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The Effects of Rural Land Registration and Certification on Land Management Practices in Damot-Gale District, Southern Ethiopia

Demise Dalacho

Abstract
The main objective of this study is to assess the role of rural land certification on land management and agricultural production in Damot –Gale District in Southern Ethiopia. It aimed to assess farmers' awareness of rural land registration and certification on land tenure security. Both primary and secondary data have been used to achieve the objectives of the study. The primary data for this study were collected from 145 HHs selected from four KFAs by using simple random sampling technique. Quantitative and qualitative data were gathered from the respondents using questionnaires, group discussion and interviews. The finding of this study showed that the perception of farmers increased about the importance of land certificate in providing land tenure security after certification. This shows that land certificate helps to increases the perception of farmers about their land security rights. Analysis of qualitative and quantitative data showed that the respondents believe ast land certification reduced land related disputes, protected security of women land rights, helps farmers in renting their land for short period of time and access to credit. The study findings from the survey also showed that the majority of the respondents perceived that the current land administration is good for them. In terms of land management practices the finding revealed that the majority (62%) of the respondents indicated that they are practicing soil and land management due to certificate, i.e. land certificate increases the perception of farmers in LMPs. But the other (38%) of the respondents do not practicing soil and land management due to certificates. They were managing land even before getting certificates and seemed to be more motivated by the extension services. When LMPs are concerned farmers are motivated to practice different types of LMPs (such as terracing, planting of trees, Application of compost, planting fodder trees on pasture land, harvesting water structure etc) each of these land management practices has shown significant differences after certification.
Key words: Land rights, tenure security, LMP, land administration system
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INTRODUCTION

Land is a primary and critical factor of agricultural production and expansion of livelihoods opportunities in Africa (Rukuni,1999). Secure access to land affects production and productivity in all sectors of agricultural production. Without equitable and secure access to land by the majority of farmers will be difficult to achieve food security. African governments have to appreciate that transforming agrarian systems into urban industrial economies invariably requires fundamental changes in many institutions, including those of land tenure. There is growing evidence that agricultural growth and efficient management of natural resources are dependent on the political, legal, and administrative capabilities of rural communities to determine their own future and to protect their land and land-based natural resources and other economic interests. The lack of this power (or lack of democracy) is translated into insecure tenure rights, abuse of common property and resources, dis-enfranchisement of rural people, particularly women, and the breakdown or weakening of rural economic institutions. The management of the environment and the effectiveness of community based natural resources management are all dependant on clearly defined land rights and support systems for rural communities (Rukuni, 1999).

Land is a precious resource. According to FAO(2002) estimates, almost 80 percent of the world's undernourished people live in rural areas and most depend on agriculture, including livestock, for their livelihoods. Land also secures the production of food for people not directly involved in agriculture, and is needed for a myriad of other purposes, including infrastructure and human settlements. At the same time, land is a finite resource. Consequently, there are frequent struggles over access to land and conflicts over how land should be used **(**FAO, 2002). It is also one of the most important assets of the people throughout the whole world especially for the rural and urban poor whose life basically relies on agriculture (USAID, 2007). But this valuable property is being degraded due to soil erosion and nutrition depletion (Akililu and Graaff, 2007). According to (Toulmin *et al*. 2004) land is fundamental asset for economic development, food security and poverty reduction in Sub-Saharan Africa and has crucial importance to economies and societies of the region contributing a major share of GDP employment and contributing the main livelihood basis for large portion of population. Likewise, land is the vital asset for a country like Ethiopia, where the country's economy is based agriculture; where the opportunities for non-farm means of livelihood are limited; where land is considered as significant and valuable means of livelihood and reflective of both symbolic and relating to interaction of people and material aspects by the local people.(Lyons and Chandra 2001).

Ethiopia is one of the few countries in Africa where for more than three decades no significant changes in its basic land policy have been made, except for some occasional land redistributions so as to cope with the growing population. The allocation of land to individuals was often used as a political instrument and sudden reallocations of land were common (Samuel, 2006). As many African countries the issue of rural land in Ethiopia has been mainly considered as a political or social question. Several land reforms have been accomplished since 1975. However, the results of the reforms have no effect to change the intensity of poverty and food insecurity in the country. On the contrary, they increase under utilization of land, high tenure insecurity, and continuous political grievances. This situation has sparked a debate among different Ethiopian and foreign scholars regarding the poor performance the economy in general and agricultural performance in particular and the current debate mainly focuses on land ownership and on private-state dichotomy (Samuel, 2006). Many lands were underutilized due to insecurity of land which even leads farmers to mine their land resource by cutting, but not planting trees and not investing in soil and water conservation practices. Ethiopia Land Tenure and Administration Program, being executed by USAID and the Ministry of Agriculture and Rural Development, concluded that such actions were the major contributing factors leading to degradation of the rural landscape and declining farm productivity (ELTAP, 2007). So the Government started the process of Rural Land Registration and Certification Program since 1998-99 which is regarded as a milestone in providing land tenure security through land titling (Amdissa, 2006).

Statement of the Problem

In most of the developing countries, the major factor for land degradation is the improper and unsustainable land management due to population pressure and small farm sizes, land tenure insecurity, land redistribution, limited access to credit and limited education (IFPRI *et al.,* 2005). Security of land tenure is believed to be important in improving land management, improving investment in land and sustainable use natural resource management. However, the possible effects of land certification on tenure security, proper utilization of land and dispute resolution is debatable.

In Ethiopia, there is a frequent change in land tenure system with the change in Government causing tenure insecurity among farmers. According to Samuel(2006), Ethiopia is one of the few countries in Africa where for over three decades no significant changes in its basic land policy have been made; except for some occasional land redistributions so as to cope with the growing population. The allocation of land to individuals was often used as a political instrument and sudden reallocations of land were common (Samuel, 2006).

This may be an important measure to guarantee landholding rights by a certificate of holding as legal evidence. Therefore; the current Government started the process of Rural Land Registration and Certification Program since 1998-99 which is regarded as a milestone in providing land tenure security through land titling. In order to know the role of rural land certification or the tenure arrangements encourages or discourages sustainable farm practices and land management, several researches had been conducted. The research conducted by Deininger *et al*., (2009), Berhanu,G. and Swinton, (2003), and Holden *et al*.,(2009) showed that more secure land tenure and land rights enhance the farmers to make investments on land. However, there are also cases where tenure security has no influence on land management. The study done by Holden and Yohannes, (2000) showed that tenure security is not always the reason to make land related investments.

This reveals that there are different results about tenure security which make it difficult to draw a conclusion about the influence of land certification and tenure security on soil and sustainable land management practices. Even though, many researches were conducted in Ethiopia to see the influence of rural land certification in providing tenure security, and sustainable land management, but most of them are done at regional level and no research was conducted in this study area. Despite the fact that land certification in the study area is a recent undertaking which possibly creates knowledge gap in terms of its effects.

Accordingly, based on the existence of knowledge gap in the topic under discussion, one of the primary reasons for conducting this study is to fill the knowledge gap about the role of certification in Damot Gale Woreda, Wolaita Zone Southern Ethiopia.

Objectives of the Research

- To assess the level of awareness of farmers about rural land registration and certification on land tenure security.
- To identify different types of land management practices that farmers are making on their land to conserve soil.
- To assess the role of rural land certification on sustainable land management.

Research Questions

This research attempts to give answers for the following questions.

- To what extent the farmers are aware of rural land registration and certification on land tenure

security?

- Which type of land management practices do the farmers of the study area employ?
- What changes have been achieved in land improvements after land registration and certification process with the study area?

REVIEW OF RELATED LITERATURE

General Overview of Land Tenure System in Ethiopia

In most developing countries, "the way land is instituted and distributed and ownership conflicts are resolved has a far-reaching consequence beyond the sphere of agricultural production" (Deininger, *et. al* 2003). In addition, Desalegn (2004) contends that for agricultural based economy land tenure arrangements weakened not only the ability of rural household to produce for their survival and the market, but also their social and economic status, their incentives to work and use land resources in sustainable way(Desalegn 2004).

