DISSERTATION TITLE: Impact of Pastoral Productive Safety net Program on prevention of asset reduction at household level in Somali Region

Name: ***Hanna Teshome Habtemichael***

Enrollment number: 089133318

Supervised by: Dr. Wondimagen Chekol

Masters of Art in Rural Development (MARD)

INDIRA GANDHI NATIONAL OPEN UNIVERSITY (IGNOU)

May 2012

Acknowledgements

The research student team thanks PCAE for arranging logistics of the trip and for their facilitation of meetings with consulted community.

Of most importance, I thank the pastoralists and agro-pastoral communities of Filtu woreda who answered the many questions about themselves and their experiences with the PSNP.

In particular Dr. Wondimagen Checkol deserves mention for his supervisory support.

Table of Contents

Contents

List of Tables

List of Figures

Figure 15: Comparison of average number of camel per household in Aynile community before 2005 and now

Figure 16: Pattern of drought for Aynile over the last ten years with 'shocks' and comparative overlay of livestock numbers:

Figure 17: Pattern of drought for Masajid over the last ten years with 'shocks' and comparative overlay of livestock numbers:

List of Acronyms

ABE:	Alternative Basic Education
APL:	Adaptable Program Loan
CAHWs:	Community Animal Health Workers
CIDA:	Canadian International Development Agency
CS:	Coping Strategies
DFID:	British Department for International Development
DS:	Direct Support
ETB:	Ethiopian Birr
FSP:	Food Security Programme
HH:	House Hold
HIV/AIDS:	Human Immune Deficiency Virus/Acquired Immune Deficiency Syndrome
MDGs:	Millennium Development Goals
MIS:	Management Information System
NGOs:	Non Governmental Organization
PAD:	Project Appraisal Document
PCAE:	Pastoralist Concern Association Ethiopia
PFE:	Pastoralist Forum Ethiopia
PRA:	Participatory Rural Appraisal
PW:	Public Works
PSNP:	Productive Safety Net Programme
SNAP:	Safety Net Approach for Pastoralists
SPSS:	Statistical Package for Social Science
RVF:	Rift Valley Fever
USAID:	United States Agency for International Development
WFP:	World Food Program

Abstract

This paper assesses the impact of Pastoral Productive Safety net Program on prevention of asset reduction at household level in Somali Region. The study aims at making an in-depth analysis on the impact of Productive Safety Net Program in preventing asset reduction at the household level mainly of key breeding livestock, which is one of the main strategic objective the program needs to address. The PSNP program is being implemented within a background where unpredictable seasonal variation, increasing population, and accompanying stress on the environment are constraining factors that are increasingly impacting on food insecurity. It is within this context that PSNP is aiming to provide transfers to chronic food insecure communities and prevent the depletion of household assets. The program is preventing destitution within communities as there is little doubt that the situation would be far worse in these program areas were the food transfers not taking place. Existing traditional coping systems such as *zakat* and *irmaansa* are under significant strain exacerbated by the recurrent drought-like conditions and PSNP is supporting and relieving this system so that not only those specifically targeted by the program but others within the community can also benefit.

In this study sets of participatory techniques were implemented to assess the Impact of Pastoral Productive Safety net Program on prevention of asset reduction at household level in Somali Region. The result of the study has revealed that the program has little impact on participants in protecting household assets of Somalie pastoralists, due in part to overwhelming drought that wiped off their livestock. *PSNP alone is therefore not able to protect assets at the household level but helping targeted communities as a life saving.* The conclusion reached from this study is therefore, PSNP needs to be recognized as an important pillar and foundational 'holding' program in addressing the huge challenges facing pastoralist communities in southern Ethiopia. It is not a solution however, to these challenges given the experience to date and assuming a continuation of current broader trends and as such there is no clear end in sight for the program. For the higher objectives and aims of PSNP to be achieved within the pastoral context, it

therefore requires a suite of additional activities and program components combined in a comprehensive approach that aims to address the factors that are constraining the success of asset protection.

Chapter 1: Introduction

Pastoralists are people who depend for their living primarily on livestock. They inhabit those parts of the world where the potential for crop cultivation is limited due to lack of rainfall, steep terrain or extreme temperatures. In order to optimally exploit the meager and seasonally variable resources of their environment and to provide food and water for their animals, many pastoralists are nomadic or semi-nomadic.

The type of livestock pastoralists keep varies according to area, and includes sheep, goats, cattle and camels, but also yaks and horses in Central Asia, buffalo in South Asia, llamas and alpacas in South America, and reindeer in the Palearctic region. An important characteristic of pastoralists is their close relationship with their animals. The identity of pastoralists is based on the close association with their livestock that forms a key component of their economic, social and ritual life. By keeping animals under conditions that are close to the wild, but giving them the benefit of protection and health care, pastoralists represent a cultural counterpoint to industrialized animal production in the west.

There is no reliable information available on the number of pastoralists worldwide. According to one estimate, there are around 17.3 million pastoralists in Africa, 3.4

million in the Middle East and South Asia and no more than 2 million in Central Asia (Sandford, 1983).

It is widely recognized by ecologists that pastoralism represents a sustainable method of utilizing certain types of ecosystems, such as deserts, steppes and certain mountain areas. In fact, continued utilization of the world's arid lands very much depends on viable pastoral systems. Nevertheless, pastoralists have come under pressure worldwide due to a variety of circumstances that include population growth, environmental degradation, and unsound development and trade policies especially encroachment of agriculture on their grazing territories and existence.

In Ethiopia, pastoralism provides the main livelihood for close to 15 million people spread across seven regions of the country. Affected by unpredictable rainfall and temperature pattern, recurrent conflicts and a generally inhospitable environment, the pastoralists are among the poorest of the poor in terms of disposable income, access to social services and general welfare. Human development indicators and poverty rates among pastoralists are uniformly worse than non-pastoralists in Ethiopia. The unpredictable climate, coupled with low levels of human development, mean that the expected effects of climate change are likely to exacerbate the problems of development in pastoral regions. These effects include increasing temperatures, a shift in rainfall patterns and distribution, as well as increased frequency of extreme weather events such as droughts and floods (Anderson et al., 2009; Nassef et al., 2009). The local pastoralists have hitherto been able to cope with recurrent droughts through the resilience of their traditional livelihood system, but presently marked signs of crisis are

visible. The pastoral modes of sustenance are under excessive – largely externally created – pressure, and the number of people dropping out of the pastoral system has increased considerably (Pantuliano and Wekesa, 2008; Tache and Oba, 2008).

Chapter 2: Statement of the problem

Productive Safety Net Program has been implemented in Pastoral areas as a pilot since from 2005 in 9 pastoral woredas of Somalie and Oromiya Region. The program started since 2005. The research has focused in assessing the impact of PSNP in protecting household assets, which is livestock in pastoral areas. Out of the nine PSNP woredas, the study covers Filtu woreda and has sampled 3 kebeles were selected based on their peculiar representative livelihood zones namely Agro-pastoral and pastoral. Those ex-pastoral kebeles have been excluded from the study as they already lost all of their livestock and have already changed their life style and their livelihood is based on other means of income. So we cannot see the real change in livestock holding per household in these types of kebeles. Moreover this will require a different model to see the change in household asset as the value system of what we call asset in their context has already changed from livestock to other types and are dwelling in towns. The research student has managed to visit and interviewed 142 HH members (pastoral and agro-pastoral) in three kebeles of Filtu woreda. Moreover 23 elders and religious leaders and members of kebele food security task forces were interviewed. In Filtu woreda there are 40 kebeles and 3 kebeles were sampled that means the sample covered 7.5% of the kebeles. Whereas, out of 2008 (502 direct support and 1506 public work) PSNP

beneficiaries in the three kebeles, 142 PSNP beneficiaries have been sampled and this represents 7.1%.

Chapter 3: Objective of the study

The study aims at making an in-depth analysis on the impact of Productive Safety Net Program in preventing asset reduction at the household level mainly of key breeding livestock.

The specific objectives are as follows:

- To what extent are the pastoral livestock asset maintained since from the onset of the PSNP program in 2005.
- Is the PSNP supports livelihood of pastoralists? How?
- If not, to study the factors attributing to loss of livestock.

Chapter 4: Scope of the study

The study has focused on assessing the impact of the program for prevention of asset reduction at the household level (e.g. sale of key breeding livestock) in Filtu woreda, which is one of the nine PSNP woredas USAID has started piloting the program since 2005.

Chapter 5: Organization of the document

The thesis has organized the research paper in to ten chapters.

The **first chapter** talks about an introduction to the subject matter of the present study.

The **second chapter** shall deal with statement of the problem.

The **third chapter** explains about objective of the study.

The **fourth chapter** focused literature review.

The **fifth chapter** talks about literature review.

The **six chapter** discuss about Research Methodology.

The **seventh chapter** talks about the result of the study and discussion

The **eight chapter** discuss about some workable conclusions and recommendations.

Chapter 6: Literature review

A significant proportion of Ethiopia's population is engaged in pastoral and agro-pastoral livelihoods. Poverty and vulnerability in pastoral areas tend to have different characteristics than that experience elsewhere in Ethiopia. Asset holdings among populations still engaged in pastoralism tend to be significantly higher than those elsewhere in Ethiopia and studies of nutritional outcomes indicate that stunting is generally lower in pastoral areas in highland areas. However, pastoral populations tend

to have much weaker access to services and are subject to more frequent and more extreme shocks than other areas of the country. It is common for pastoral populations to inhabit areas with high inter-annual variations of rainfall; such an environment is not suitable for crop production but has potential for livestock husbandry as livestock can be moved to take advantage of location specific rainfall and its resulting grazing.

1.1. Livelihoods of Pastoralists among Somali communities of Ethiopia

Amongst pastoralists, the ownership of livestock is the main determinant of wealth as well as the main determinant of food security. Livestock are not only a saleable asset but provide income and food in the form of meat, milk, *ghee* and hides and skins. Pastoralists reduce their risks by combining the animal species in their herds and flocks; female stock make up the larger half of the herd in order to enhance production and reproduction options. Choosing which animal to herd depends mainly on ecological factors, combined with social values and market factors. In Somali and Ethiopia, herd and flock composition can be a combination of camels, cattle, goats and sheep.

Camels are particularly important in Somali society. They are perceived as life-saving assets as they resist harsh ecological extremes, due to their ability to survive in dry conditions and produce milk throughout the year. They also embody prestige and key social roles, such as compensation for dowry (*yarad*) and blood payment (*diya*). As a Somali saying goes, '*a camel man is a superman, a sheep man is half of a man and a cattle man is not even a man.'* Though recent data over livestock population in Somalia is not available (last official survey was undertaken in 1989), there is a general

acceptance that total livestock population may have increased in the last decade due to population expansion (and despite conflict and droughts), but ownership per households has declined over the years. This situation also applies to other Ethiopia pastoralists.

Pastoral populations are predominantly dependent on animal products both for consumption and for purchase of other foods through the sale of livestock, livestock products and other natural products (through bush exploitation or fishing activities.) The reliance on so-called clan-based social assets, (gifts, remittance and borrowing etc), constitute another important option. While livestock products make up a consistent portion of pastoral households consumption, purchased foodstuff and water are also essential components of the diet, especially during dry periods (seasons or years). Proportions of sources of food, income and expenditure will vary accordingly to the season, the socio-economic group and the household composition.

Some studies show that the poorer the group, the higher the reliance on food purchase and exchanges. This pattern is allowed by higher levels of engagement in other income-generation activities, such as the selling of labour or exploitation of bush resources. A major characterization of Somali pastoral livelihood concerns seasonality and related migratory patterns, defined as seasonal transhumance and dependent on the availability of pasture and water, related to unpredictable and localised rainfall. As Lewis described in the 1960s, pastoralism can be defined by two major seasonal extremes, which constitutes the annual peaks of the cycle of pastoral production and livelihood systems:

(a) Main **rainy season (*Gu*)**, where quality grazing is the major element of concern, the household tend to stay closer to origin areas, milk production is consistent, assets are stocked within the herd, social life is intense and the community develops.

(b) Main **dry season (*Jilaal*)**, when water and quality pasture become the constraining factors, household efforts are aimed at subsisting through household and herd splitting and migration, dependency on market exchange is huge. Livelihood standards decrease consistently and assets could deplete during these periods.

