclosures.

Literature on the proliferation of private enclosures boldly signifies economic motives. For example, Boku (2010) explained in Borana rangelands the expansion of crop production, diversification in farming and increased livestock trade as motivating factors to enclose land for the production of hay and/or renting of grazing to herders and traders. Such endeavors, however, emphasize solely on the gradual pastoral awakening and the development of economic man-conceived as a rational decision maker to take up farming in economic terms and drop-out of pastoralism for the same reason without any external intervention.

Counter to the above conservative economic drag, the case in Boltu Grisa portrayed the need to paint the whole picture rather than to rely on a merely linear 'economic man' assumption. In this study, informants pointed out that advances of irrigation scheme was mentioned as reason for the 'salt testing' value of land in the area.

Likewise, the survey result showed that 72.7% the respondents have been dissatisfied over the expansion of individually held enclosures (*kaloo dhuunfaa*). It's negative impact over pastoral production and traditionally held cultural values (the qualitative impact that transcends the

physical frontier of enclosure) were identified as relevant reasons. The same factors were also echoed by all FGD participants of both sexes. There has been an overwhelming consensus among the studied households that communal land should not be abandoned in pursuit of individual wealth creation. The obtained quantitative data has been further analyzed to see if there was any relationship between some socio-demographic variables and respondents' perceived level of satisfaction towards the expansions of private enclosures and fenced plots. Hence, survey result revealed a statistically significant association between household heads level of education and perceived level of satisfaction over the ever expansion of private enclosures and fenced plots. Hence, as the level of education increases, the view towards the expansion of private enclosures and fenced plots appeared positive and other demands related to the restorations of traditional values sign a likely decrease. It was also found a statistically significant correlation *($p<.005$)* between income from crop-production and total household income. Meaning, households with a higher level of education appear likely to hold higher demand for individually held closures. Household who never attended education from the total sample size was about 57.27 per cent, while only 30 per cent from the total sample size have had attended grade 5 to 10. Thus, the negative view towards the expansion of privatization manifested in the form of private closures and fenced plots could be related to education. In contrary, some households' kept positive views over individually held enclosures because they say it clarifies boundary, gives sense of security for a long term investment and avoids conflict over resource use and claims. Regardless of the benefits, however, it appeared that most agro-pastoral households consider it as a serious threat to their traditional livelihood system and to their cultural practices.

The survey result has also revealed that 53.6% of respondents seem to have engaged on fencing without the intervention of external forces. Unlike the case of the Borana pastoralists, Alison and Solomon (2011) *"…the number and size of range enclosures has steadily increased…, and often supported by NGOs with the objectives of rehabilitating degraded or bush-invaded rangeland, and providing a pasture reserve for animals during extended dry season or drought periods",* the expansion of enclosures in the lands of Guji didn't seem to be motivated by external forces or interventions as such. Though this is not to argue that there were no other external forces supporting the expansion of individually held enclosure over the territory of Guji agro-

pastoralists, the majority (40% excluding the missing cases of the households) of the act seem done by individuals' own decision. For instance, only 32.7% the households (excluding 7 missing cases) were initiated by government and 7.3% (excluding 7 missing cases) by the community elders. Hence, we can at least say that the expansion have occurred under both internal and external forces. Yet the involvement of external forces has been found to be indirect than direct unlike it was the case among the Borena and the Somali pastoral groups (Alison and Solomon, 2011).

The internal motivation could be associated with households' sense of security, expected benefits and fear of detachment from pastoral mode of production. While the external forces refer to the government intervened changes and the role that the community elders. As it is shown in Table 2 (See annex), two variables representing forces behind individualization as an independent variable kept a significant and moderate association with factors behind household initiated individualization. For the strength of their relationship each variable was quantified through the Pearson's Phi Coefficient. Thereby analyzing the relation between the two variables, it was suspected that households' sense of security and fear of losing land due to redistribution, expected long-term benefits, and fear of detachment from pastoral mode of production might have motivated households to take up enclosure actions.

4.1.4. Individualization of Pastoral Commons: Does Population Pressure Really Count?

Although researches are rare, there are, however, ample literature which reveals the link between individualizations of pastoral commons land and population pressure. For instance, Copock (1994), Helland (2000) and Skinner (2010) explained the reason for the ever growing impact of human and animal population on the already precarious rangeland resources of the Borana lowlands. In addition, Coppock (1994) blamed ethnic influx of non-Borana from around the towns fueling competitions among resource users.