Like many African countries the issue of rural land in Ethiopia has been mainly considered political or social questions. A lot land reforms have been took place since 1975. Yet, the result of the reforms has no effect to change the intensity of poverty and food insecurity in the country. On contrary, they increase underutilization of land, high tenure insecurity and continuous political grievances. This situation has sparked a debate among different Ethiopian and foreign scholars regarding the poor performance of the economy in general and agricultural performance in particular and the current debate mainly focuses on land ownership and on private-state dichotomy (Samuel, 2006).

Land Tenure System in Ethiopia

In different time period the land tenure system in Ethiopia showed that it was changing with the change in the government of the country. Land tenure systems during three regimes of Ethiopia are illustrated as follows:

The pre-1975 period

The land tenure system pre-1975 in Ethiopia was one of the most complex and intricate systems. It represented the issue of power and governance in Ethiopia, as land was the major source of income and livelihood in this predominantly agrarian economy. The land tenure system varied from region to region due to the diverse geographical and cultural settings and the different socio-political events that occurred in different parts of the country. These different land tenure arrangements, in general, can be categorized into usufructuary tenures and private tenures (Dessalegn 1984).

The usufructuary tenure systems include the *rist, gult, samon and maderia or yemengist* forms that differ principally in the type of institution holding the ultimate reversionary rights over the land.

All the rist, *gult*, *samon* and *maderia* or yemengist tenures were similar in providing use rights to the holder while institutions held the ultimate reversionary rights over individual holdings were different. The nature of tenure arrangement and security of tenure on individual holdings was highly dependent on the holder's relationship with the institution governing access to land.

Private Tenure was recognized as the most dominant system during the final days of the Imperial regime, affecting some 60 percent of peasants and 65 percent of the country's population. It was largely created by means of land granting by the crown to those members of the army who came from the north and those who were loyal to the regime in captured territories. Under this system land was sold and exchanged; however, given that all the land was originally state property and that private holders had no absolute rights, this was different from the general concept of a freehold system. Serious land concentration, exploitative tenancy and insecurity have characterized the private tenure system (Berhanu Nega, B.Adnew 2003).

The Derg period (1975 - 1991)

The 1975 land reform by the Derg has been considered by many as a radical measure that has abolished tenant - landlord relationships in Ethiopia. The reform was designed to alter fundamentally the then agrarian relations and make those working the land owners; increase agricultural production; create employment; distribute land and increase rural income; and provide a basis for agricultural expansion. The provisions of the proclamation (No. 31/ 1975) include: public ownership of all rural lands; distribution of private land to the tiller; prohibitions on transfer-of-use rights by sale, exchange, succession, mortgage or lease, except upon death and only then to a wife, husband or children of the deceased; and in the case of communal lands, possession rights over the land for those working the land at the time of the reform. The power of administering land was vested in the Ministry of Land Reform and Administration (MLRA) through Peasant Associations at the grassroots level.

Under this reform, all customary and pre-existing land rights were demolished and all lands were declared as a public property. Lands were redistributed among the peasant communities on a relatively equitable manner.

Current Land Tenure System

After the fall of the Derg in 1991, the new government reaffirmed what the previous regime had established by constitutionalising state ownership of all rural lands and declared that the issue of private versus public ownership of land would be settled during the process of developing the new federal constitution (Crewett and Korf, 2008). Article 40(3) of the new constitution that was adopted in 1995 states that:

The right of ownership of rural land and urban land, as well as of all natural resources, is exclusively vested in the state and the peoples of Ethiopia. Land is a common property of the nations, nationalities and peoples of Ethiopia and shall not be subject to sale or to other means of transfer (Ahmed *et al*., 2002).

Sub Article 4 also states that "Ethiopian peasants have the right to obtain land without payment and the protection against eviction from their possession." Another important provision regarding property rights (Sub Article 7) states that "Every Ethiopian shall have the full right to the immovable property he builds and to the permanent improvements he brings about on the land by his labor or capital. This right shall include the right to alienate, to bequeath, and, where the right of use expires, to remove his property, transfer his title, or claim compensation for it"(Nega *et al*., 2003). In its declaration on economic policy in November 1991 (Transitional Government of Ethiopia 1991), it announced the continuation of the land policy of the Derg regime.

The new constitution of 1995 approved and confirmed the state ownership of land in Ethiopia (FDRE, 1995). Land policy, the real source of power in imperial and contemporary Ethiopia, remains at the center of a controversial policy debate. The debate has largely been carried out along two antagonistic arguments concerning property rights to land.

The Ethiopian government continues to advocate state ownership of land whereby only usufruct rights are bestowed upon landholders. The usufruct rights exclude the right to sell or mortgage the land. Thus, the government asserted, was to protect the rural peasants from selling off their land to wealthy individuals leaving them landless and without source of livelihoods.

The Idea of Land Tenure

The term land tenure is derived from the Latin word tenured which means “to hold”. Tenure defines the social relations between people in respect of the object of tenure, in this case land (Lynch and Alcorn1994). According to Maxwell and Wiebe (1999, p.826) land tenure “is the system of rights and institutions that govern access to and use of land and other resources”. Land tenure systems mainly fall into three basic categories: Private or “modern”, communal or customary, and public or state. A forth category, open access, may also be observed where property rights have not been assigned or observed.

In the context of Ethiopia, and according to Article 40 sub-section 3 of the1995 Ethiopian constitution, land is entirely under state ownership. Simply put, *land tenure* is the way in which people have access to and use land and natural resources. A more detailed definition describes land tenure as “the institutional (political, economic, social, and legal) structure that determines (1) how individuals and groups secure access to land and associated resources, including trees, minerals, pasture, and water and (2) who can hold and use these resources for how long and under what conditions” (USAID, 2007).

The idea of land tenure could define differently by different scholars. But, it seems imperative to .have a working definition of the concept land tenure. Economic Commission for Africa (ECA 2004) states that, “land tenure is a social construct that defines the relationship between individuals and groups of individuals by which rights and obligations are defined with respect to control and use of land”. Moreover, the centrality of land in all dimensions of rural life in the context of Africa means that the analysis of land tenure issues should be broadened from its traditional links with issues such as land-use, agricultural efficiency, access to credit, conflict management mechanisms, fragmentation of landholdings and the like to include all aspects of political and social situations (ECA 2004).

Another definition given by FAO (2002) is land tenure as “the relationship, whether legally or customarily defined, among people, as individuals or groups, with respect to land”.

Moreover, land tenure is an institution, i.e. rules invented by societies to regulate behavior. In simple terms,” land tenure systems determine who can use what resources for how long, under what conditions”(FAO 2002).Similarly, land tenure seen as an institutional that determine how individuals and groups secure access to productive capabilities of land other uses over the land(Bell 2006).

The Evolution of Women’s Land Rights and the Land Certification program

Prior to 1975, Ethiopia’s long, feudalistic system of land tenure rarely recognized independent land ownership by women, except through marriage and inheritance. While women could inherit land from their parents or deceased husbands, they could not own land in their own right (Crummy 2000). The overthrow of last imperial government in 1975 abruptly instituted a series of measures that changed the political and economic landscape of the country from a feudal system to a socialist state (Bereket,2002).

Among the many radical measures, the land reform proclamation of February 1975 nationalized all rural

lands, announcing that all land was owned by the state and given to farmers on a right-to-use (usufruct) basis, organized via peasant associations (Bereket,2002). The farmers' membership in the peasant associations made them *claimants*, endowed with rights, such as access, some management rights, and limited exclusion rights. Per the 1975 legislation, spouses enjoyed joint ownership of the land, implying that on paper men and women were entitled to the same land rights. However, women's rights to land depended on marriage and were not registered separately; they therefore had no control of the land (Crewett *et al*. 2008).