During the rainy periods, pastoralists rely heavily on milk and milk products for their food needs. As an average, milk products constitute up to 60% of pastoralist food intake during the rainy periods, while it decreases down to 30% during the dry seasons. Cereals (rice, sorghum, flour and pasta), oil (replacing *ghee*) and sugar become progressively more important to their det during the dry periods. These stuffs need purchased and therefore integrate the pastoral livelihood within a wider context where market exchanges are vital. Reliance on borrowing, loans and credit is also typical during the dry season. These credits are normally paid back during the wet periods through livestock, milk or directly cash. The long dry *Jilaal* period (Dec- March) represents no doubt the most difficult time of the year for pastoralists, when water and pasture resources are distant and energy requirements higher, milk production is low and household costs are high. During these periods households and herds are normally

separated, due to the fact that camels, cattle and shoats have different grazing habits and watering needs and different household members embody diverse functions/roles. Household father and elder sons move to distant ranges with hardy and mobile animals in search of pasture. The herdsmen will subsist only on milk and wild foods for several months. On the other side mother and children would normally move to near home wells together with the remaining herd (shoats, pregnant and some lactating camels and cattle, this milk herd is traditionally called *nugul*).

High asset holdings are a requirement for successful pastoral livelihoods. Sustainable pastoral livelihoods are dependent on households being able to regularly sell livestock in order to purchase food and other necessities, while higher asset holdings are a critical coping mechanism for withstanding the frequent shocks experienced in pastoral areas. Average asset holdings are significantly lower in pastoral areas than they were 20 or 30 years ago, highlighting the impacts of recurrent drought and population pressure. As a result there are a growing number of people whose herd sizes are too small to enable sustainable livestock production; and who are dependent to a greater or lesser extent on cropping or the sale of labour. There are also a significant number of people who have abandoned pastoral livelihoods due to loss of assets (and sickness) and who have been forced to settle on the outskirts of villages and towns. While all people living in pastoral areas are vulnerable to the frequent shocks experienced in these areas, it is these last two groups who are most at risk and who may experience food shortages every year.

Livelihood analysis aims to understand how people source, develop and use assets within a complex set of trends, shocks, formal and informal policies and institutional arrangements. Such analysis is commonly based on a livelihood framework which categorizes assets in terms of five main types of capital:

a) **Human capital:** it represents the skills, knowledge, ability to labor and good health and that together, enable people to pursue different ways of making a living. In pastoralist areas, formal education and health services are often poorly developed. And levels of literacy and health are low. However, pastoralists possess rich indigenous knowledge on livestock health and production, and some communities have traditional healers and traditional schools.

b) **Social capital:** is the social resources people use to pursue different ways of making a living. Social capital includes networks, group membership, relationship of trust, and access to wider institutions of society, including political institutions. The concept of reciprocity is important, as are the exchanges which facilitate cooperation, reduce transaction costs, and safeguard the poor. Pastoralists often have strong social capital at community level, with complex system of indigenous social support (safety nets) based on the exchange of livestock. In contrast, they often have weak political voice or representation.

c) **Financial capital:** is the financial resource which people use to achieve livelihood objectives. It relates to both production and consumption, and the availability of cash (or equivalent) which enables conversion to other types of capital. In pastoralist communities, financial capital is based on ownership of livestock or access to livestock resources. People consume directly from

livestock (eg. Milk) and sell livestock and livestock products – markets are a crucial factor in the attainment of financial capital.

d) **Natural capital:** is the natural environmental resource which people use to make a living. It includes soil, water, vegetation and wildlife resources, and encompasses access rights and land ownership. In general, pastoralist areas are characterized by low rainfall with high special variability. It is this rainfall pattern which largely determines the seasonal movement of pastoral herds, and the seasonal variations in production and markets.

e) **Physical capital:** is the basic infrastructure and producer goods needed to support livelihoods. In pastoralist areas, the physical capital required to support livestock production is often poorly developed. This includes roads, communication infrastructure and livestock markets.

Access to and use of these different types of capital is determined by various factors;

Seasonality*:* Particularly seasonal variations in rainfall, livestock production and the terms of trade for livestock and cereals.

Trends such as global climate trends, the increasing occurrence and severity of drought, the growth of export market for livestock, environmental change associated with bush encroachment, private enclosure of rangeland, and human population growth.

Shocks such as drought, livestock disease epidemics and conflict; as drought, becomes more regular and predictable it might be categorized as a seasonal factor rather than a shock.

In addition, pastoralist livelihoods are affected by various formal and informal norms, policies, and institutions such as;

- Professional or cultural norms which perceive pastoralists as uneducated and irrational, and which overlook the efficiency of pastoral production systems;
- Inappropriate pastoral development policies which fail to recognize the benefits of mobility and attempt to deliver basic services through fixed point delivery systems;
- Disabling international standards governing the formal export trade of livestock;
- Inflexible financial services which overlook the potential to use livestock assets as insurable collateral.

Therefore, pastoral livelihoods results from a complex interplay between accesses to different types of capital, the affects seasonality, trends and shocks, and the influences of policies and institutions. If there is key lesson arriving from livelihoods analysis, it is that a single technical intervention is unlikely to improve livelihoods. Furthermore, short-term interventions have to have a long term perspectives. Maintaining human capital while undermining the other forms of capital makes people more vulnerable – relief and development thinking have to merge.

1.2. What critical factors make up a pastoralist livelihood

The greatest weakness of the Somali pastoral economy lies in its poor diversification in the production system as well as poor alternatives for marketing. While alternative sources of income are increasingly sought by pastoralists, options are still limited. Livestock performance is the most important element of pastoral livelihood providing milk and other products during good production periods. Pasture conditions and rainfall

patterns are basic elements of their system, as the saying goes: “Livestock food security means pastoralist food security”. This thinking is complimented by another reference statement “If our animals are healthy, we are healthy”. As animal health impacts livestock productivity, the edibility of its products and its market value this should also be considered a pillar of their system.

A whole lot of factors are currently jeopardizing pastoral livelihoods in Somali. Conflict and insecurity have disrupted traditional resource management strategies in many areas, leading to environmental degradation, restrictions in pasture, water and market access and in mobility as an overall. Forced movements of people has brought localized competition over limited resources and enhanced scope for rural-urban conflicts. The presence of limited appropriate animal health surveillance and effective veterinary systems also pose problems whenever a disease spreads in an area. It is also believed that the current global warfare situation will negatively impact export trades and remittance.

Let us analyze these critical elements in detail, by keeping in mind that they will vary in importance and prioritization depending on the wealth status, the season and other factors. The situation of sporadic insecurity in the Region is restricting the mobility of pastoralists and constraining decision-making amongst pastoral groups. The chance of moving and accessing different resource areas as well as markets is a key element for pastoral livelihoods. Constraints to migration patterns and to resource access (posed by clan-related issues) are increasing - reducing livestock and people mobility. This is

detrimental for pastoral livelihood, environmental conditions and could also increase the chances of livestock disease spreading. Moreover forced migration of people due to clan conflict has brought urbanization and sedentarisation of consistent portions of the population and has increased chances of conflict between urban/village settlers and mobile pastorals over water, land and bush products.

The livestock export ban has had a huge impact on the overall pastoral system, as it has curtailed the major market options and therefore cut down resources for food import at macro level and food purchase at household level. The major impact from the ban are skyrocketing inflation rates, curtailed income generation as well as credit opportunities and decreased purchasing power for pastoral groups. Terms of trade between pastoral and non-pastoral products constitute a key indicator to analyze pastoral livelihood trends.

Milk price represents a key indicator with this respect: it seems to keep pace with inflation rate in Somali Region, where staple cereals are mainly produced locally. The issue of the livestock ban is related to the spread of Rift Valley Fever (RVF) that followed 1997 *El Nino* intense rains. While the risk related to RVF is diminishing over time, livestock disease surveillance as well as an effective veterinary system needs to be establishing in order to accomplish international marketing requirements.

The most important pastoral determinant, climate, is the less predictable factor and represents the constant element of uncertainty for pastoral systems. Climate in Somali

is characterized by low and erratic rainfall, which influences pasture and water availability and therefore livestock conditions, reproduction rates and milk production, the key assets for pastoral livelihood. Dry periods occur almost normally in arid climates and pastoral groups are almost used to those and have developed specific Coping Strategies to deal with bridging the gap between rainy periods. On the other side, when consistent rains follow a period of relative drought, many animals are at life risk due to their poor conditions and related disease susceptibility. Rainfall levels, pasture conditions and distances between water and pasture should therefore be constantly assessed as well as migration patterns tracked to monitor these trends.

Increasing concern is also raised by herders over degradation of range resource in many areas, where conflict and insecurity has disrupted traditional resource sharing and common management mechanisms. Encroaching farming and settlements enhance competition over land, while income-generation opportunities (such as charcoaling) as well as coping strategies for settled people increasingly exploit range resources at unsustainable rates. Uncontrolled proliferation of private *berkads* is also considered a key threat for seasonal pasture availability, while common water points suffer from poor management. As a result pasture degradation and land erosion processes are reported in many implications for pastoral livelihoods.

Reliance on social assets, such as loans, borrowings, credit, remittance and kin gifts and exchanges, constitute an important component for overall livelihood in Somalia.

Remittances are not equally spread among the population, and when critical periods are prolonged, the reliability of these mechanisms tends to diminish. Prolonged request for credit and borrow tend to weaken the system and, should the overall economy not recover, better off family portions will be less able to trickle down resources to poorest relatives. At the same the system of remittance is likely to suffer from the ongoing international crisis leading to increased constraints to international money flow.

It has already been emphasized that risk perception and vulnerability among pastoralist groups present characteristic features when compared with other groups. Every dry season represents a critical period for the pastoral livelihood and specific risk minimizing and Coping Strategies (CS) have been developed with this respect. The extent to which these CS are applied is therefore a good indicator of seasonal difficulties and exceptional situations. Economic options as well as social rank play key roles in defining the capacity to respond to a shock. While poorer groups have fewer options in times of drought, they can more easily adapt to alternative sources of income available, as they are less constrained by herd-related labour activities. The exact sequence of events which lead to a critical situation will determine the options available to households in trying to ensure their own survival. In addition, depending on the specific nature of the problem (drought, conflict, market shock, etc.), its timing (short/long term) and space (local/regional) features, different options will be applied.

Appreciating the CS of the different groups in making up a deficit/crisis helps determine an appropriate response to an emergency situation. The sustainability of applied strategies should be carefully analyzed in view of protecting pastoral livelihood (and

herds) and not only lives. Some strategies could be effective in the short term while degrading economic, social and natural assets in the longer term.

Coping Strategies could be roughly classified as:

a) Short-term CS are normally highly reversible and require a low commitment of domestic resources (e.g. dietary change)

b) Long-term CS to cope with extreme situation, when the household is near to collapse. Often called adaptive or distress strategies, are normally irreversible and involve a high commitment of domestic resources (productive asset sales, out-migration, switching herds)

Typically, increased pressure over social, economic and natural assets tends to be the core of the response by households. The links with either urban or international environments constitute an important resource. The expandability of these options varies from one situation to another. As a general reference it seems anyhow that marketing of milk during dry periods does not show constraints from the demand side in urban areas. The same is true for charcoal making, which can rely on export markets. While a major emphasis is put over physical resources, the social impact of critical situations should not be underestimated within the livelihood framework (dislocation, distant migration, long household break-up, children unable to attend Koranic schools, etc.).

1.3. The role of Pastoralism to Ethiopia's national economy

In spite of the historic economic, political and social marginalization of the pastoralists from the colonial power to the Marxist Derg regimes, pastoralist areas have been playing a vital role to the national economy. The livestock export, development of big irrigation schemes, tourism, source of hydroelectricity power and settlement schemes to the small farming households from the highlands are some to be mentioned. Moreover, the adaptive and flexible capacity of the pastoralist system had attributing to its continuity. Under arid and semiarid climatic zones, the mobility for the efficient use of scares and variable resources with different livestock types and application territorial fluidity with reciprocity and communal use is still valid (Yohannes, 2003, Lister, 2004).

Extreme poverty is widespread in Ethiopia. The major causes of poverty and food insecurity in rural areas include land degradation, recurrent drought, population pressure, low input subsistence agricultural practices, limited employment opportunities and limited access to services. As a result more than 38% of rural households fall below the food poverty line and 47% of children under five suffer from stunning. The food security situation in pastoral areas is further aggravated by other factors like sporadic conflicts between tribal communities and cross border. Usually the pastoralist areas of Ethiopia are known for their conflicts, drought, and famine and food aid. According to many researchers the crisis in the pastoral areas has been mainly attributed to lack of good governance, knowledge gap about pastoralism and pastoral development, underestimation of the rationality of traditional practices, long-term marginalization of

the pastoralists in decision making and policy defects in marketing, land policy, extension, and credit and financial services (PFE, 2004D, Yohannes, 2003).

Today, the millennium development goals (MDGs) have been geared to the establishment of good governance, eradication of hunger, assurance of environmental sustainability and strengthening of partnerships. To achieve these goals, the importance of the genuine participation of the rural community as a foundation has been underlined. Similarly, in Ethiopia, there are already some enabling policy changes by the government include the constitutional right of pastoralist not to be displaced from their own land, power decentralization to grassroots level, the formation and reformation of pastoral institutions. Yet, the critical mass of pastoralists was not far from marginalization and vicious circle of poverty.