Learning from the results of the three *kebeles* it was only at on one *kebele* (Irba Buliyo) that respondents have associated population pressure with increasing pressure over pastoral commons land. In all of the three *kebeles* we found that there were no significant non-Guji ethnic influxes. For instance, all surveyed households from the three *kebeles* in the *woreda* were Guji and most

have occupied the area for more than 10 years. Thus, population pressure doesn't seem to count over the expansion of individualization over the pastoral commons land in the study area.

4.2. Land and the Guji Agro-Pastoral Livelihood Response

4.2.1. The Contribution of Assets to Livelihood Outcomes and the Link to Property Rights

To clearly picture the reality on ground, two ways of picturing the relationship between access to assets and livelihood outcomes were followed. In the first way, we measured the contribution of each type of asset for obtaining a particular livelihood outcome. The contribution of each variable was quantified through the Spearman's rho Coefficient and revealed multivariate correlation between 'total household income', 'total income from crop production', total income from livestock production' and 'total livestock holding threshold at present' variables taken as indicators of livelihood outcomes (See also table 3 on the annex part). Thus, total income plus the two 'other income' types and the 'current livestock holding threshold' were differentiated in order to highlight the effect of households participation into markets in the formation of livelihood strategies and the concomitant livelihoods outcomes –and indirectly, in the share of outcome that was more affected by a sizable ownership of land.

Seeing separately, what can be observed in table 3 is that each variable representing different variables keeps positive correlation with all income types and current livestock holding threshold, except the negative correlation observed between the variable 'age' with "current livestock holding threshold" marking that relatively younger households had less livestock size. To this effect, all variables (meaning household schooling years, family size, total land holding size and fenced livestock grazing land) exposed more significant relations with the income of all types. Similarly, all variables except schooling and family size exposed more significant relations with income of all types and current livestock holding threshold. In other words, although household heads' schooling years and their corresponding family size had a relationship with the current livestock holding threshold among the Guji agro-pastoralists in the study area, it seem played lesser role in determining household livestock size. Therefore, it was learnt that households' total land holding size and fenced livestock grazing land have played role on determining the current household livestock holding. In other words, land in any form of ownership has been identified to have a big contribution in the community.

Another way of measuring relationships was to take fully into account the holistic characteristic of the property-right and livelihood model envisaged in this study to understand the formation of livelihood strategies with the correspondent conditionality of access to assets altogether, i.e., inserting all capital assets within a unique equation. By doing so, relationships have been measured by means of a linear regression. Moreover, the most significant variables representing various types of capital assets from (table 3) were selected to be regressed with total income, income from crop production and income from livestock production. These variables were: 'estimated households' total land holding', 'schooling years of household head', 'household family size' and 'estimated fenced grazing land size'. Additionally, in order to observe the effect of access to land for crop production on income earned from crop production, one dummy variable was added.

As stated before, to have a comprehensive view on the current Guji agro-pastoral households socio-economic situation, one need to analyze not only what combinations of capital assets delivers a livelihood outcome but also the influence of a particular property rights regime on the access to each and its contribution to the overall agro-pastoral households' livelihood situation. By doing so, therefore, the specific impact of the change in land tenure arrangement on the livelihood outcomes of the Guji agro-pastoral households cannot be overstated. Moreover, although the contribution of property-right regime on various assets from all capital forms has not been easy to figure out, simple test was conducted to see the correlation between the two.

4.2.2. Contribution of Land in the Changing Livelihoods of the Guji

Access to land is a critical issue for millions of agricultural and agro-pastoral households. The average farm sizes in Ethiopia are small with more than 85% of farming households operating less than 2 hectares and, in 2000, more than 40% having 0.5 hectares or less (http:// usaidlandtenure.net/ 2011:2). Likewise, the case study among the Guji in the study area revealed a mounting difference between households in terms of total land holding size. As a survey result shows, the landholding size delineated for crop production ranges between 0 and 7 hectares, with a mean of 2.6 hectares while the areas enclosed/reserved for livestock grazing varies between 0 and 2.5 hectares with a mean of 1.2 hectares. Individual agro-pastoralists also held significant amount of land. As Indicated

(See table 4 and 5 on the Annex part), the total landholding stands for the highest correlation between capital assets and income (with both total income and income from crop production). We have also realized the negative correlation between total land holding size and income from livestock production. From the level of significance and the coefficient values the following facts were learned.