The EPRDF-led government that overthrew the military government (Derg) in 1991 largely maintained the land policy of its predecessor, keeping all rural and urban land under public (government) ownership (Samuel, 2006). Significant changes included formal confirmation that land rights were to be granted to men and women, including the right to lease out land. However, most regions limited the period of the lease and restricted leasing rights to only a share of the farmland. The severe limitations in these provisions still exist, particularly for women. For instance, divorced women lack secure land rights, due to numerous exceptions which strictly curtail these rights (Crewett *et al*. 2008).

Pre-existing land-tenure systems in many developing countries are characterized as rigid and highly intertwined with socio-cultural customs, leaving huge room for efficient reforms (Nega *et al*. 2003). Women, in particular, are often disadvantaged by both statutory and traditional land-tenure systems (Agarwal 1994; Lastarria-Cornhiel 1997; Kevane and Gary 1999). Across Africa in particular, women's rights to property often derive from men in the household while their use of land is consequently constrained by the choices of the men (Davison, 1988 and Crummy, 2000). Ownership rights to land, and control over it in terms of production and management decisions, are arguably critical to productivity. Thus reforms that strive to improve land rights could go a long way to improve the economic position of rural women. They have weak property and contractual rights to land, water, and other natural resources (Quisumbing *et al*. 2009).

Since the 1990s, most African countries have passed new land legislation to remedy some of the perceived shortcomings of existing systems, particularly by strengthening customary land rights, recognizing occupancy short of full title, improving female land ownership, and decentralizing land administration (Deininger *et al*. 2009).

However, whether these moves have improved the status of women remains debatable.

In some cases, privatization has led to different land rights being concentrated in the hands of a few people, while other people (such as poor rural women or ethnic minorities) lose the few rights they have and generally are not able to participate fully in the land market (Lastarria-Cornhiel, 1997).

In addition, Khadiagala(2001) argued that traditional institutions suffer from a limited ability to deal with gender-related conflict and tend to be gender-biased. Even with recent reforms, gender equality has not been thoroughly addressed. Among other equity and efficiency concerns, the land certification program in Ethiopia attempts to address gender bias concerns of the current land-tenure system.

The program issues a non-alienable joint certificate to both spouses that confer equity and joint land ownership. The certificates include maps of the land and photos of both husband and wife. Women are also actively involved in the certification process, and the land administration committees at the *Kebele* level are required to have at least one female member (Deininger *et al*. 2007).

RESEARCH METHODOLOGY

DESCRIPTION OF THE STUDY AREA

Damot Gale woreda is located in Wolaita zone, Southern Nations Nationalities and peoples Regional States (SNNPRS). Astronomically it is located between $6^0$53'00"and $7^0$07'00" N latitude and $37^0$45'00"and $38^0$00'00" E longitude (Fig.3.1). It is bordered on the southwest by Sodo Zuria Woreda, on the northwest by Boloso Sore and Damot Pulasa Woredas, on the north by the Hadiya Zone, on the east by Diguna Fango Woreda, and on the southeast by Damot Weyde woreda. The administrative center of Damot Gale Woreda is Boditi Town which is about 368kms far South of Addis Ababa. It has the total area coverage of 24,285.9 hectares.

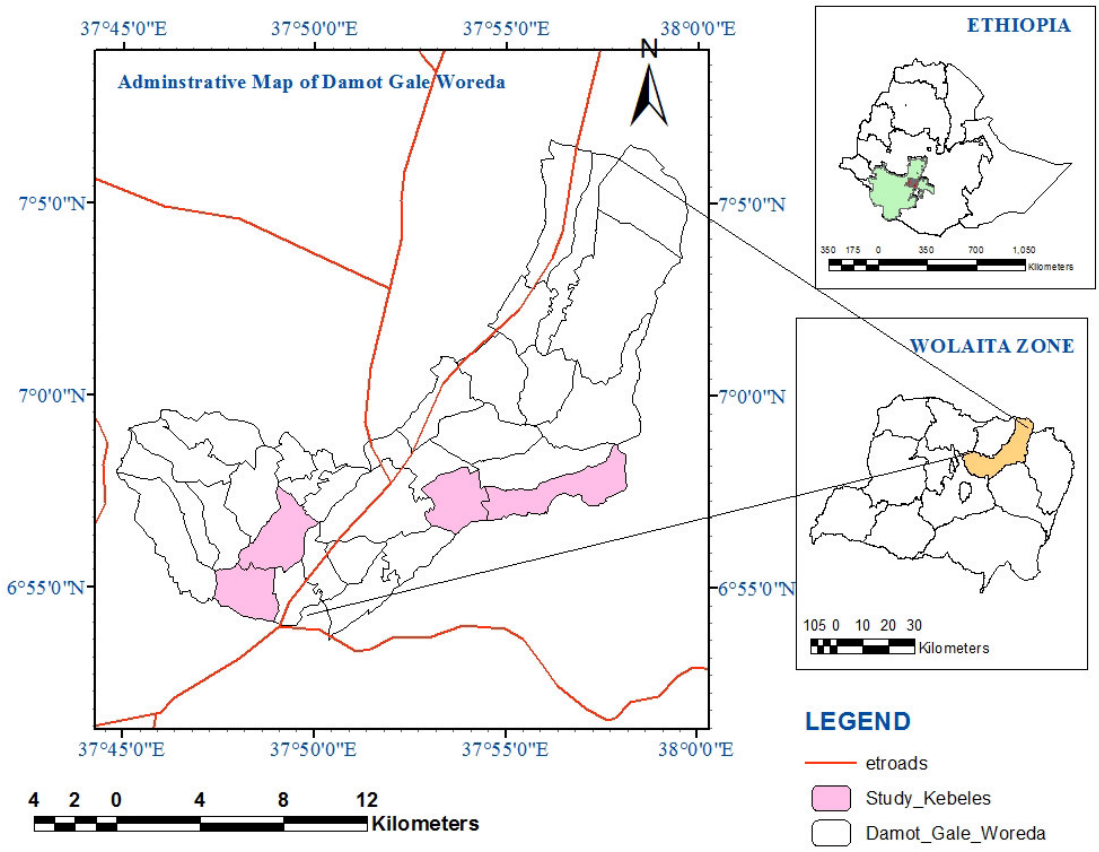


Fig. 3.1 Location Map of Damot Gale Woreda.
Source: Extracted from Ethio-Gis Data Base by the Author

Materials and Methods

Preliminary Survey

Prior to the research work, preliminary field observation of the research areas was carried out, questionnaire was prepared, pre-tested and modified accordingly, to interview the people and extract the relevant data. Surveying the study area and review of the secondary information was conducted.

Sources of Data and Methods

The necessary data were collected through the use of both primary and secondary sources. The sources of primary data that were used in this study primarily obtained by the questionnaire survey from sample households, focus group discussion, key informant interview and field observation. Farmers are the major sources of primary data. Secondary sources of information used for this study include published materials such as reports, plans, official records, census records, project reports. Also some of the local literature and some unpublished papers are obtained from the offices at the local and national level.

Methods of Data Collection

A combination of methods were used to collect relevant data as presented as follows:

Primary Data Collection Methods

Primary data were collected directly from the respondents using both quantitative and qualitative methods. All the necessary data were collected by targeting sampled HHs and kebele farmers' administration through HH questionnaire survey, focus group discussion, key informants interview and field observation

Plate 3.1 Personal face-to-face interview

Focus Group Discussions (FGD)

Focus group discussion was undertaken with selected farmers using some open-ended guiding questions. Two ways of communication was conducted between farmers and interviewers in order to make the process of data collection more effective. The focus group discussion included experts, leaders and elder community members. Discussion was done after conducting the household survey so that the issues related to tenure security and SLM which are not clear during the formal survey was raised to get the better understanding of the issues.

Plate 3.2 Focus group discussion with selected farmers

Secondary Data Sources

Some secondary data were collected from published/unpublished materials such as Rural land Administration and Utilization proclamation and regulation, reports, plans, official records, census records, project reports. These data have been used to get a better insight of the topic regarding evolution land tenure system of Ethiopia, rural land registration and certification on land management. The previous findings of related to similar researches even used to compare and contrast the findings from this study.