1.4. Food Security in Ethiopia

Significant parts of Ethiopia are characterized by persistent food insecurity. While droughts and other disasters (such as floods) are significant triggers, more important are the factors which create and/or increase vulnerability to these shocks and which have undermined livelihoods. These factors include land degradation, limited household assets, low levels of farm technology, lack of employment opportunities and population pressure. As a consequence, but also exacerbating the situation, levels of education are low and disease prevalence is high. Prior to 2005, the typical response to this persistent food insecurity was emergency relief resourced through an unpredictable annual appeals process.

Although relief was provided, often at great expense, it was rarely adequate or timely. As a consequence, households were forced to sell assets (further constraining their livelihood options); and to restrict consumption (with immediate impacts on increasing the risk of disease and longer term impacts on chronic malnutrition).

1.5. Mitigation Measures Taken by Ethiopian Government

Following many years of this approach, it was recognized that the majority of those receiving food aid were chronically food insecure, with households experiencing a food gap even in average or good rainfall years. If the ever-worsening cycle of destitution was to be broken, it would require a significant increase in and better use of the resources supporting those households facing both persistent and transitory food insecurity. Business as usual was not working.

In 2003 the Government launched a large scale consultation process called the New Coalition for Food Security. Key stakeholders interested in the development of Ethiopia were invited to share views and support the definition of new strategies to address increasing persistent food insecurity. The significant political commitment to this process was reflected in the participation of the Prime Minister and other high level decision-makers in the platform that delivered the New Coalition work.

As a result of this process the government made significant changes to its existing Food Security Programme (FSP), scaling up its level of intervention and incorporating a large

'Productive Safety Net Programme' (PSNP). The FSP was designed to help chronically food insecure households reach a level of food security necessary for an active and healthy life. Three components were planned: resettlement, productive safety nets, and other food security interventions. Resettled households were expected to achieve food secure status solely as a result of that component's package of interventions. Safety net clients, however, would require the complementary other food security interventions in order for sustainable impact to be achieved.

1.6. Brief description of the Productive Safety Net Program in Ethiopia

In 2005 Ethiopia's Productive Safety Net Program was established to provide transfers to the food insecure population in chronically food insecure *woredas* in a way that prevents asset depletion at the household level and creates assets at the community level (GFDRE 2004). The new safety nets approach focused on tackling chronic or seasonal hunger and sought to provide a more sustainable safety nets system. Sustainability was not just about finding an alternative to an emergency system that donors were increasingly unwilling to fund. From the outset, consumption objectives were linked with the protection and creation of assets and the idea that PSNP beneficiaries would graduate into food security as a result of PSNP and wider support that supported their consumption as they built assets and strengthen livelihoods.

The World Bank support to the PSNP began in the form of an Adaptable Program Loan for the Ethiopian Productive Safety Net Project (hereafter referred to as Adaptable

Program Loan (APL1) or the project). The World Bank assisted in design phases and a credit of US$14.3 million and a grant of US$55.7 million was appraised and subsequently approved on November 30, 2004. The project became effective on January 1, 2005 and closed on December 31, 2006. Two subsequent APLs followed as government met safeguard conditions identified in the APL1. APL2 covered January 1, 2007- June 30, 2010. APL3 was approved on October 22, 2009 and will end in June 30, 2015. The World Bank support to PSNP was simultaneously supported by other donors, including: Canadian International Development Agency (CIDA), British Department for International Development (DFID), the World Food Program (WFP), the United States Agency for International Development (USAID) and the Government of Ireland. The Bank's financial contribution was 18 percent of the total donor support to financing the PSNP in 2005-2006 but it played a lead role with regard to analytical work and joint supervisory missions, and donor coordination. (Later, the role of donor coordination rotated between different donors.)

The APL1 project was designed to support the efforts of the Ethiopian Government to transition away from an ad hoc emergency appeal system to a more predictable safety net to tackle chronic and seasonal hunger. The development objective of APL I was *to assist the Government to shift from a relief-oriented to a productive and development-oriented safety net* (World Bank 2004a).

USAID is financing PSNP Pastoral Area Pilot through Save the Children USA in five pastoral woredas of Somalie and Oromiya Regional states namely; Dollo Ado and Filtu

woreda of Liben zone and Dollo Bay and Bare woreda of Afder zone. And Arereo woreda of Borena zone of Oromiya Region.

The project would achieve this by (i) providing predictable, multi-annual resources, (ii) replacing food with grants as the primary medium of support, and (iii) making resources available for critical capital, technical assistance, and administrative costs. Objectives for the full APL series were broader: *improved food security for at least 5 million chronically food insecure people and stabilization of the long term trend of increasing numbers of food insecure people.* For the purposes of this PPAR, the PDO listed in the Project Appraisal Document (PAD) provides the basis for the ratings but progress towards program objectives is also reviewed and wider lessons are drawn out regarding the APL series.

The project had two components. Progress under each component was measured as per the log frame with two higher level additional indicators included: at least 75 percent of program participants report no distress sales of assets to meet food needs; and at least 75 percent of households in program areas reporting satisfaction with or benefit from infrastructure developed. These were expected to be achieved by the end of APL2 but were monitored in the project.

APL1 Productive Safety Net Project Components are divided in to two

Component 1: Safety Nets

a) ***Labor-intensive public works*** will provide grants to households whose adults participate in public works subprojects. Sub-projects to be undertaken as part of public works will be determined locally by the beneficiary communities through an annual, participatory planning process. With appropriate technical assistance being provided by *woreda*s and regions, sub-projects will focus on, but are not limited to, environmental rehabilitation. A specific budget for administrative costs and equipment will be allocated. Furthermore, as the most appropriate time for undertaking public works is during the dry season, and the period of most need for food insecure households is during the rainy season, a system of deferred payment of grants will be established. Public works participants will receive 50 percent of the grant at the end of the month in which they have worked, and 50 percent will be deferred until later in the year. This will ensure that households have the resources available when they are most needed, that works can be undertaken at the most appropriate time, and that public works sub-projects do not compete with the intensive agricultural season.

b) ***Direct support*** will provide grants to households who are labor-poor and cannot undertake public works. Beneficiaries will include, but are not limited to, orphans, pregnant and lactating mothers, elderly households, other labor-poor, high risk households with sick individuals (such as people living with HIV/AIDS), and the majority of female-headed households with young children.

Component 2: Institutional Support

This component will focus on strengthening all aspects of program implementation, including (i) capacity building at community level to strengthen beneficiary identification

and local level planning, financial management, procurement and technical training at *woreda* and regional level to ensure that all subprojects are appropriately designed and rapid response mechanisms are in place to ensure smooth program implementation; (ii) support to the development of a monitoring and evaluation framework and a program Management Information System (MIS).

This includes the implementation of a beneficiary survey, and a detailed program —process survey after the first 12 months. It will also finance several additional studies as part of the shift to the second phase of the APL; and (iii) procurement of essential goods and services.

Targeting: Prior to the start of the project in 2005 an average of between 5 and 6 million Ethiopians (just below 10% of the total population) had required assistance each year over the previous decade (World Bank 2004b). The PSNP initially targeted households in 262 (out of about 550) *woredas.* Those *woredas* targeted were designated food insecure by the government and had received three continuous years of food aid in the last decade and estimated that within these *woredas* there were 5 million food insecure households. Households were defined as food insecure when they faced a food gap of three months (determined at community level) or more in any given year. Food insecurity was chronic when experienced for three years or more. Self-targeting based on the PSNP public works wage rage (ETB6 / day) was deemed inappropriate due to the lack of alternative employment opportunities. Rather, households were to be identified on the basis of the following criteria:

- Chronically food insecure households that had continuous food shortages (three months of food gap or more) in the previous three years and who had received food assistance;
- Households that, in the last one or two years, suddenly became more food insecure as a result of a severe loss of assets and were unable to support themselves; and
- Households without family support and other means of social protection and support

1.7. Objectives of PSNP

In 2005 the Government of Ethiopia and donors introduced the Productive Safety Net Programme to help households that face regular food shortages during difficult times. It is now a key part of the Government's overall food security programme. The overall objective of the programme is "Food security for those who are able, and food sufficiency for those unable to achieve food security, for male and female members of chronically food insecure households in chronically food insecure woredas achieved".

The specific objectives of the Productive Safety Net Programme (PSNP) are to provide support to woredas where people regularly face food shortages in a way that:

- Prevents asset reduction at the household level (e.g. sale of key breeding livestock);

- Prevents long-term problems caused by short term food shortages;

- Builds assets at the community level (e.g. improved access to existing water points, construction of markets; improved access to markets).

Chapter 7: Research Design and Methodology

With a view to achieving these benefits, the donor community agreed to support the implementation of PSNP in 262 highland *woredas* targeting an initial figure of five million chronic food insecure people – later increased to eight million in 2006. Success would see program participants build sufficient assets to have greater resilience to shocks such as localized drought or food insecurity and graduate from the PSNP and reducing the burden on food aid in the long term except when exceptionally severe shocks occur.

For its part USAID funded 6 International NGOs to guide the implementation of the PSNP in 35 highland *woredas* beginning program implementation in January 2005. At the same time USAID funded Save the Children to implement a pilot *Safety Net Approach for Pastoralists* (SNAP) in three lowland woredas, Dollo Ado, Dollo Bay and Filtu (implemented through PCAE) in the Somali Region for two years as a forerunner to the planned PSNP Pastoral Area Pilot which was planned would be launched in January 2008. Whilst the overall design of the Pastoral Area Pilot is similar to the highland PSNP, there are differences which reflect levels of local government capacity in pastoral areas and pastoral area livelihoods strategies.

Safety Net Approach for Pastoralists was launched in 2005 and for the next three and a half years the program was the only safety net 'type' program implemented by NGOs in the pastoral areas of Ethiopia. In 2008 the official PSNP Pastoral Area Pilot (PSNP PAP) was launched with full Government support in 21 *woredas* of Afar, Oromiya and Somali Regions.

7.1. Study area and sample size

An initial literature review was undertaken prior to the field visit and a participatory assessment conducted in three kebeles of Filtu woreda, Liben zone of Somali Regional state. The sample kebeles were selected based on their peculiar representative livelihood zones namely Agro-pastoral and pastoral. Those ex-pastoral kebeles have been excluded from the study as they already lost all of their livestock and have already changed their life style and their livelihood is based on other means of income. So we cannot see the real change in livestock holding per household in these types of kebeles. Moreover this will require a different model to see the change in household asset as the value system of what we call asset in their context has already changed from livestock to other types and are dwelling in towns. The research student has managed to visit and interviewed 142 HH members (pastoral and agro-pastoral) in three kebeles of Filtu woreda. Moreover 23 elders and religious leaders and members of kebele food security task forces were interviewed. In Filtu woreda there are 40 kebeles and 3 kebeles were sampled that means the sample covered 7.5% of the kebeles. Whereas, out of 2008 (502 direct support and 1506 public work) PSNP beneficiaries in the three kebeles, 142 PSNP beneficiaries have been sampled and this represents 7.1%. The table below illustrate summary of number of sampled PSNP beneficiaries in the three kebeles.

Table 1: PAs/ Kebeles visited during the study

Woreda	Name of kebele	Type of Livelihood			Sample size		Total
			No. of Direct support beneficiary	No. of Public work beneficiary	Sampled PSNP beneficiary	Religious leaders and members of kebele food security task forces	
	Lantware	Agro-pastoral	94	282	54	7	
	Mesjida	Agro-pastoral	300	324	48	6	
Filtu	Ayinle	Pastoral	108	900	40	10	
Total			**502**	**1506**	**142**	**23**	**165**

7.2. Study period

Data has been gathered from the period of March 14-20, 2012.

7.3. Hypothesis

The hypothesis framed for this study is that Pastoral Productive Safety net Program prevents asset reduction at household level mainly of sale of key breeding livestock.

7.4. Study Participants

The Government Administration of Filtu woreda were consulted prior to field visits and consultations with communities. In each of the kebele locations, community informants were divided into two groups: men and women, so as to enable the women to participate fully in discussions with the researcher and as a cross-check on information provided. These groups consisted of a mix of both beneficiaries (Direct Support – DS, and those participating in Public Works – PW) as well as members of the Kebele Food

Security Task Force. In addition separate meetings were arranged with key community and religious leaders.

7.5. Participatory Methods

Participatory methods were used with groups of participants as summarized in table below:

Table 2: Description of Participatory Methods Used

Method	Use
Seasonal calendars	To determine monthly comparative variations of rainfall and hunger periods
Time lines and qualitative graphing	To determine droughts and 'shocks' over the last ten years and impacts and correlations with livestock numbers
Wealth ranking	To determine the relative numbers of households within a kebele that falls within a high, medium or low wealth category. As well as consider the average ranges of assets held by households in each wealth category
Focus group discussions	Used with all the above exercises to clarify and confirm responses and information provided.
Key informant interviews	Used in conjunction with the above methodologies to

	confirm information received and deepen understanding in key aspects of the program or context.
Matrix scoring	To compare reasons for livestock deaths

7.6. Triangulation

In this research triangulation was conducted through interviews with the different stakeholders considering consistency of response and perception from those consulted.