First, the high level of significance implied that the total amount of landholding has been more important for estimated household total annual income and income from crop production than other factors. Second, estimated fenced livestock grazing land has contributed more for income from livestock production than other factors. Third, estimated income from livestock production and total land holding has been negatively correlated (i.e., as households total land size increased, households' seem turned it to crop land so as to secure more income derived from crop production than using it for livestock grazing land). Fourth, a various level of elasticity coefficients representing estimated household total land holding to income from livestock, income from crop production and to the total income was found to be (-.357, 0.967 and 0.242), respectively. This means, estimated total land holdings of households has contributed more to income from crop production than to the total income, and its contribution for income from livestock production was negative. Fifth, a change in landholding and increase in individual landholding has led households to earn higher income from crop production and its contribution to the changes on total output was also found considerable. However, it has negatively affected household income from livestock production.

Drawing from the results, therefore, the contribution of total land to the generation of income from crop production seemed generally high. Indeed, if one doubles the total size of land available for a household, one can expect a 96.7 and 24.2 percent increase in income from cop production and total income, respectively. The same can be said to the fenced livestock grazing land, this means, fenced livestock grazing land to the generation of income from livestock production appeared to be very high. If, for example, one doubles the amount of fenced grazing land available for household; one can expect a 90.5 and 17 percent increase in income from livestock production and total household income, respectively.

Although further quantification of the above variables was limited due to the absence of numerical data regarding the total size of pastoral commons land in the study area, it still seems plausible to say two points from the above results. First, one individually held estimated total land size contributed greatly for households whose main livelihood was dependent on crop production. Second, conversely, what matters most for those households whose main livelihood was dependent upon livestock production was not privately owned total land, rather it was the amount of land reserved for livestock grazing. Hence, the result revealed that land is the most vital natural capital and had a lot of contribution to the livelihoods and all the above points make property rights to be relevant. In addition, although it was learned that ownership of land in any form of property regimes has been vital to the consecutive livelihood platform households pursue, the increasing trend of individualization among Guji tended to prop up farming society than allowing the pastoral system.

4.3. Changes on the How Land and other Resources are Used, Held and Disposed Off.

Rural Ethiopia in particular has witnessed profound and at times, erratic shifts in the ownership and control of land. Since 1975, land tenure profoundly altered the agrarian structure and the mechanisms of access to land. Today, land in Ethiopia is under the state ownership. Many observers have noted that Ethiopia's land rights structure is opaque and ambiguous (e.g. Crewett, et al. 2008). Among the major challenges; uncertainty on how many rights such as the sale and transfer of use rights, mortgage, and ownership can be enjoyed.

In the study area, several changes have undergone particular since 1980s, initially under the pretext of saving pastoralism and later as a response to a multifaceted developments. This new phenomenon entailed serious consequences over the way land is used, held and disposed off among the Guji agro-pastoralists. Land among the Guji agro-pastoralists signifies a wide set of structure of social, economic and political relationships within and between families, local communities and regional authorities.

The FGD held with community elders[8] in all the three rural *kebele* gave us a picture of the change related to tenure arrangements since 1980s. They said, the Guji land is divided to three

[8]Gamada Gilo, Asafa Adula, Areri Doko, Galchu Adula, Galo Nenko and Dinqu Dida (Irba Buliyo on February,12,2013); Butaro Udo, Nagesa Areri, Guye Hirba, Fayisa Kebed, Adula Aga and Baneta Bido (Ababa Kobo on

dominant clans know as *Huraga, Mati* and *Hoku.* Before the mid-1970s and 1980s, the division of land into the three Guji clans has been geographical and members of each clan used to have the right to use all the resources elsewhere without exclusion. Speaking about it, a key informant[9] at Irba Buliyo said:

> *Before 1980s, all the three clans had equal right of using communal lands without exclusion. But following enclosures at village level, people started dividing land to clans, extended families and nuclear families through inheritance. Initially, all the land was owned by the Guji son. Now we started dividing land to our daughters. This is done not without pain. As we continued dividing our lands, we end up having very small acre of land. Fearing that the government will snatch our land; we have now started dividing our holdings to children at minor age.*

In the study area, land redistribution by the state agents is not common. Although not often the case, zonal administrators sometimes allocate land for unemployed youths organized in small and micro enterprises. But what is after the ban on land distribution in the study area is an informal market land deal. Our survey result showed that (66.4% & 17.3%) of households have acquired their current land holding through inheritance and government allocation while the rest obtained their land through other means like the informal land market (See also Table 7).