Survey Design

There is an increasing attention using qualitative and quantitative methods as a research strategy. The use of the two methods allows benefiting from the insight that the two methods provide clarity in research when used in combination. Moreover, it is suggested that the effective evaluation type of research that one combines qualitative and quantitative components (Babbie 2003). Hence, in this research qualitative and quantitative (mixed) methods were employed in combination as research strategy. Qualitative method is used to collect data relevant to the awareness and opinion on the effectiveness of the government rural land certification implementation and outcomes of the programs using semi-structured questionnaire. Quantitative data on total land size, total household size, and amount of land registered, feeling of security of land rights, improvement in LMPs practices and other basic information was collected from sample households using structured questionnaire. The household survey was conducted by trained enumerator who interviewed one household head after another using structured questionnaire designed for them.

Sampling

Two stage of sampling procedures was followed to select sample population. In the first stage four farmers administrations namely: Ade-Aro, Aro-wogara, Woshi-Gale and Wandara-Gale were randomly selected. In the second stage, FHHs were selected through systematic sampling method using separate kebele registries as sampling frame. The registry indicated that these four FAs contain 2109FHHs. In order to decide the sample size that represents this population a quantitative model suggested by Yamane; (1967:886) was adopted as presented below:

$$n = \frac{N}{1 + N(e)^2}$$

Where; n = Sample Size
N = Total number of HHs
e = Maximum variability or margin of error 8 %(0.08);
1 = probability of the events occurring.

Therefore;

$$n = \frac{N}{1+N(e)^2} = \frac{2109}{1 + 2109(0.08)^2} = 145$$

The required sample size is 145 respondents and has been drawn from the selected FAs on the basis of proportionate sample size rules shown in the following Table 3.3.

Finally, the sample household respondents from each kebeles was selected by employing simple random sampling techniques. This method of sample selection has given every household heads in each kebele a chance of being included in the sample. Therefore, the sample selection is free from bias.

Table: 3.3 Distribution of FHHs in selected FAs

No.	Fas	Total FHHs	Sample FHHs
1	Woshi-Gale	514	36
2	Wandara-Gale	572	39
3	Ade-Aro	525	36
4	Aro-wogara	498	34
Total	Four	2109	145

Methods of Data presentation and Analysis

In order to answer the research questions and to address the specified objectives of this study, both quantitative and qualitative methods were employed for analyzing the data. The quantitative data from the household survey and questionnaire survey were summarized, categorized and coded to analyze the responses into numeric values by using Statistical Package for the Social Scientist (SPSS) software version windows 16.0 to analyze the descriptive statistics of the study. Percentage and frequency values have been widely used and the data are presented in tables to enable easy interpretation and quick visual comparisons of variables within the study area.

Information obtained from verbal description of the role of land certification and data from the focus group discussions, key informant interviews with local people, DAs, land administration committee and experts as

well as for field observation notes were qualitatively analyzed.

RESULTS AND DISCUSSION

The survey result show that out of the total sampled HHs about 33.1 percent are between 46-55 years of age, 30.3 percent between 56-64 years age, 16.6 percent between 36-45 years age, 6.9percent are in age group 30-35, 1.4 percent are in age group of 20-29 and the remaining 11.7 percent are greater than 65years. Minimum and maximum ages of the interviewed household heads are 22 and 84 respectively with an average age of 53 years. According to the survey the majority of the respondents are found in the age group of 46-55. (Table 4.1)

Table: 4.1 Distribution of respondents by age

Age group	Number of respondents	Percent
20-29	2	1.4
30-35	10	6.9
36-45	24	16.6
46-55	48	33.1
56-64	44	30.3
65 and above	17	11.7
Total	145	100.0

Source: Household survey by author, 2014

Household Size

As it has been showed that about 11.7 percent of households under investigation have the HH size of 1-4 members, 31.7 percent have 5-7 members, 46.2 percent comprises of 8-10 members and 10.3 percent are above ten members (Table 4.2). Table 4.2 further confirms that nearly half (46.2%) of the respondents have 8-10 family members which are greater than the country's average which is six members.

Table: 4.2 Percent distribution of respondents by HH size

Family size	Number of respondents	Percent
1-4	17	11.7
5-7	46	31.7
8-10	67	46.2
Above 10	15	10.3
Total	145	100.0

Source: Field survey by author, 2014

Educational level

Education would have a great influence for the awareness of farmers regarding to environmental issues. The data presented here was collected in such a manner to include the educational level of respondents. As it can be seen from figure 4.1, among the literate category, the majority of the people (43.4 percent) have the education level ranging from1 to 4, 33.8 percent cannot read and write, 7.6 percent can read and write, 7.6 percent has junior education, 5.5percent has high school education, 0.7percents has preparatory, and the rest (1.4 percent) has certificate and above. The result shows that the educational status of farmers in the study area is considerably low. In the area as a whole, significant share (about 43.4%) of the household heads were illiterate (Figure 4.1)

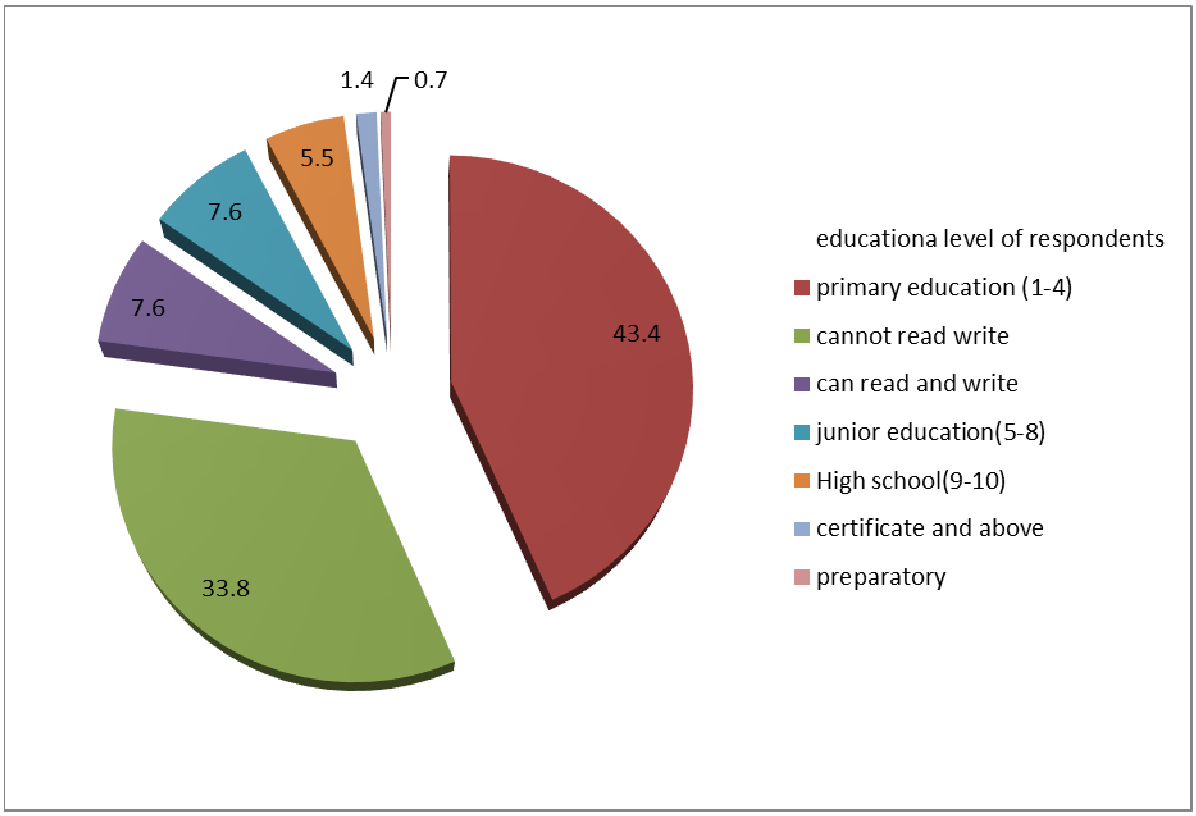
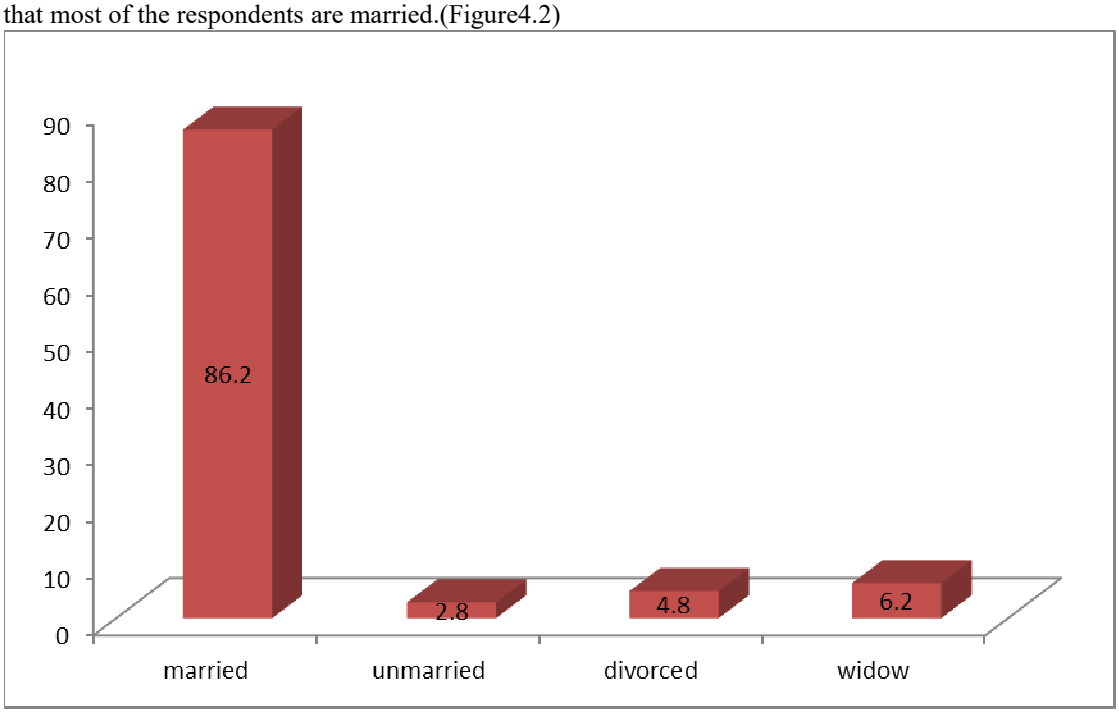