7.7. Data Analysis

To analyze the data SPSS (Statistical Package for Social Science) and excel statistical software were used.

Chapter 8: Results and discussion

Targeting of PSNP beneficiaries is based on community identified lower wealth status. When they do wealth ranking, respondents categorized their community in to three groups based on the number and type of livestock holding as *rich* households (HH), medium households and poor households by further stratifying them in to settled (agro-pastoral) and mobile households. The table below depicts a summary of the PRA exercise on wealth ranking from Lantware Kebele.

Table 3: An example of a wealth profile from Lantware Kebele, Filtu

Total number of households in the Kebele is 900 consisting of 500 settled households and 400 mobile households depending on the season.

Settled Households			**Mobile Households**	
High	100 HH	▪ 30-40 shoats ▪ 10-15 camels ▪ 4-6 cattle ▪ Rainfed farms 70%	180 HH	▪ 100-150 shoat ▪ 30-60 camel ▪ 0 cattle ▪ Donkey ▪ No farm
Medium	120 HH	▪ 5-15 shoats ▪ 2-5 camels ▪ 0-1 cattle ▪ Rainfed farms 80%	120 HH	▪ 40-50 shoat ▪ 20-30 camel ▪ 0 cattle ▪ Donkey ▪ Rainfed farm 30%
Low	280 HH	▪ Rainfed farms 80% ▪ Chickens ▪ A donkey	100 HH	▪ 20-40 shoat ▪ 10-15 camel ▪ Donkey ▪ Rainfed farm 30%
Total	500 HH		400 HH	

Not only this, Sandford, J et al said poverty is more than just a lack of income but rather encompasses a broader range of features including ownership and access to assets, locality, social status, and vulnerability to shocks. These features interact and reinforce each other with short-term consequences as well as affecting opportunities and outcomes in the long-term. The following section summarizes some of these key features:

1. **Income.** Poor households have significantly less income than their wealthier counterparts. This limited income affects their ability to meet food requirements and constrains potential to secure other basic needs such as shelter and health care, with

the result that children are malnourished and all family members face increased health risks.

2. **Assets.** This lack of income is usually a result of limited assets. In rural areas these assets often include land, livestock or other means of production; but also include skills and labour (often affected by ill-health and high dependency ratios). Degraded natural resources or poor and unreliable rainfall also directly impact on people's ability to make ends meet.

3. **Locality.** Poorer people are often found in poorer communities, whether this is a result of degraded natural resources or geographical remoteness. Remoteness affects both the ability of poor households to access markets (reducing the prices of products produced and increasing the price of products purchased) but also impacts on the quality of services received and the ability of communities to advocate for greater or more appropriate support.

4. **Social status.** While social networks are often an inherent part of rural life in the IGAD region, poorer households tend to have weaker networks than their wealthier counterparts (either because those they network with also tend to be poorer, or because their inability to fulfill social responsibilities limits their access to some networks). As a consequence of this and because of their low status, poor households find it more difficult to represent themselves even at local levels.

5. **Shocks and Risk.** Natural disasters and other shocks are a key cause of increases in poverty. Many households can attribute their decline into poverty to a few specific events such as major droughts or the death of a family member. However, poverty also increases households' susceptibility to shocks. With fewer assets, poor households tend

to have very limited buffers against crises. This can lead to a vicious circle of destitution from which it is difficult (although not impossible) for households to break free. Poorer households are often more affected by downward trends.

Poorer households are often disproportionately dependent on markets for food, so increases in the price of staple foods – such as inflation caused by the current global food crisis – can have devastating consequences on the poor.

6. **Limited Opportunities.** Poverty not only affects current realities (such as income sources) it also severely limits opportunities. As already mentioned low asset holdings reduce households' ability to withstand shocks increasing the chances of them becoming poorer. Poor households cannot afford to send their children to school affecting future earnings potential and livelihood options. The widespread incidence of childhood stunting has long-term consequences on productivity – as children fail to achieve their physical and mental potential. Because the constraints and strategies of the poor differ from those who are better off in the ways discussed above, poor people need particular attention to enable them to rise out of poverty. It is not sufficient to assume that growth and wealth-creating policies will be appropriate and helpful to the poor. Key to an effective response to this reality understands the nature of poor people's livelihoods and how they differ from other groups.

Significant proportion of Ethiopia's population is engaged in pastoral and agro-pastoral livelihoods. Poverty and vulnerability in pastoral areas tend to have different characteristics than that experience elsewhere in Ethiopia. The type of livestock

pastoralists keep includes sheep, goats, cattle and camels. Amongst pastoralists and agro-pastoralists, the ownership of livestock is the main determinant of wealth as well as the main determinant of food security. Livestock are not only a saleable asset but provide income and food in the form of meat, milk, *ghee* and hides and skins.

Pastoralists reduce their risks by combining the animal species in their herds and flocks; female stock make up the larger half of the herd in order to enhance production and reproduction options. Choosing which animal to herd depends mainly on ecological factors combined with social values and market factors. The herd and flock composition of Somali communities in Ethiopia, is a combination of camels, cattle, goats and sheep. Camels are particularly important in Somali society. They are perceived as life-saving assets as they resist harsh ecological extremes, due to their ability to survive in dry conditions and produce milk throughout the year. They also embody prestige and key social roles, such as compensation for dowry (*yarad*) and blood payment (*diya*).

Productive Safety Net Programme (PSNP) in pastoral areas of Ethiopia is aimed at preventing assets reduction at household level. For pastoralists and agro-pastoralists ownership of livestock mainly of key breeding animals is the main determinant of wealth and asset they mention more often as their livelihood is based on livestock. As asset protection at house hold level is the first objective of the PSNP program, let’s see in depth how does the PSNP program have attributed for fulfilment of the bigger program objective with this regard.

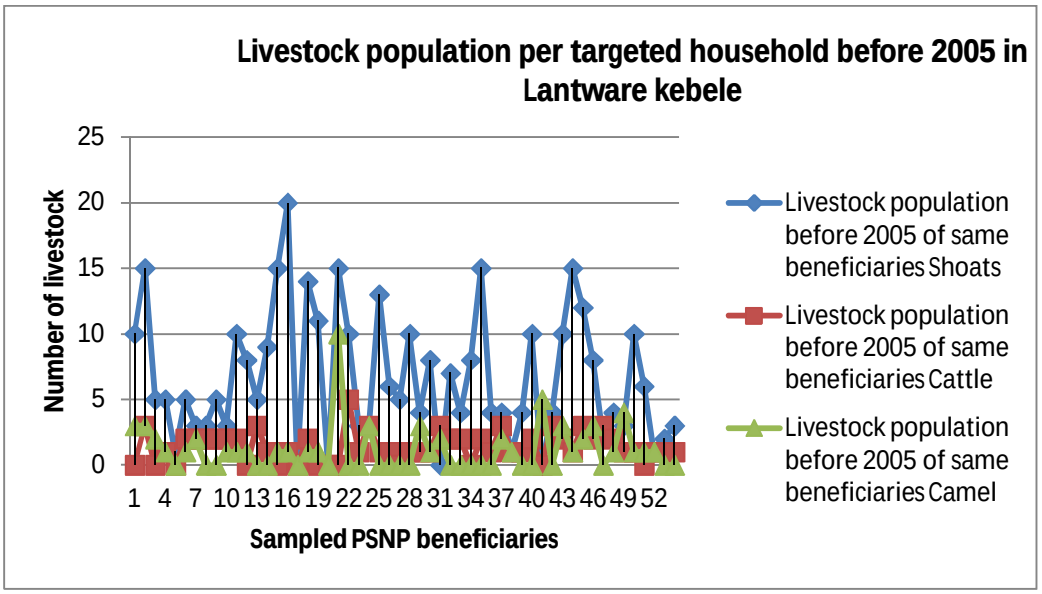
In order to assess asset protection, which in the context of pastoralists and agro-pastoralists livestock holding at household level, an exercise was undertaken with all community participants to identify number and type of livestock. These community participants have been supported by Pastoralist Concern Association Ethiopia (PCAE) since from 2005 by transferring food basket per target beneficiary households for both labor based public work and direct support for six months in any calendar year that matches dry season that is where they need food ration to fill the food gap of the community. The food basket consists of wheat, pulses and vegetable oil according to the following ration size: 15 kg of wheat, 1.5 kg of pulses and 0.45 kg of vegetable oil allocated per family consisting six members. The months for resource transfer are during *Jilaal* dry season from January to March and *Hagaa* dry season from July to September. Other months of food shortages in a year are being addressed by risk financing complementary funding.

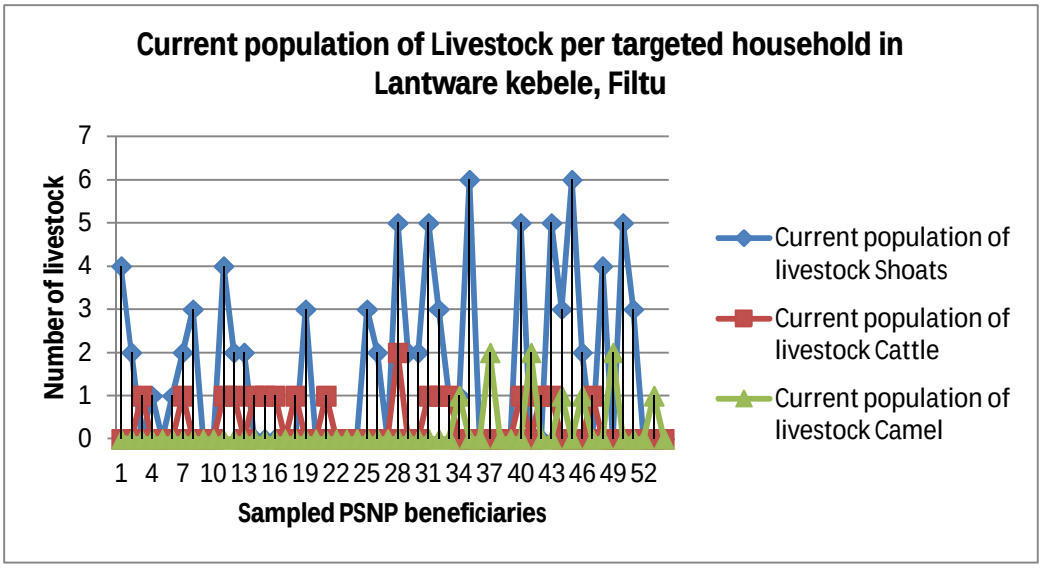
Sampled community participants were asked to identify type and number of livestock they own at the time of survey and retrospectively before 2005.

In preventing the sale of assets to meet food needs, the program aims to enable the development of these assets. The rate at which the numbers of livestock owned by a person increases naturally depends on the size of the herd. So those with small numbers of animals will inevitably need more time to build up their livestock assets than those with larger herds. Communities also reported that many animals currently, and over the past few years have been weakened and are not fertile or productive and this

has exacerbated the slow growth. It has meant that any small gains that might be made in asset building are eroded by shocks as animals die and healthy ones are sold to meet (usually) other needs than food such as medicines. At best there is maintenance of the status quo with small temporary gains within a picture of much bigger asset loss in the community which is shifting people down in the wealth rankings. Under normal seasonal conditions and circumstances however, the communities agreed that positive gains could possibly occur within a five year period, assuming there were absolutely no severe shocks (which is unlikely). This study also reveals that number of livestock holding per household is significantly reduced with 95% confidence interval in the last six years even if there is tremendous support of the PSNP program in meeting the food need of pastoral and agro-pastoral communities. The following figure clearly indicates this fact in each of the three sampled kebeles.

Figure 1: Trend analysis of livestock population of Lantware kebele households before 2005 and now





It is clear from this figure that number of livestock holding per household (number) over time in Lantware kebele has reduced in all of the three livestock types. In order to see average decline of livestock number frequency distribution was calculated using SPSS as shown below. This will indicate the extent of reduction in number of livestock.