In addition, 5.5% of households had no private holdings for crop-production and engaged in other forms of contractual arrangements to obtain land for crop productions. Similar to what has been identified by Ayalew (2009) with the Karrayu 'land occupants', some sharecropping arrangements are common among the Guji too, In our interview with the key informants, some of possible factors were associated with differential access to land among various households. Accordingly, with a gradual abandonment of pastoral commons, households owning large livestock size and affiliated to the local administrators have been given large tract of land. In this regard, informants stated that two groups were created:

February, 7, 2013) and Adola Busua, Boru Kesi, Tadasa Boru Gimbu Sorsa, Dammisee Gimbu and Ware Udo,(Boltu Grisa On February, 23, 2013) respectively.

[9] Galchu Bukato (Irba Buliyo on February, 12, 2013)

Certainly, there were people benefited in the midst of these changes, especially the rich and people affiliated to the leaders' clan. Both harkaa (money) and blood has been used to influence the local state apparatuses.

From the above statement, we understand the initial individual expansion over commons land was undertaken in the absence of forcible laws, the rich households used their status to expand their land holdings. Even after, the rich conspiring with the local leaders expanded their individual holdings over common lands before their land got registered. Eventually, of course, they controlled up to 25 hectares while some are left landless. Survey results also showed a positive and significant relationship between households' income, size of livestock owned, age, family type, and family size, except education. From the results, we came to conclude that the changing land tenure arrangements have benefited the richer households while the disadvantaged, youth and poor agro-pastoral households seems have lost from change (See Table 8 on the annex). Therefore, we can say that in all three *kebeles* the pastoral commons land appeared to be under increasing pressure due to the rapid privatization and enclosure developments over the past two decades.

On the other hand, the change has brought complexities and tenure ambiguities in the study area. Respondents in all the three *kebele* have associated tenure ambiguities with some important changes. Among others, the existence of multiple arrangements, (the disputes between the state, the collective and the individual property right regimes) and historical claims over land and other resources amplified tenure ambiguities. For instance, in Irba Buliyo and Ababa Kobo *Kebeles* there were dominant forest sites traditionally owned by the community itself. In the old days individuals neither cut those trees for sale, nor did they engage in abuse of the resources. It is only later following the transfer of the ownership title to government in late 1990s people have started misusing the forest. The ambiguity has been also related to the continuation of government land, communal land, other unoccupied land and land with no inheritor. Especially, after the abolishment of the village level communal enclosure and after the expansion of private enclosures the dispute between individuals and communities over land and other communal resources have increased. As officials from the *woreda* explained, it is with the process of land registration and certification (after the year 2008 and 2009) that things have become more

difficult for the government to convince people about their specific right over state, communal and private lands.

From the above observations we can at least contend that:

- First, the existence of certain space for the traditional, local and informal land institutions together with vague state ownership title and the *defacto* privatization manifested in the forms of private enclosures seem to have raised a serious question on the credibility and successful functioning of land tenure arrangements and the move towards the formalization of land tenure system in the study area.

- Second, due to the tragedy of the transition among the Guji today, the theft of land has become more common, either because the legal frame has remained incomplete and inconsistent or it has not yet been implemented fully.

- Third, the claims are intensified by the administrative measures rather than legal measures. That is local administrators and people affiliated to them easily expropriate pastoral commons land.

To sum up, as more and more of the pastoral commons were converted to individual plots of land, the demands for cultivable land are on the increase. But, this has also consequently invited inconsistent land tenure arrangements and lead for new developments on the ways under which land is used, held and disposed off.