Fig. 4.1.Percentage distribution of respondents by educational level

Marital status

The given fig. 4.2 shows marital status of the HH heads. As indicated in fig. 4.2 majority of respondents are married (86.2%). 2.8% of them are single and 4.8% are divorced and 6.2%are widowed. Thus, the survey shows that most of the respondents are married.(Figure4.2)



Source: Household survey by author, 2014

Fig.4.2 Distribution of respondents by marital status

Land Holdings

Regarding the land certificate all respondents had received certificate for their lands. Out of the total sampled HHs 60percent of the respondents got their certificate in 1998, 32.4percent got in 1999 and 7.6percent got their land certificate in the year 2000.The certificate are given jointly both by husband and wife listing the names of other family members and the total size of farm plot. If one of them was died the certificate is given by a single person.

80 percent were issued by both husband and wife, 14.5 percent certificates were issued by husbands and 5.5percentwere given by wives. The certificate is not given to those whose age is below 18 years old. The land has been acquired through inheritance, redistribution and contractual for a short period. The following Table 4.3 shows the way how farmers got their land.

Table: 4.3 Land Tenure structure

Roll no	Ways of acquiring	No of respondents	Percent
1	Inheritance	116	80
2	Redistribution	27	18.6
3	Contractual	2	1.4
	Total	145	100.0

Source: Field survey, 2014

As indicated in Table 4.3 it is shown that farmers got their land not in similar ways. According to the above given table the majority of farmers got their land from their parents(80%),18.6% of them got their land through redistribution 1.4% of them got the land through contractual and no one had got the land through sharecropping. Thus, the survey result shows that the majority of the respondents acquired their land through inheritance.

Land holding size

As in most highlands of the country, the landholding of farmers in the study area is very small. The survey result shows that, almost all of the farmers have their own farm land. However, there is a significant variations in the size of landholding among farmers. The land holding of farmers in the study area varied from less than one 'timad' (0.25 hectare) to more than 5'timad' (1.0 hectare) with an average holding of 2.179 'timad' per households. Depending up on the farm size, they use the land for various purposes whether it is for cultivation, grazing, wood lots and homestead. As it can be seen from Table 4.4 the households with less than 0.26 hectare(3'timad') make up 27.5 percents household, with 3.1'timad'to 5'timad' constitute 35.2 percent; households with 5'timad' to 7'timad' members make up 29.7 percent, household with 7.1to 8'timad'constitute 6.9percent and household with more than 8'timad'make up only 0.7percents. Thus, the data on Table 4.4 shows that most of the farmers have less than 0.5 hectare, which constitute 62.8 percent of household head. In Ethiopia, the ratio of people per hectare of land under cultivation as of 1998 was about 0.14 hectare. This means a family with seven members has only a hectare of land (Sisay, 1998). Hence, pressure on land at household level has been increasing as long as the population growth is there.

Table: 4.4 Landholding size of sample household heads.

Farm size in 'timad'	No of respondents	Percent
1-3	40	27.6
3.1-5	51	35.2
5.1-7	43	29.7
7.1-8	10	6.9
8 and above	1	0.7
Total	145	100.0

Source: Household survey, 2014

Farmers' View and awareness on land certification

According to the survey result all respondents received the certificate for their land. Yet not all these respondents know the rights and obligations written in the certificate. From the total sampled HHs, 55.9percent are aware of the basic rights and obligation indicated on their land certificate. Whereas 44.1percent do not. According to the respondents, this is because of majority of the respondents have low educational level and lack of information. About 33.8percent of the respondents cannot read and write. From the study, we can see that even though all of the farmers were received the certificate, a significant number of respondents have no awareness about the rights and obligation about written on their certificate.

Perception of farmers about the security of land before and after land certification

Perception and view is very subjective concepts and difficult to define as it is subjective and not directly measurable things. So here an attempt has been made to catch farmers view and awareness in terms of land

tenure security, increase in different types of land management practices, renting their land for short period of time, increase in women access to land, minimizes land dispute problem, getting credits for farm inputs. Hence, the questions were designed in order to know the trends in perception of farmers about the security of land before and after certification, whether they fear their land can be taken by the government at any time in the future and whether women land rights are secured as the results of land certification or not.

As indicated in Table 4.5 below farmers were requested to show their land security status before and after getting certification, only 23.4percent of the respondents stated that they were secure with their land before getting certificates. Compared to this, the portion of respondents stated that the security of land increased after certification raised to 85.5percent. Thus, the survey result shows that there is a difference in the perception of farmers before and after getting certificates. So, certificate helps to increase the perception of farmers about their land security. This finding is the same as the finding that was made by Sabita (2010) in Central Rift Valley of Ethiopia which showed that the certificate will help to increase land tenure security.

Table: 4.5 Perception of farmers about security of land before and after certification

S/no	Before certification		After certification	
	Frequency	Percent	Frequency	Percent
Insecure	27	18.6	0	0
Partially insecure	17	11.7	2	1.4
Partially secure	67	46.2	19	13.1
Secure	34	23.4	124	85.5
Total	145	100.0	145	100.0

Source: Own field survey data, 2014

Besides information obtained from FGD indicated that farmers expresses the significance of the certificate of holding as the certificate is the legal document to keep their land holding rights secured. Furthermore; they explained that certificate is a legal evidence that can protect their rights from different types of land related disputes, and expressed their confidence that the certificate of holding shows their perpetual rights to use the land, and their ability to gift and inherit their children after death.