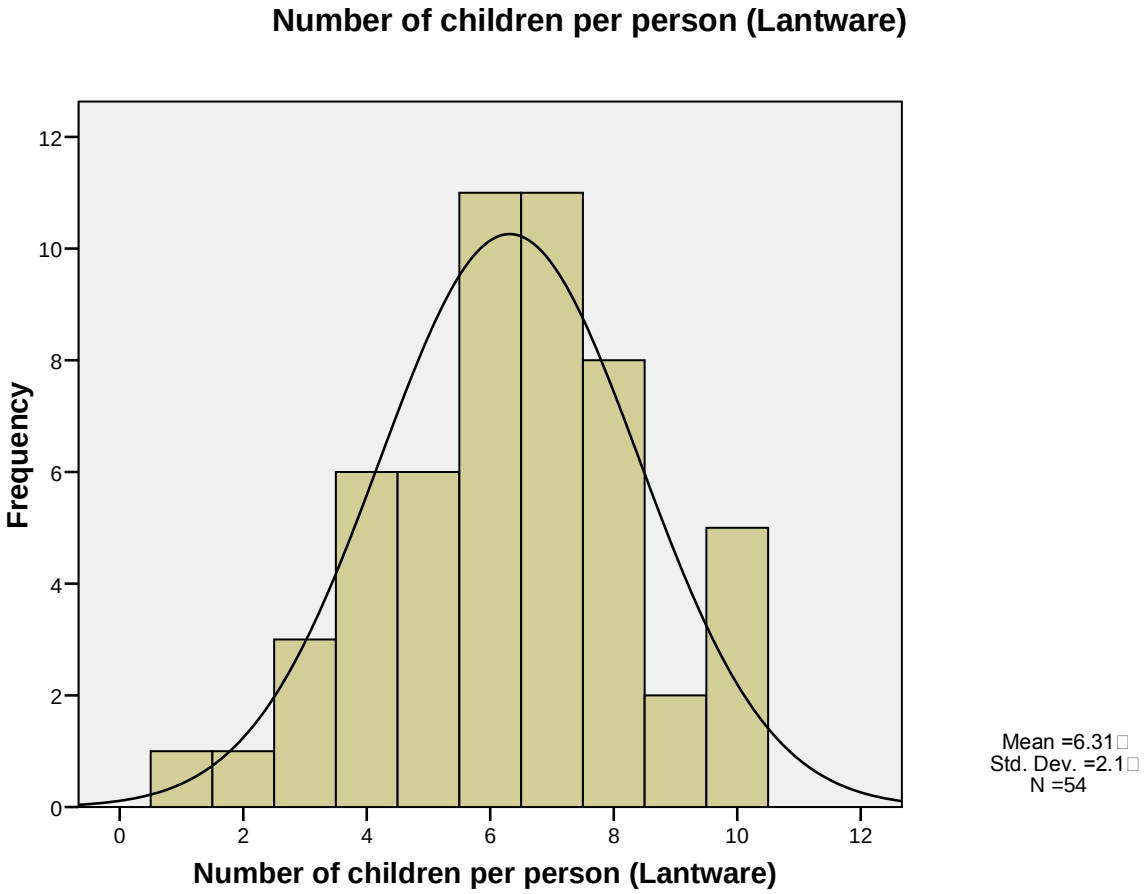
Table 4: Frequency distribution table of Lantware kebele, Filtu woreda

Statistics

	Lantware Kebele (Agropastoralist)	Client of Lantware kebele	Number of children per person (Lantware)	Number of sheep and goat now (Lantware kebele)	Number of cattle now (Lantware kebele)	Number of camel now (Lantware kebele)	Number of livestock by type per beneficiary before 2005 (Lantware)	Number of sheep and goat before 2005 (Lantware kebele)	Number of cattle before 2005 (Lantware Kebele)	Number of camel before 2005 (Lantware kebele)
N	54	54	54	54	54	54	54	54	54	54
	0	0	0	0	0	0	0	0	0	0
Mean		27.50	6.31	1.61	.33	.20		6.69	1.39	1.17
Std. Error of Mean		2.141	.286	.261	.070	.072		.657	.153	.235
Median		27.50	6.00	1.00	.00	.00		5.00	1.00	1.00
Mode		1[a]	6[a]	0	0	0		3[a]	1	0
Std. Deviation		15.732	2.100	1.917	.514	.528		4.828	1.123	1.724
Variance		247.500	4.408	3.676	.264	.278		23.314	1.261	2.972
Skewness		.000	-.206	.866	1.155	2.603		.682	.662	2.945
Std. Error of Skewness		.325	.325	.325	.325	.325		.325	.325	.325
Kurtosis		-1.200	-.144	-.523	.255	5.902		-.239	.473	12.336
Std. Error of Kurtosis		.639	.639	.639	.639	.639		.639	.639	.639
Range		53	9	6	2	2		20	5	10
Minimum		1	1	0	0	0		0	0	0
Maximum		54	10	6	2	2		20	5	10

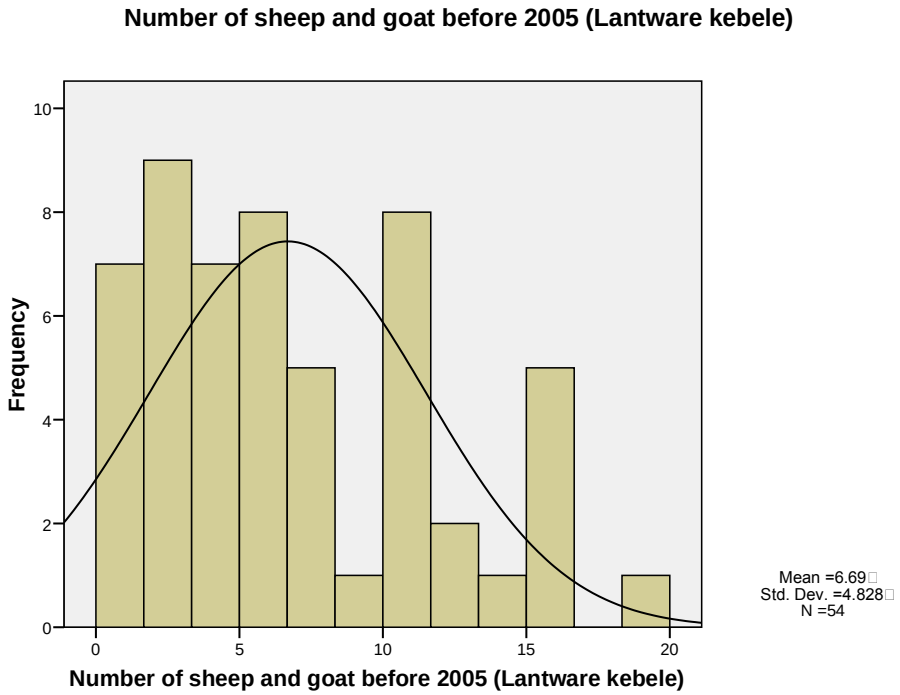
a. Multiple modes exist. The smallest value is shown

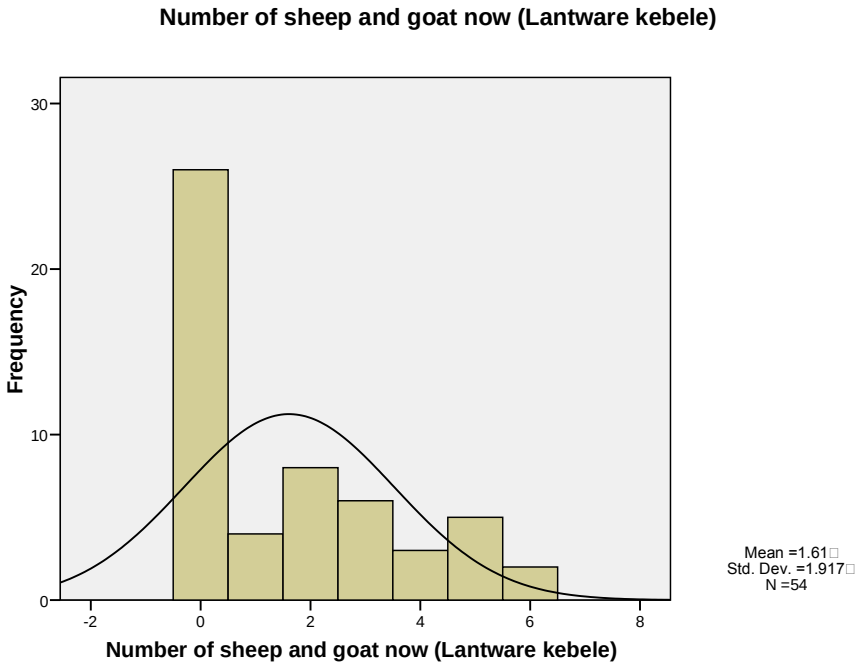
Figure 2: Average number of children per person in Lantware kebele



Note that average number of children per person in Lantware kebele is 6.31.

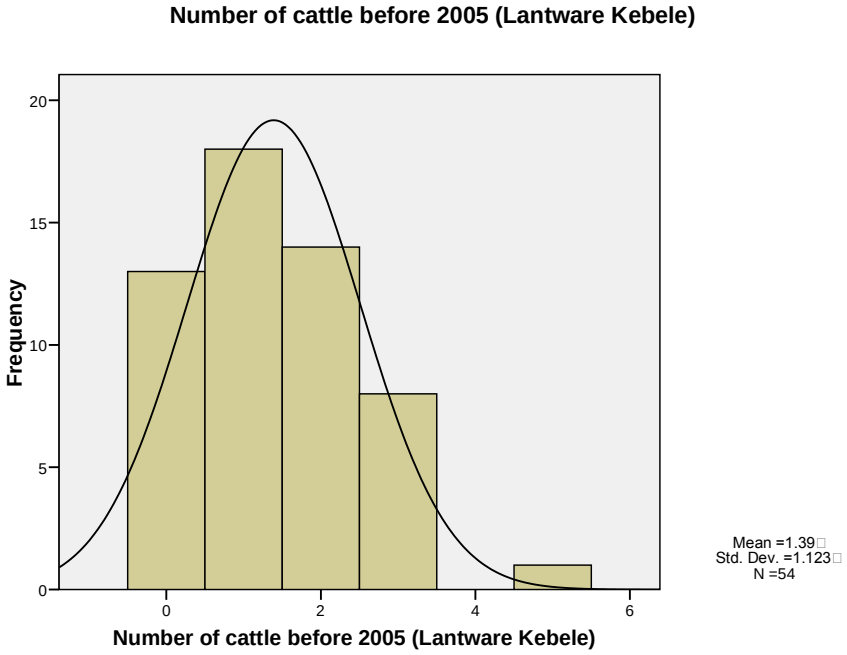
Figure 3: Comparison of average number of shoats (sheep and goat) per household in Lantaware community before 2005 and now

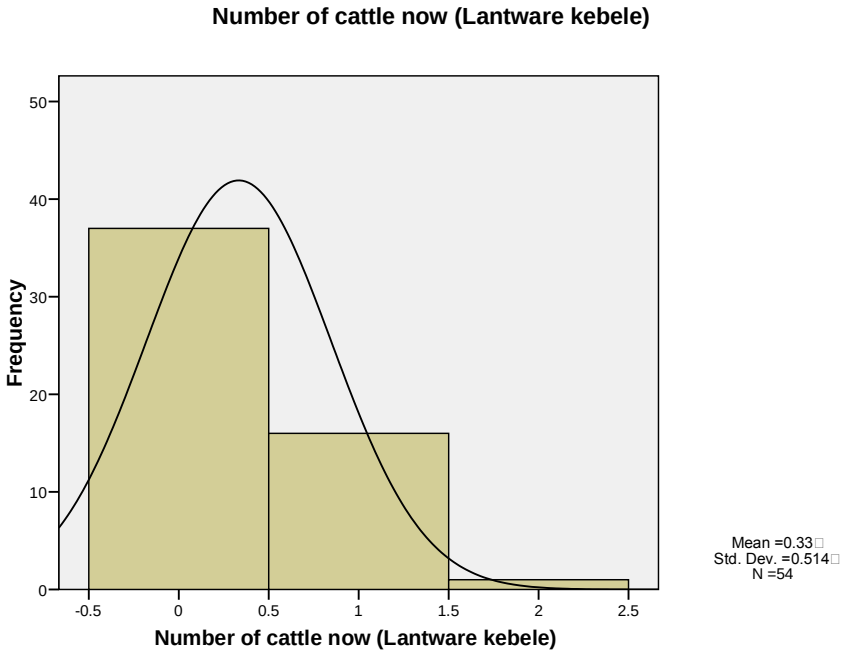




This graph clearly shows that average number of sheep and goat per household has reduced from 6.69 to 1.61 in Lantware kebele.