Conclusion

Given the changing tenure arrangements Ethiopia have passed through, this study brought into light the important ways in which property right changes and consequences stem from the change in the ownership title. The findings of the study indicated that the issue of land and its use among the Guji is under increasing divorce from the traditional practices. Drawing insights from the Evolutionary Theory of Land Rights (ETLR), this study has come across the role of an ongoing social interaction, the role played by traditional institutions, the changing values of the community towards crop-livestock production, and the changing functions of institutions operating behind the overwhelming individualization land among the Guji. However, contrary to

the basic argument of ETLR the study among the Guji tends to show population pressure and the growing land scarcity as of less determinant.

Furthermore, although the changes in land tenure and its implication on pastoral livelihood is recognized in this study, solely attributing the changes to the state sponsored intervention and to other extraneous variables seems exaggerated. In this study the combination of interacting social, economic and environmental factors and processes operating at a range of scales appeared to hold water behind the current changes. The traditional pastoral commons and the rules dictating its use have been weakened and the changes within the transition have cut off agro-pastoral households from their traditional customary practices. While the change among the Guji is apparently heading towards a positive adaptation, challenges cropped up within it, however, seem to have a potential test in the days to come.

What needs a quick fix in the light of the forgoing is the urgency of strengthening formal/legal and institutional frameworks, which could manage communal pastoral commons effectively and efficiently. However, formalization of property does not just "crystallize" claims but offers significant opportunities for redistribution and proper utilization. Complex customary rights were seldom translated perfectly into the new system, therefore, the new takeoff among the Guji, seem to invite solid legal and institutional frameworks to bridge the huge gap between the newly emerging land tenure related developments and institutional loopholes doting here and there.

To sum up, future research should focus on variations in property rights along all the dimensions so that a more holistic picture of a concept could be achieved. Future researchers could be based on the following questions.

- Will the ongoing transformation among the Guji lead to a single, dominant, property rights regime?
- Does the distribution of new assets reflect older inequalities among the community, and what are the implications in reproduction of inequality?
- What balance exists between formal and informal property rights, and are these two substitutes or complements?

- How do the politics of property unfold during periods of institutional transformation? And What is the interplay between formal property interests in things and social or cultural interests?

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Annex: A Table Wise Summery of Methods and Results

Table 1: Factors Behind Household Initiated individualization

		Frequency	%	Valid %	Cumulative %
Valid	Expectation of eminent land redistribution in the foreseeable future and of losing land due to redistribution	67	60.9	63.2	63.2
	Expectation to benefit from investing in long-term natural resource management	29	26.4	27.4	90.6
	Plan to renting-out land to others	1	.9	.9	91.5
	Expectation of future livestock grazing shortage	9	8.2	8.5	100.0
	Total	106	96.4	100.0	
Missing	System	4	3.6		
Total		110	100.0		

Source: Household survey

Table 2: Force Behind Individualization*Factors Behind Household Initiated Individualization (Cross tabulation, Pearson Chi-square Test)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.696[a]	6	.033
Likelihood Ratio	14.651	6	.023
Linear-by-Linear Association	.333	1	.564
N of Valid Cases	103		

6 cells (50.0%) have expected count less than 5.
The minimum expected count is .08.

a. N= 103
b. Association is significant at the .05 level (2tailed)

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.365	.033
	Cramer's V	.258	.033
N of Valid Cases		103	

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.

Table 3: Multivariate Correlation between Livelihoods Outcomes and Access to Assets (Spearman's rho Coefficient)

Variables for Capital Assets	Spearman rho Coefficient	Livelihoods Outcomes			
		Estimated Total Number of Livestock Size (At Present)	Estimated Total Household Income(a)	Estimated Total Household Income From Livestock(b)	Estimated Total Household Income From Crop Production(c)
Age of Household	Correlation	-.007	.O83	.080	.110

Head (In Years)	Coefficient Sig.(2-tailed) N	.939 110	.388 110	.404 110	.253 110
Schooling Years of Household Head	Correlation Coefficient Sig.(2-tailed) N	.154 .108 110	.210(*) 0.28 110	.235(*) .013 110	.019 .841 110
Household Family Size	Correlation Coefficient Sig.(2-tailed) N	.042 .663 110	0.224(*) .018 110	.203(*) .013 110	.019 .084 110
Estimated Total Land Size(Total land extension in Hectare)	Correlation Coefficient Sig.(2-tailed) N	.577(**) .000 110	.800(**) .000 110	.776(**) .000 110	.588(**) .000 110
Estimated Fenced Grazing Land (Extension in Hectare)	Correlation Coefficient Sig.(2-tailed) N	.698(**) .000 110	.777(**) .000 110	.582(**) .000 110	.729(**) .000 110

** Correlation is significant at the .01 level (2tailed)

* Correlation is significant at the .05 level (2tailed)

(a) Total income includes all output produced by households only for market purposes.