Land certification and women land rights before and after getting certification

An important point concerning women land rights is " women land rights in Africa has been treated differently in customary systems and statutory systems" Hilhorst (2000). Many studies conducted in the area of women land rights generally realize that gender differences in access and control over land across Africa is generally taken as a common problem in both research policy literatures. It has clearly shown that the women's right over land and other farm resources are inferior to those of men placea (2008). In Ethiopian context female are less involved in farming activities and males are always responsible for those activities they have less power and weak position in HH and in society than male.

Information obtained from FGD indicated that unmarried women's access to abandoned land is not realized and none of them accessed land through inheritance in the study area. The paternal inheritance system disfavored women in terms of land acquisition through inheritance because women are not considered as custodians of family property in communities practices. The tradition in the study area gives inheritance rights to male descendents but denying inheritance right to daughters of their deceased parents' land. Another information from FGD with rural on land access right of widows confirm that widows' access to deceased husbands' land is attached to fertility. These informants further disclosed in-law would not allow a widow to live on their deceased relative's land if a widow is childless from that marriage.

As indicated in Table 4.6, among the total sampled HHs 86.9percent respondents believed that women land rights are not secure and only 13.1percent respondents believed that women land rights is secure before land certification. But after getting land certificate about 94.5percent respondents believed that women land rights secured and only 5.5percent respondents believed that women land right is not secured. Out of total sampled HHs, eight female respondents in the study area mentioned that as their names are mentioned on the certificates, they believe that they will get the land in case of death or divorce to their husband. Thus, this shows that the provision land certificate by both spouse and by the name of female increases women access to and control over land. Hence, the finding shows that there is a quite change in the security of women land rights after getting certificate (Table 4.6).

Table: 4.6 Security of women land rights before and after getting land certificate.

Description	Responses of respondents	No of respondents	Percent
Women land rights before certification	Yes	19	13.1
	No	126	86.9
	Total	145	100.0
Women land rights after getting Certification	Yes	137	94.5
	No	8	5.5
	Total	145	100.0

Source: Field survey data, 2014.

Information obtained on land access rights of women in polygamous marriages from interviews conducted with Woreda Land Administration experts and Kebele LAC members reveal that polygamy is mostly attached to infertility and ageing of women and that wives themselves agree with their husbands' entering into second marriage in such cases. As to rights of these women to land, these interviewees explained that the husband shares yields obtained from the land registered in his name to all wives. Kebele LAC members also stated that all wives get their share from the husband's land in case of divorce. However, assessment on the regional land policy makes evident existence of policy gaps on land access rights of women in polygamous marriages. There is discrepancy between the regional rural land use and administration proclamation (Proclamation 56/2002) and the implementation regulation (Proclamation 39/2003) on land rights of women in polygamous marriages.

Besides, the key informants interview with experts of woreda agricultural office regarding the benefits of land certificate confirmed that although it has many problems in practical implementation level, it benefits women by ensuring access to land, give guaranty for access to credit, increasing decision power and it help to participate in land management practices.

The Land certificate and Land disputes

Deininger and Castagnini (2004) proposed that one of the main reasons for the increasing incidence of land-related conflicts in Africa is the failure of land tenure systems to respond to the increasing land pressures and this undermines investment incentives and land productivity. An important question is then whether policy interventions can help to reform these tenure systems such that investment and productivity effects can be enhanced by reducing land conflicts and tenure insecurity. In this section an attempt has been made to show whether the land certificate contributes to decrease land related conflict or not.

Therefore, the respondents were asked questions in order to investigate the level of land disputes in the study area. The following survey result shows land related issues before and after certification.

Table: 4.7 Percentage distributions of respondents whether experienced land related disputes

Variable	Responses	Before certification		After certification	
		Number of respondents	Percent	Number of respondents	Percent
Have you ever faced any land related dispute in your land ?	Yes	101	69.7	16	11
	No	44	30.3	129	89
	Total	145	100.0	145	100.0

Source: Field Survey by author, 2014

As it is indicated in Table 4.7, 69.7 percent of the respondents reported that they faced different types land related disputes, especially boundary and inheritance disputes and 30.3percent responded that they never faced land dispute problems before certification whereas after certification the majority (89%) of the respondents stated that they didn't face any land related problems and 11percent reported that they face land dispute. The above figure shows that as the land was registered and certified, the level of land related disputes shows a decreasing trends. The finding of this study shows that land related disputes are declining after the land certification. The result of this research is similar as the research conducted in Tigray region which revealed that 66 percentof the respondents responded that land related disputes are decreasing after certification (Holden, *et al*.2007).

This is a good evidence of the positive effects of land certification in terms of reducing a number of land related disputes. Even though a conflict over land exists, the land certification plays a great role reducing related disputes.

As to FGD regarding land disputes existed in the study area before certification boundary conflicts, encroachment to communal lands and inheritance disputes were the major source of conflicts while after the land

was registered and certified these land related problems were reduced in significant level. This is because all farmers acquired certificate to their landholding and this in turn reduces land related disputes. However, the communal lands in the study area are simply registered but not certified. Because of this due to shortage of lands farmers who have lands bordering communal lands were expand their land from time to time and this situation leads to raise many encroachment problems especially in communal lands.

As key informants interview with experts of woreda land administration committee, before certification land cases were the main source of conflict between farmers. This is because the boundaries of land were traditional one (stone, "kinchib" etc..) that means it has not well defined boundary marks as the result of this boundary conflict was the main source conflicts in woreda but after land certification this problem was solved as the result of certificate.

Land certificate and different types land management practices

The provision of certificate is to increase sustainable land management practices. So, in order to know whether rural land certification encourages or discourages sustainable farm practices and land management.

Therefore, an attempt was made to show whether perception of farmers about tenure security affect their perception on land management or not (Table 4. 8).

Table: 4.8 Land certificate increases different land management practices

	No of respondents	Percent
Slightly disagree	51	35.2
Agree	75	51.7
Strongly agree	15	10.3
Neutral	4	2.8
Total	145	100.0

Source; field own survey, 2014

Table 4.8 shows that about 10.3percent of respondents strongly agree and 51.7percent respondents agree that land certification increased the perception of farmers in land management practices and 35.2percent slightly disagree, 2.8percent are neutral and there is no any case of strongly disagreement. Even though majority (62%) of respondents agree and strongly agree that the land certificates enhances investments in LMPs, whereas 35.2percent slightly disagree and 2.8percent are neutral. Thus, the survey result revealed that the majority of the respondent believed that certificate increases the perception of farmers in land management practices.

Even though land certificate enhances tenure security, some farmers are not making land management practices for the sake of the certificate. According to these farmers, irrespective of whether they have land certificate or not, they manage their land properly because it is the basic source of their life and all of their basic needs are meet from land.

In addition, they emphasized that "before the land registration program we were doing different types of soil conservation practices; and now after the land registration we are still implementing the same".

Land certificate and access to credit

Application of modern fertilizers, improved seeds and other important farm inputs are very important to acquire the expected results from the farm. But due to financial problem most farmers do not apply these inputs to their field which is also the case in the study area. According to Deininger (2003) one of the benefits of having land certificates is that the farmers can use their land certificates as collateral to the financial institute and can get credits to buy farm inputs.

As to focus group discussion with the key informants revealed that if they encountered shortage of money to buy agricultural inputs or any other purpose they can get credit by using their land certificate from micro-finance institutes, like Omo micro-finance.

Table: 4.9 the land certificate and access to credit

	No of respondents	Percent
Slightly disagree	41	28.3
Agree	96	66.2
Strongly agree	3	2.1
Neutral	5	3.4
Total	145	100.0

Source: field survey, 2014

The above table shows that out of the total respondents in sampled HHs the in the study area , majority(66.2%) of the farmers agreed that certificate help in getting credits whereas 28.3percent of them slightly disagree and the other 3.4percent of the sampled respondents are somewhat not clear in the issue and they are neutral, that means not being able to completely agree or disagree due to lack of awareness of using land

certificate to get credit from micro-financial institute for inputs.