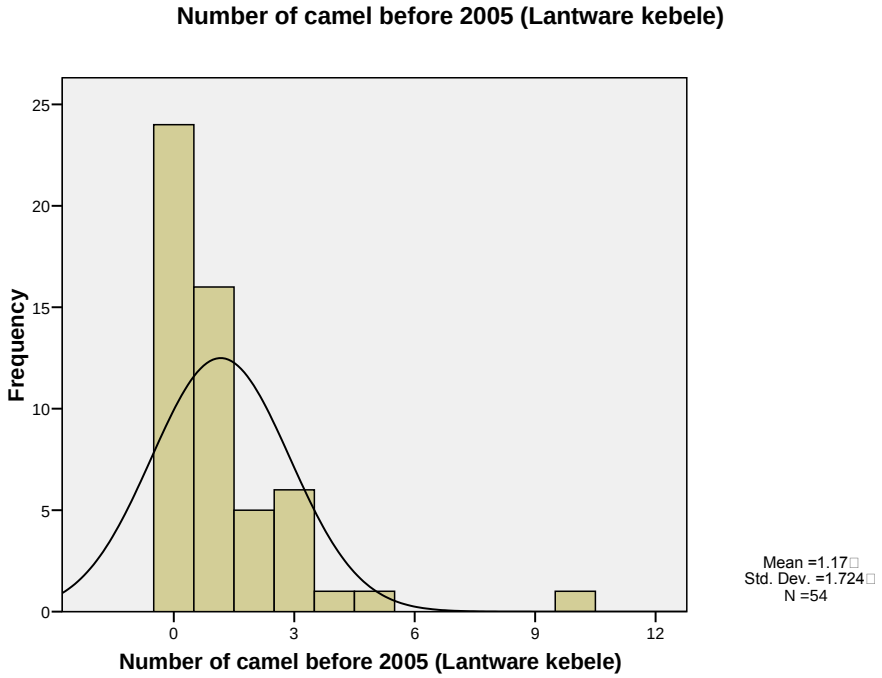
Figure 4: Comparison of average number of cattle per household in Lantaware community before 2005 and now

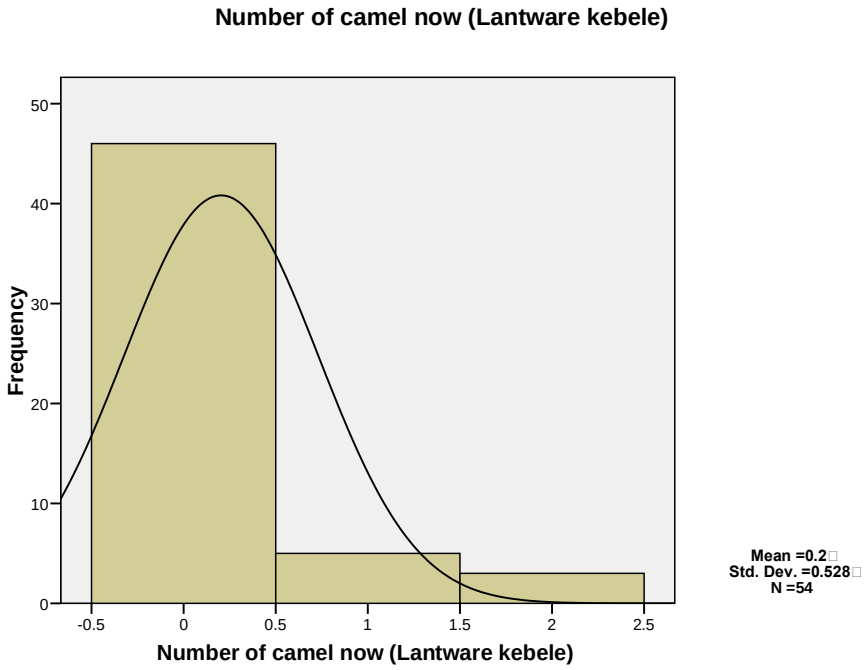




This graph clearly shows that average number of cattle per household has reduced from 1.39 to 0.33 in Lantware kebele.

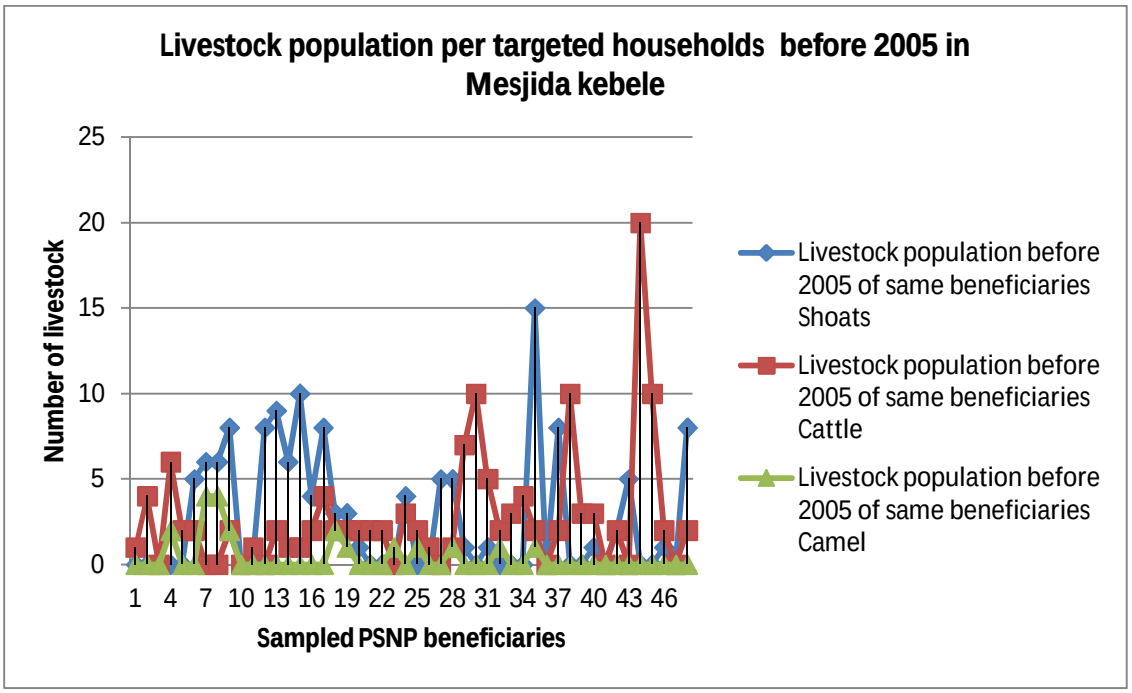
Figure 5: Comparison of average number of camel per household in Lantaware community before 2005 and now

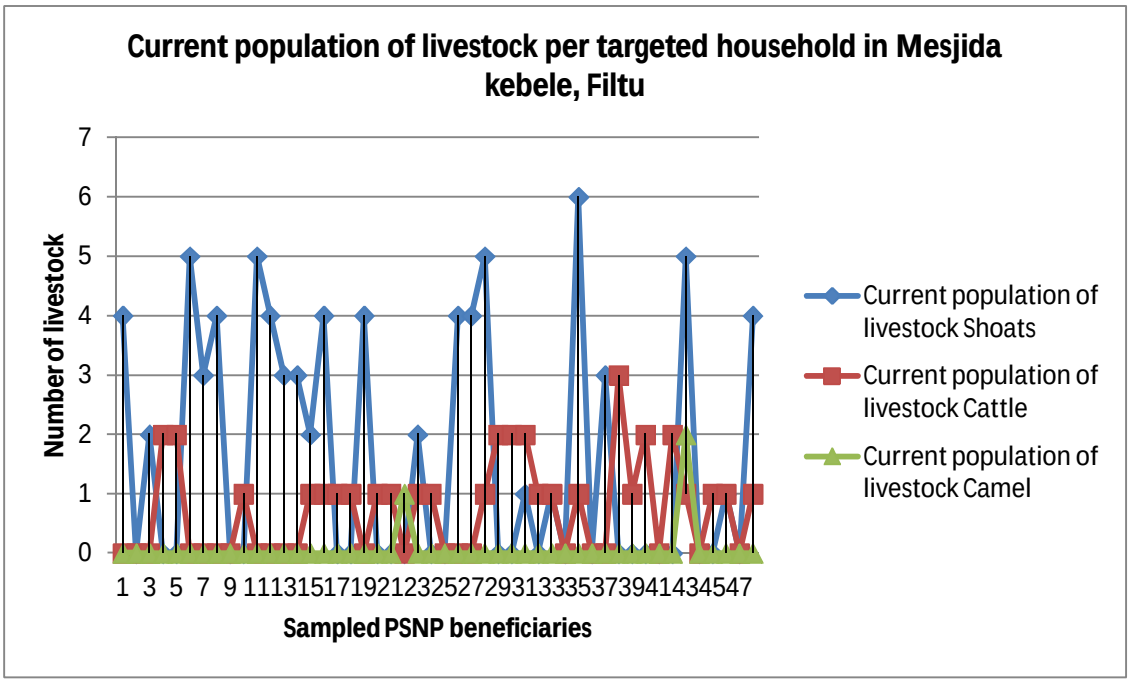




This graph shows that average number of camel per household has reduced from 1.17 to 0.2 in Lantware kebele.

Figure 6: Trend analysis of livestock population of Mesjida kebele households before 2005 and now





It is clear from this figure that number of livestock holding per household (number) over time in Mesjida kebele has reduced in all of the three livestock types. In order to see average decline of livestock number frequency distribution was calculated using SPSS as shown below. This will indicate the extent of reduction in number of livestock.

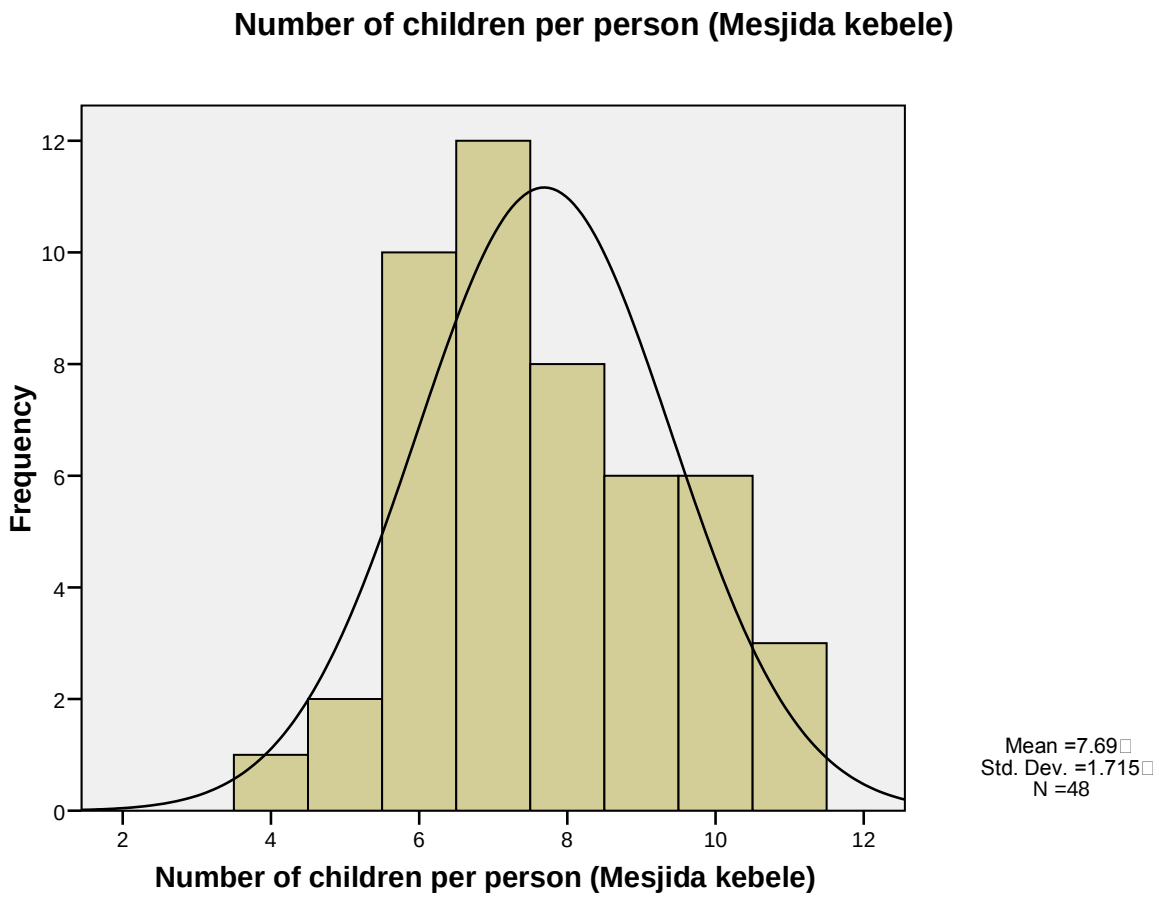
Table 5: Frequency distribution table of Mesjida kebele, Filtu woreda