(b) Cash income from livestock production includes only the output produced for the market.

(c) Cash income from Crop production includes only the output produced for the market.

Source: Household survey

Table 4: The Contribution of Capital Assets and Other Factors to Income from Livestock

Variables	B	t
Estimated Total Land Size(Total land extension in Hectare)	-.357	-2.328
Access to the Land for Crop Production	-.014	-.189(NS)
Estimated Fenced Grazing Land Size	.905	6.570
Household Family Size	.239	2.277
Schooling Years of Household Heads	0.43	.465(NS

R square= 0.525 F = 22.974 Df = 5 N = 109

Notes for tables 6, 7 and 8: NS = not significant

Source: Household survey

Table 5: The Contribution of Capital Assets and Other Factors to Income from Crop

Variables	B	t
Estimated Total Land Size(Total land extension in Hectare)	.967	5.617
Access to Land for Crop Production	-.021	-.257(NS)
Estimated Fenced Grazing Land Size	-.395	-2.471
Household Family Size	-.031	-.267
Schooling Years of Household Head	-.019	-.181(NS)

R square= 0.425 F = 12.696 Df = 5 N = 109
Notes for tables 6, 7 and 8: NS = not significant

Source: Household survey

Table 6:Ways Through which Households Obtained their Current holdings

Land Obtained Through		Frequency	%	Valid %	Cumulative %
Valid	Clan Membership	11	10.0	10.6	10.6
	Government allocation	19	17.3	18.3	28.8
	Inheritance	73	66.4	70.2	99.0
	Other	1	.9	1.0	100.0
	Total	104	94.5	100.0	
Missing	System	6	5.5		
Total		110	100.0		

Source: Household survey

Table 7: The Correlation between Socio-Demographic Variables and Households Current land Holding Size (Pearson Correlation Coefficient)

		Hh Head's Age (in years)	Hh Heads' Educational level (in years)	Hhs' Family Type	Hhs Land Holding Size/in hectare	Total Livestock Holding Threshold (At present)	Hh Family Size	Hhs Total Income During the Last 24 Calendar Months (Birr)
Household Head's Age (in years)	Pearson Correlation	1	-.697**	.466**	.197*	.098	.710**	.058
	Sig. (2-tailed)		.000	.000	.039	.309	.000	.547
	N	110	110	110	110	110	110	110
Household Heads' Educational level (in years)	Pearson Correlation	-.697**	1	-.316**	.154	.123	-.513**	.125
	Sig. (2-tailed)	.000		.001	.108	.201	.000	.195
	N	110	110	110	110	110	110	110
Households' Family Type	Pearson Correlation	.466**	-.316**	1	.504**	.222*	.899**	.158
	Sig. (2-tailed)	.000	.001		.000	.020	.000	.099
	N	110	110	110	110	110	110	110
Households Land Holding Size(in hectar)	Pearson Correlation	.197*	.154	.504**	1	.593**	.465**	.405**
	Sig. (2-tailed)	.039	.108	.000		.000	.000	.000
	N	110	110	110	110	110	110	110
Total Livestock Holding Threshold (At present)	Pearson Correlation	.098	.123	.222*	.593**	1	.213*	.289**
	Sig. (2-tailed)	.309	.201	.020	.000		.026	.002
	N	110	110	110	110	110	110	110

Household Family Size	Pearson Correlation	.710**	-.513**	.899**	.465**	.213*	1	.149
	Sig. (2-tailed)	.000	.000	.000	.000	.026		.120
	N	110	110	110	110	110	110	110
Households Total Income During the Last 24 Calendar Months (Birr)	Pearson Correlation	.058	.125	.158	.405**	.289**	.149	1
	Sig. (2-tailed)	.547	.195	.099	.000	.002	.120	
	N	110	110	110	110	110	110	110

Source: Household survey