Thus, the survey result revealed that even though there is lack of awareness among some farmers, the land certificate is used as means of getting credit for their farm inputs from micro-finance institute.

Land certification and renting their land for short period of time

Following the demise of the Imperial regime and the proclamation of a land reform in 1975, all lands were\ nationalized and pre-existing land rights were abolished. Every Ethiopian became entitled to the use of land and had full ownership of the product of their labor, creativity and capital but land could neither be inherited, rented, sold or mortgaged (Adal, 2002; Crewett *et al*., 2008; Holden and Yohannes, 2002).Even in recent times before land certification, there was illegal contractual of land and it was not supported by the law. The following table shows the contribution of certificate in renting their land for short period of time.

Table: 4.10 Land certificate helps in renting their land for short period of time

	No of respondents	Percent
Slightly disagree	31	21.4
Agree	94	64.8
Strongly agree	2	1.4
Neutral	18	12.4
Total	145	100.0

Source: Field own data, 2006

As indicated in Table 4.10, the majority of the respondents (64.8%) agreed that the land certificate helps them to rent their land legally for a short period of time, while 12.4percent respondents have no clear idea about the contribution of the certificate whether it helps in renting for short period of time or not. The remaining 21.4percent respondents slightly disagree that the land certificate helps them in renting their land. Thus, the survey showed that land certificate helps farmers in renting their land for short period of time in a legal way.

As to focus group discussion with the key informants they said that formerly farmers in the study area held the land in an illegal contractual way (traditional way) for a long period of time and farmers indirectly buy and sell the land.

However, after getting land certificate most farmers are become aware about the use of land certificate to rent their land for short period of time. They also said that even though land certificate helps them to rent their land some farmers rent their land in traditional way not by using their certificate due to lack of awareness.

Farmers perceptions towards current land administration system

There were different types of land tenure system which were practiced in Ethiopia. In this section it has been tried to show farmers perception regarding the current land administration system whether it is good or not, and the fear of farmers in redistribution of land. Hence, the questionnaire was designed in order to study the current land administration system whether they like or not and whether they fear their land can be taken by the government at any time in the future. The survey result was presented in the following Table4.11.

Table: 4.11 Perception of farmers towards current land administration system

	Responses	Frequency	Percent
1. Do you think that the current land administration system is good for you?	Yes	133	91.7
	No	12	8.3
	Total	145	100.0
2. Do you fear the land will be taken by the government at any time?	Yes	25	17.2
	No	120	82.8
	Total	145	100.0
3. Are you willing to pay substitution fee if you lose your land certificate?	Yes	136	93.8
	No	9	6.2
	Total	145	100.0

Source: field survey by author, 2014.

Almost all of the farmers have some kind of awareness about the importance of certificate. The entire sampled HHs feel the importance of the certificates and 93.8percent of the respondents have mentioned that they volunteer to pay a substitution fee for the replacement if they lose their certificate (Table 4.11). The survey result shows that out of the total sampled HHs 91.7percent perceived that they like the current land administration system whereas, 8.3percentof the respondents mentioned that they do not like the current land administration system. The survey result also shows that 82.8percent of the respondents are confident that land redistribution will not take place and their land will not be taken by the government at any time in the future whereas 17.2percent of the respondents are still have a fear of future land redistribution and their land will be taken away by a government at any time (Table 4.11). This shows that the fear is not completely avoided in some peoples

mind. Thus, the finding of this research indicates the majority of the respondents perceived that the current land administration system is good for them because their land certificate made them confident in security of their land rights.

Impact of Land Certification on Land Management Practices

In this section it was attempted to show different types land management practices done by farmers. The major land management practices that the farmers are practicing in the study area are indigenous and improved physical soil and water conservation measures which include construction of bunds (soil bund, Fanayaa juu, bench terrace, deep trenches, and cut-off drains), diversion ditches application of compost and inorganic manure, tree plantation, fencing of pasture land, water harvesting structure and intercropping.

Indigenous Soil and Water Conservation Practices

There are a number of indigenous soil and water conservation measures practiced by farmers. However, farmers use some of indigenous soil and water conservation technologies in order to control land degradation in the study area. They are broadly categorized into physical and agronomic methods of soil and water conservation practices. The indigenous physical soil and water conservation techniques that are applied to control erosion include traditional diversion ditches, traditional cut-off drain. Indigenous agronomic soil management practices include Mixed cropping, Application of compost and crop rotation. **Cut-off drain** It is one of the physical indigenous soil and water conservation structures commonly constructed by digging the soil deep by family labor and neighborhood. In order to divert the run off before reaching the farmland farmers construct traditional cut-off drains to prevent loss of soil due to excessive run-off coming from highlands of the terrain and dispose the excess surface run-off from higher ground and protect the downstream cultivated land by diverting run-off to rivers. The survey results show that 2.8percent of the farmers in the catchment used cut-off drains (Table 4.12). During field observation, it was observed that cut-off drains which were constructed at one place for long period of time directly causes big gullies and accelerate soil degradation(Plate4.1). Focus group discussion with key informants showed that cut-off drains are constructed mostly in steep sloppy land where there is high run-off and soil erosion. The establishment of this conservation structure, especially between the farms boundaries forms big gullies in different part of the study area.

Plate 4.1: Gullies formation due to cut-off drains in *Wandara-Gale kebele* .

Traditional ditches are commonly used indigenous physical soil and water conservation practices in the study area and also locally known as‘*bo'eya*’. Traditional ditches to allow excess water to infiltrate easily and drain out of cultivated land, to the side of natural waterway. The structures are constructed mainly by oxen drawn plough and family labor. Out of total respondents, 8.3% of household heads practiced indigenous ditches for managing drain excess water from the field, protect the soil from being washed away by runoff and reduces surface runoff generated within the cultivated land (Table 4.12). According to focus group discussion traditional ditches are simply constructed during farming period and destructed after the harvesting of crops for preparation of new ditches on farm fields were constructed. Therefore; it is simple and low cost methods.

Inter-cropping Intercropping is a practice of growing two or more crops at the same time on the same piece of land. Intercropping follows specific arrangements where some legume animal fodder and haricot bean grown in rows within the main crops (maize and sorghum) in the study area The aim of intercropping is to increase productivity of the land and to protect the soil against erosion. The intercrop stand makes better use of the available environmental resources. Intercropping reduces the problem of soil erosion.

In most cases grains and leguminous crops are mixed together in order to improve soil fertility and control surface run-off from the farm fields Mushir *et al.*, 2012). Out of total respondents, 76.6percent of households practiced inter cropping in the study area. According to key informants, the fast growing legumes such as haricot beans, peas and beans are mixed with late matured crops like maize and sorghum to fix nitrogen and control soil detachment. It is significant for protecting the soil against erosive forces and increasing crop production.

Application of compost is an agronomic indigenous soil fertility management practices used to be an important input for maintaining and enhancing soil fertility. Manure made of animal dung and urine is the best part of organic fertilizer. In the study area 37.9percent of households applied organic manuring on their farm plots in order to improve fertility of the soil(Table4.12). Farmers used manure mainly on the homestead farm rather than the distance plot probably to reduce transport cost or unnecessary labor cost. As to FDG with key informants, farmers have increased the amount of manure applied because of currently prevailing the high price of inorganic fertilizers.

Plate4.2: Compost making in farmers' homestead

Crop rotation It is also commonly used indigenous soil and water conservation activities practiced in the study area. Crop rotation is a practice of growing different crops one after another on the same piece of land, season after season or year after year. It is a valuable traditional practice, which plays an important role in maintaining ecological stability and improving agricultural productivity. Farmers used to select crop rotations are largely based on their personal preference, agro climatic condition and suitability of the soil type of farm plot for the selected crops. As to FGD with key informants , major crops rotated practice by farmers in the study area are from legumes to cereals (Haricot bean – Teff) or cereals to cereals (Maize - Teff - Maize or Maize) or from cereals to root crops (Maize - Sweet potato or Wheat - Sugar potato or Teff - Yam). Information obtained from FGD with key informants also explain that planting of different crops on the field in rotation can enhances soil nutrients and crop yields.