Statistics

		Mesjida Kebele (Agropastoralist)	Client of Mesjida kebele	Number of children per person (Mesjida kebele)	Number of sheep and goat now (Mesjida kebele)	Number of cattle now (Mesjida kebele)	Number of camel now (Mesjida kebele)	Number of livestock by type per beneficiary before 2005 (Mesjida)	Number of sheep and goat before 2005 (Mesjida kebele)	Number of cattle before 2005 (Mesjida kebele)	Number of camel before 2005 (Mesjida kebele)
N	Valid	54	48	48	48	48	48	54	48	48	48
	Missing	0	6	6	6	6	6	0	6	6	6
Mean			24.50	7.69	1.65	.73	.13		2.77	2.75	.42
Std. Error of Mean			2.021	.248	.286	.114	.064		.526	.518	.136
Median			24.50	7.00	.00	1.00	.00		1.00	2.00	.00
Mode			1[a]	7	0	0	0		0	2	0
Std. Deviation			14.000	1.715	1.984	.792	.444		3.645	3.588	.942
Variance			196.00	2.943	3.936	.627	.197		13.287	12.872	.887
Skewness			.000	.247	.670	.800	3.671		1.281	2.950	2.725
Std. Error of Skewness			.343	.343	.343	.343	.343		.343	.343	.343
Kurtosis			-1.200	-.623	-1.159	-.057	12.965		1.205	11.096	7.577
Std. Error of Kurtosis			.674	.674	.674	.674	.674		.674	.674	.674
Range			47	7	6	3	2		15	20	4
Minimum			1	4	0	0	0		0	0	0
Maximum			48	11	6	3	2		15	20	4
Percentiles	25		12.25	6.00	.00	.00	.00		.00	1.00	.00
	50		24.50	7.00	.00	1.00	.00		1.00	2.00	.00
	75		36.75	9.00	4.00	1.00	.00		5.00	3.00	.00

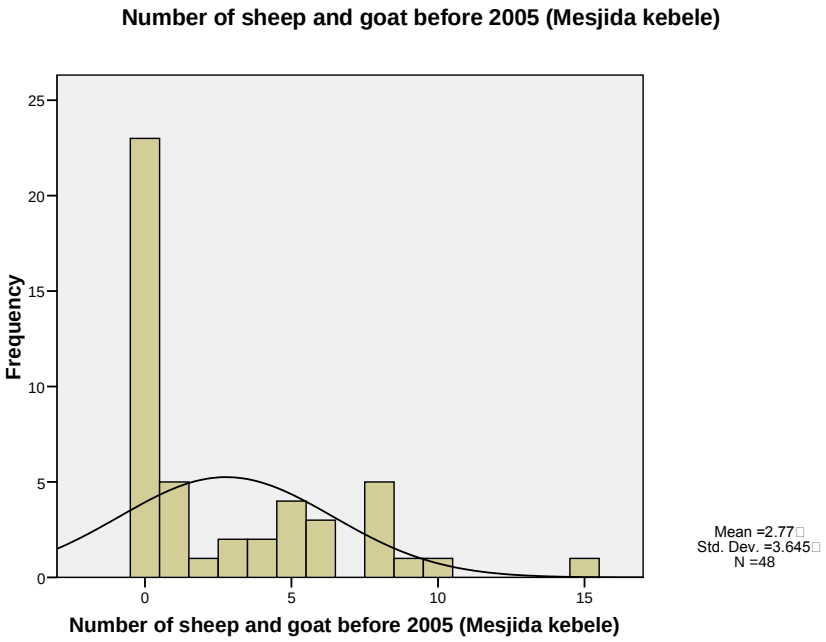
a. Multiple modes exist. The smallest value is shown

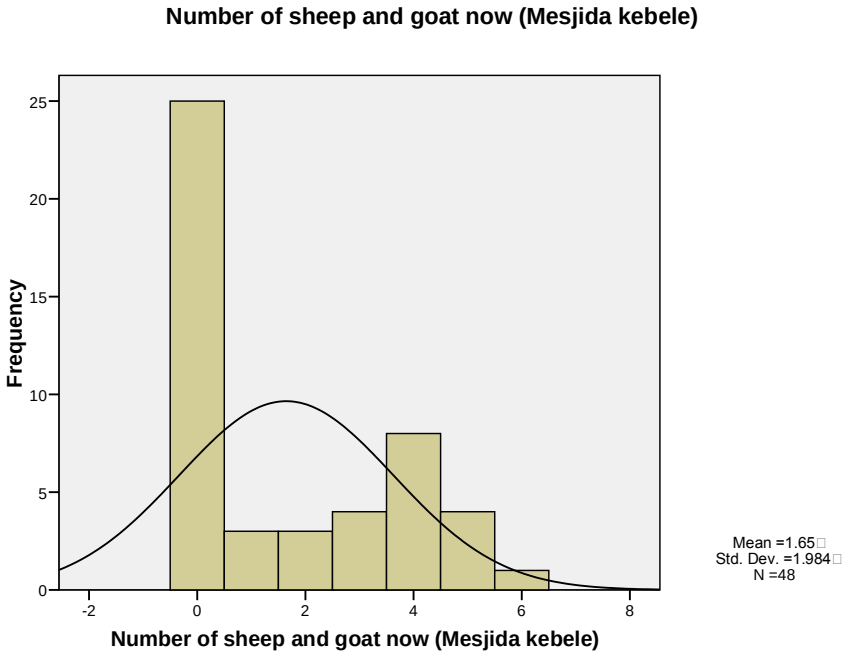
Figure 7: Average number of children per person in Mesjida kebele



Note that average number of children per person in Mesjida kebele is 7.69.

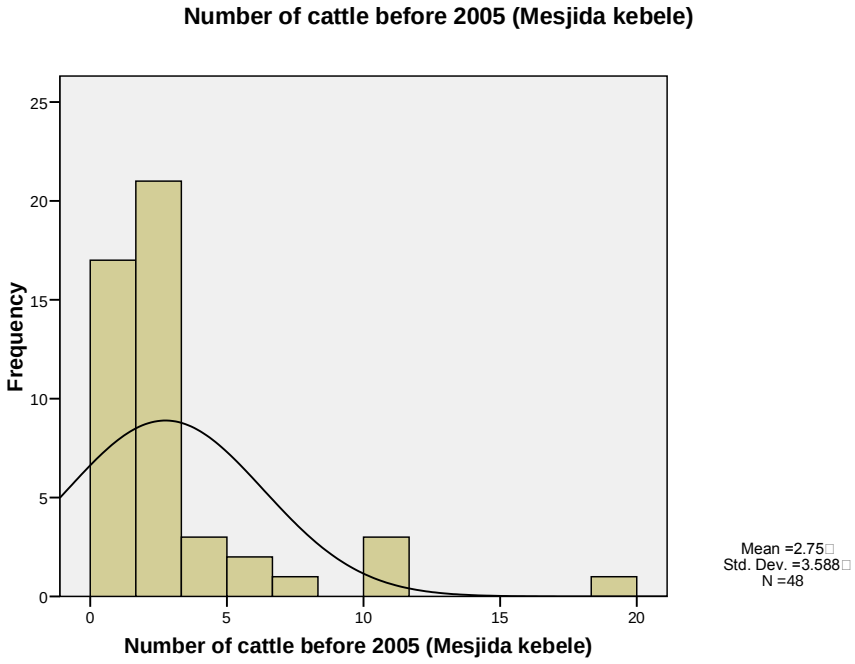
Figure 8: Comparison of average number of shoats (sheep and goat) per household in Mesjida community before 2005 and now

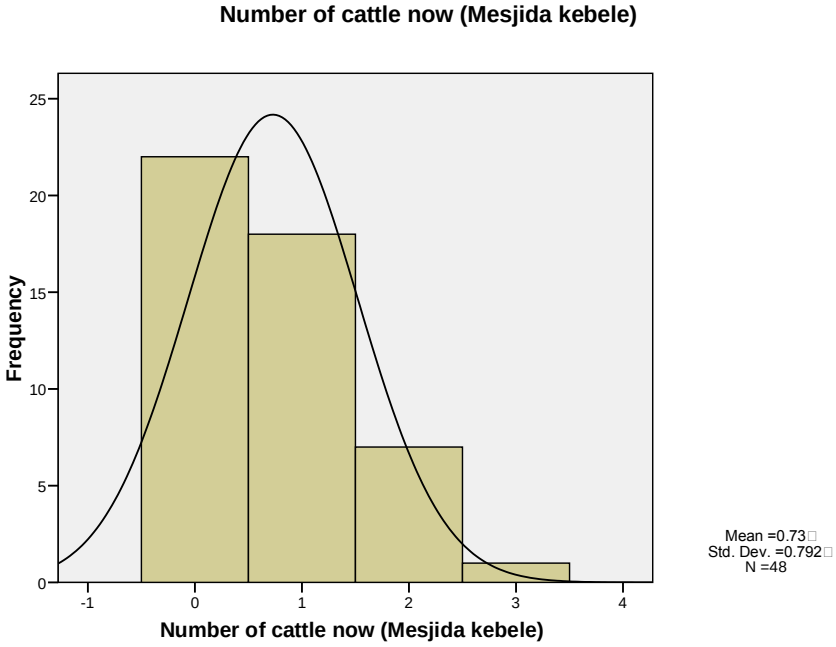




This graph clearly demonstrates that average number of sheep and goat per household has reduced from 2.77 to 1.65 in Mesjida kebele.

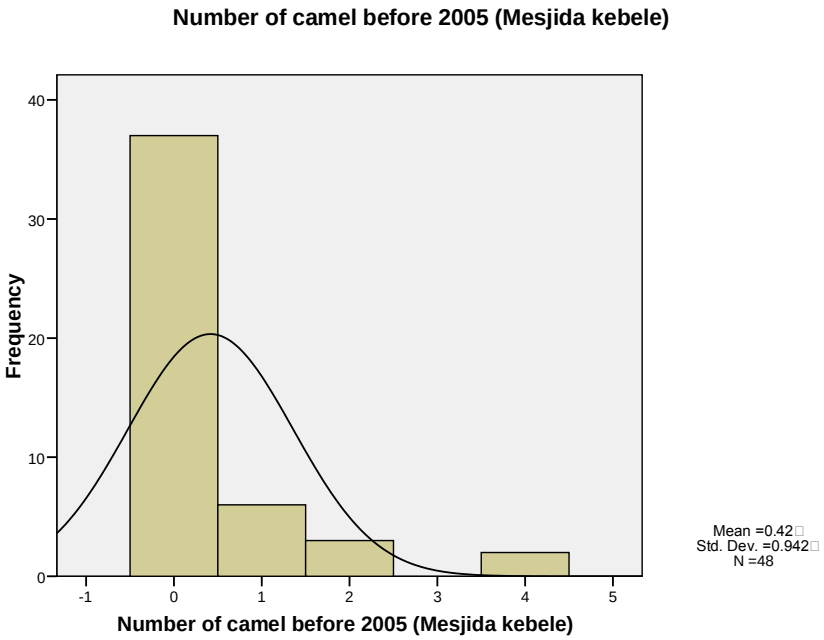
Figure 9: Comparison of average number of cattle per household in Mesjida community before 2005 and now

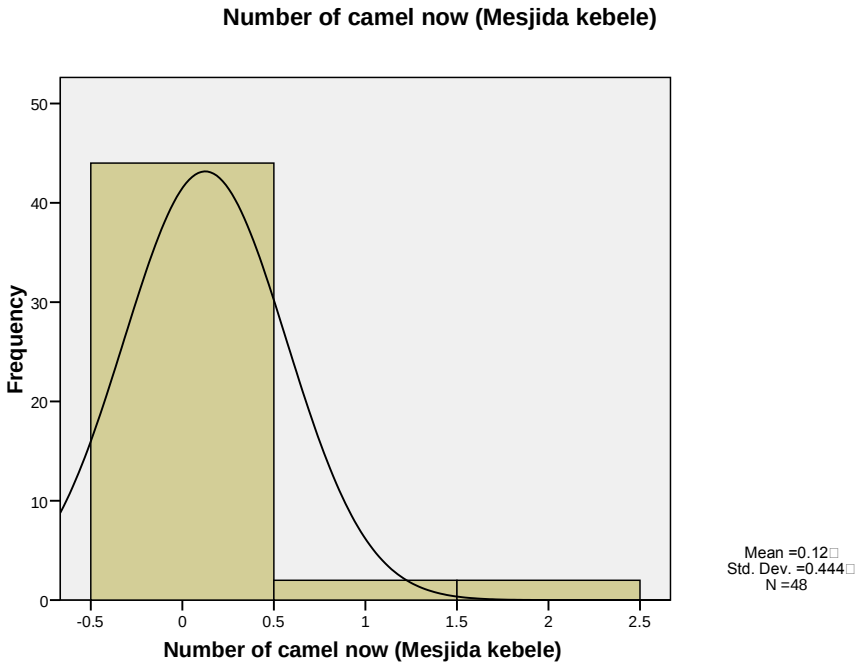




This graph shows that average number of cattle per household has reduced from 2.75 to 0.73 in Mesjida kebele.