Table 4.12 Indigenous soil and water conservation measures practiced in study area

Indigenous soil and water conservation measures	Frequency	Percent
Cut-off drains	4	2.8
Traditional ditches	12	8.3
Inter-cropping	111	76.6
Application of compost	55	37.9

Source: Field survey by Author, 2014

Introduced Method of Soil and Water Conservation Practices

The most important introduced soil and water conservation measures that are widely used in the area include Soil bunds, fanya juu, Trenches and Bench terrace.

Soil bunds

Soil bunds are one of the introduced physical soil and water conservation measures that are practiced in the study area. They are constructed by throwing soil dug from basin down slope to control runoff and erosion from cultivated lands by reducing the slope length of the field which in turn reduces the velocity of runoff.

According to the implementation guideline for community based watershed planning (DGWBoAD, 2014), they are constructed in fields that have slope less than 15 percent. Out of the total respondents 32.4 percent have constructed soil bunds on their farm fields (Table 4.13).

Plate 4.3**:** Six years Soil bund Constructed in sloppy gradient in *Wandara-Gale kebele*

Fanya juu Structures It is an introduced physical soil and water conservation measures practiced on cultivated lands, grazing lands and sloppy homestead farm land. Out of the total sample HHs, 26.9 percent of respondents replied that they practiced fanaya juu structures in their farm plots (Table 4.13). The construction of *fanaya juu* varies from village to village based on slope category of farm land. Accordingly, the recommended farm land slope gradient category for construction of *fanaya juu* is in between 3-15percent slopes (MoARD, 2003). During field observation it was observed that most of the farmers' fields fanny juu was practiced in combination with biological conservation practices
(Plate 4.4).

Plate 4.4 : Four years fanny juu combination with biological conservation measures in *Wandara-Gale kebele*

Deep trenches It can be constructed on slopes of 3-30 % and soils at least 50 cm depth and suitable mostly in semi-arid and medium rainfall areas (600-900 mm). About 13.8percent of households had practiced Trenches for soil and water conservation in the study area (Table 4.13). They are implemented mostly during the dry season or after short rainy season for hard soils and are rectangular and deep pits constructed along the contours. The main purpose of constructed Trenches was collecting and storing rainfall water to support the growth of trees, shrubs, cash crops and grass or various combinations of those species in moisture stressed areas(MoARD,2005). They have good potential to improve degraded areas and homesteads can support fodder

production and trees/shrubs. According to natural resource management expert's explanation from *DGWAD*, Trenches constructed by government program in degraded communal land were better status with specific standard design compared to constructed soil bunds and fanyajuu structures in farm land because of no space taking complained in communal land by the farmers (Plate 4.5).

Plate 4.5: Trenches constructed on degraded land in *AroWogara kebele*

Bench terraces Construction of bunds is the physical structures which are constructed across the contour lines in order to reduce the steepness of the land (Gebrernichael *et al.,* 2005). Bench terraces are introduced physical soil and water conservation practice applied in area where the slop of the land is very steep in order to reduce the steepness of the slop and control soil erosion in the area. About 18percent of households had practiced bench terraces for soil and water conservation in the study area (Table 4.13)

Plate 4.6 Bench terraces in Woshi-Gale kebele,2014

Table: 4.13 Major types of physical land management practices in the study area.

Types of introduced Soil and water conservation	No of respondents	Percent
Soil bund	47	32.4
Fanayaa juu	39	26.9
Bench terraces	26	17.9
Deep trench	20	13.8
Cut-off drains	13	9
Total	145	100.0

Source; field own survey, 2014

Land management practices before and after getting land certificate

Farmers are practicing at least in one type of land management practices before and after getting land certificate. Among LMPs, terracing, planting of permanent tree, application of compost, planting of fodder trees, construction of water harvesting structures and maintenance of physical LMPs have been considered in this study. Each type of LMP has shown high significance difference before and after land certification (Table:4.14).

Table: 4.14 Types of land management practices before and after land certification

No	Variables	Before certification			After certification	
		Yes	No	Yes but Limited	Yes	No
1	Make terracing(physical LM structures)	67.6	32.4	0	93.8	6.2
2	Maintenance of physical LM structures	26.2	73.8	0	70.7	29.3
3	Planting permanent trees	42.1	33.1	24.8	95.9	4.1
4	Different types fruit trees	36.6	63.4	0	74.5	25.5
5	Application of compost	12.4	87.6	0	40	60
6	Water harvesting structure	0	0	0	14.5	85.5

Source: field survey, 2006.

As it is shown in Table4.14, there is a significance differences before and after certification. Among the HHs in land management practices For instance, before land certification 67.6percent respondents made terracing on their land and only 26.2percent respondents maintain these structures when it was damaged but after certification 93.8percent respondents made terracing on their land and 70percent of respondents maintain these structures when it was damaged. Regarding planting permanent trees before certification 42.1percent of respondents plant permanent trees on their land, 36.6percentplant fodder trees on pasture land,12.4percent apply organic fertilizer, and no water harvesting structures but after certification these numbers were increased to 95.9percent,74.5percent,37.9percent and 12.4percent respectively. According to survey result 74.2 percent of respondents said that these the above mentioned differences in land management activities in (Table4.14) is due to land security after getting certificate.

Besides, information obtained from focus group discussion with kebele Land Administration Committee indicate that although farmers practiced different types of LMPs on their land before land certification, some farmers who acquired their land through redistribution have no full confidence about their land. Because of this they are not engaging in permanent land improvement activities. However, after land certification farmers having certificate for their land increased the willingness of farmers to improve their land and sense of land tenure security. This in turn motivated the farmers to practice different types LMPs more than before.

CONCLUSION

The frequent land redistribution in the past regimes of Ethiopia was the main threat for insecurity of land rights. However, current government took measures to increase tenure security by giving land certificate. Therefore, the study focused on the role of rural land registration and certification program on land management and in granting land tenure security. To attain this objective rural land registration and certification has been implemented in the region since 2004 by providing landholding certificate to enhance farmers security of land rights. Before certification majority of farmers in the study area lack full confidence about their land and fear of future land redistribution was one the source of tenure insecurity. The finding from this research showed that this fear of some farmers was almost eliminated and they feel completely secure of their land after land certification. This is because of change of perception of farmers and the certificate also ensures the full rights of land tenure security. The findings of previous studies revealed that perception level of farmers is too low but in this study it is increasing from time to time. So, from this finding we can conclude that land certification plays a great role(positive effect) in securing land rights. The findings of this research revealed that all respondents have certificate for their land but not all of these farmers understood the rights and obligation written on their certificate. Hence, it can be concluded that there is information dissemination gap to create knowledge about the rights and obligations listed on certificate among some farmers.

The study has also tried to examine the perception of farmers about security of women's land rights. In this regard the finding revealed that the majority(94.5%)of respondents perceived women's' land right is secured after certification.

Regarding land related disputes, the finding of this study revealed that land related disputes were high before certification and decreased after land certification. This finding show that land certification has a positive effect in reducing land related disputes. Concerning the impact of land certification on long term investment and sustainable land resource management, even though some (35.2%) of respondents slightly disagree that the land certificates didn't enhances investments in LMPs and they are not making land management practices because of the certificate. However, the majority of the respondents believed that certificates increase the perception of farmers in land management practices and HHs participation in LMPs has shown an improvement in the study

area after land certification. It is also indicated that before certification land management activities were not practiced as such by many farmers due to lack of awareness. Yet, the finding from this research revealed that the majority of the respondents were involved in different types of land management activities after certification. Thus, this shows that there is a positive relationship is observed between certification and land management activities.

The finding of the study shows that there is no significant relationship between certification and farm productivity thereby leading to further investigation including other factors that have significant influence on agrarian farm productivity.

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