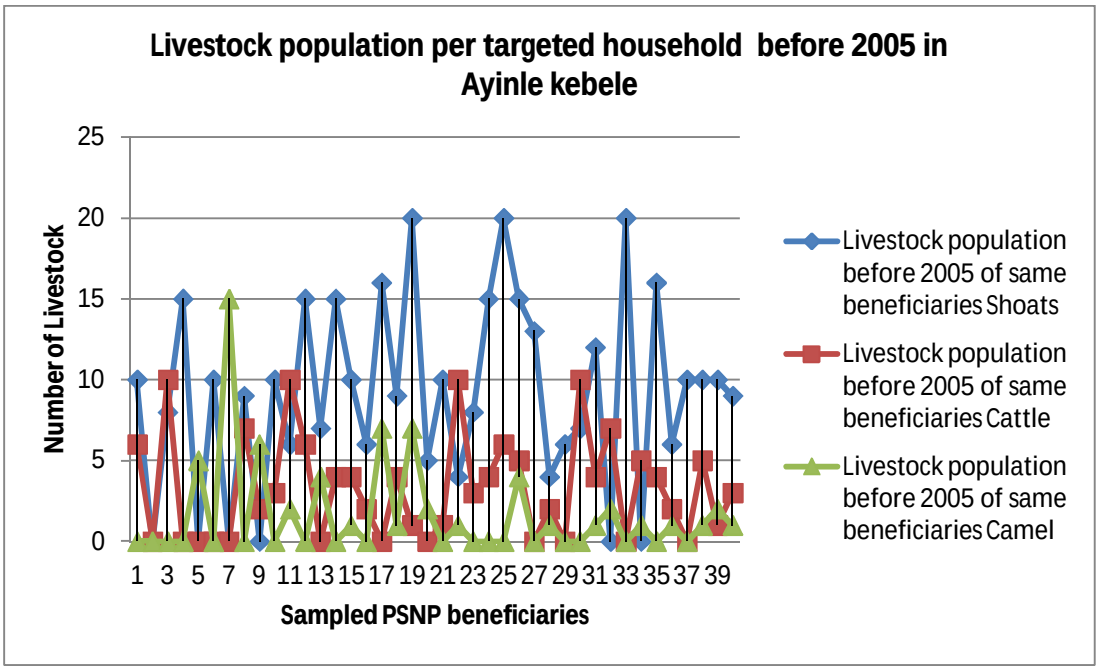
Figure 10: Comparison of average number of camel per household in Mesjida community before 2005 and now

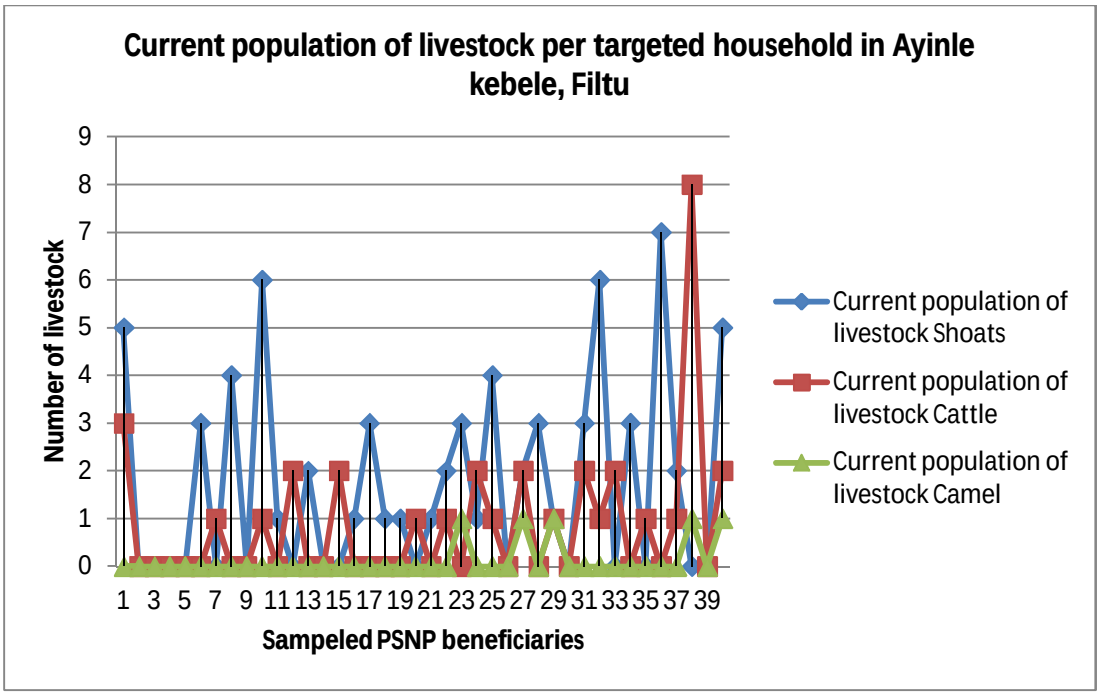




This graph shows that average number of camel per household has reduced from 0.42 to 0.12 in Mesjida kebele.

Figure 11: Trend analysis of livestock population of Ayinle kebele households before 2005 and now





It is clear from this figure that number of livestock holding per household (number) over time in Ayinle kebele has reduced in all of the three livestock types. In order to see average decline of livestock number frequency distribution was calculated using SPSS as shown below. This will indicate the extent of reduction in number of livestock.

Table 6: Frequency distribution table of Aynile kebele, Filtu woreda

Statistics

		Ayinle Kebele (Pastoralist)	Client of Ayinle kebele	Number of children per person (Ayinle kebele)	Current Number of livestock by type per beneficiary in Ayinle kebele	Number of sheep and goat now (Ayinle kebele)	Number of cattle now (Ayinle kebele)	Number of camel now (Ayinle kebele)	Number of livestock by type per beneficiary before 2005 (Ayinle)	Number of sheep and goat before 2005 (Ayinle kebele)	Number of cattle before 2005 (Ayinle kebele)	Number of camel before 2005 (Ayinle kebele)
N	Valid	54	40	40	54	40	40	40	54	40	40	40
	Missing	0	14	14	0	14	14	14	0	14	14	14
Mean			20.50	8.03		1.75	.85	.15		9.15	3.28	1.63
Std. Error of Mean			1.848	.276		.318	.228	.057		.903	.503	.464
Median			20.50	8.00		1.00	.00	.00		9.50	3.00	.50
Mode			1[a]	10		0	0	0		10	0	0
Std. Deviation			11.690	1.747		2.010	1.442	.362		5.709	3.178	2.932
Variance			136.67	3.051		4.038	2.079	.131		32.592	10.102	8.599
Skewness			.000	-.374		1.040	3.354	2.038		.068	.784	2.959
Std. Error of Skewness			.374	.374		.374	.374	.374		.374	.374	.374
Kurtosis			-1.200	-.642		.154	15.143	2.263		-.533	-.247	10.656
Std. Error of Kurtosis			.733	.733		.733	.733	.733		.733	.733	.733
Range			39	7		7	8	1		20	10	15
Minimum			1	4		0	0	0		0	0	0
Maximum			40	11		7	8	1		20	10	15
Percentiles	25		10.25	7.00		.00	.00	.00		6.00	.00	.00
	50		20.50	8.00		1.00	.00	.00		9.50	3.00	.50
	75		30.75	10.00		3.00	1.00	.00		14.50	5.00	2.00

a. Multiple modes exist. The smallest value is shown

Figure 12: Average number of children per person in Aynile kebele

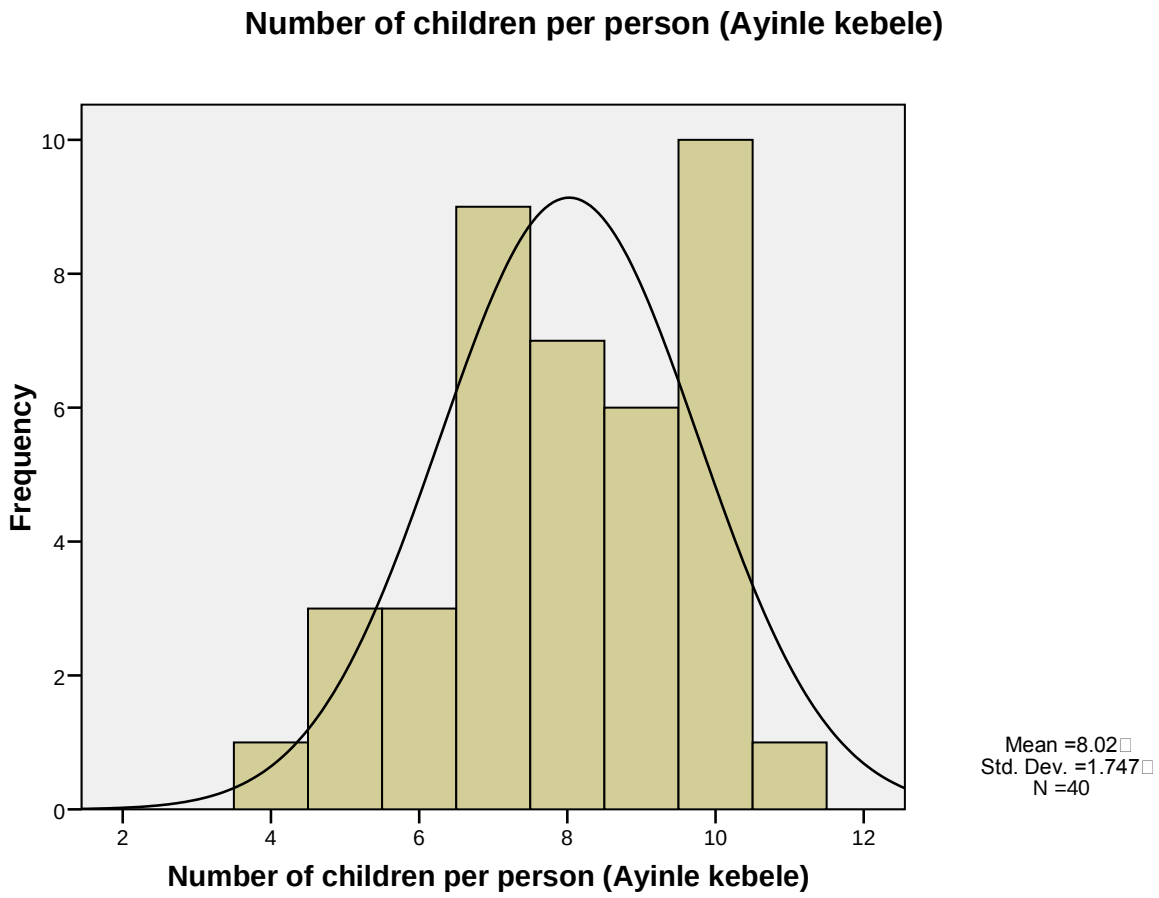
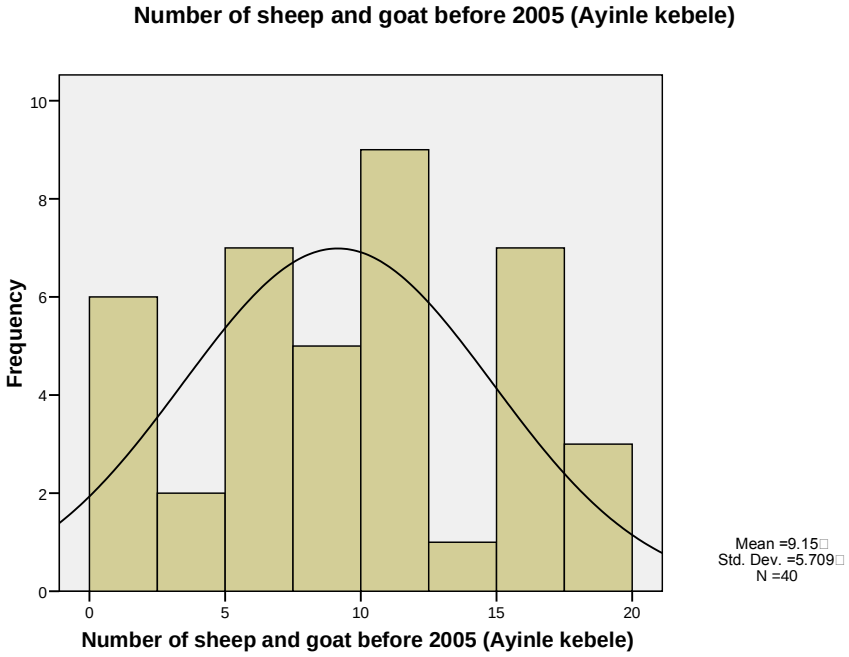
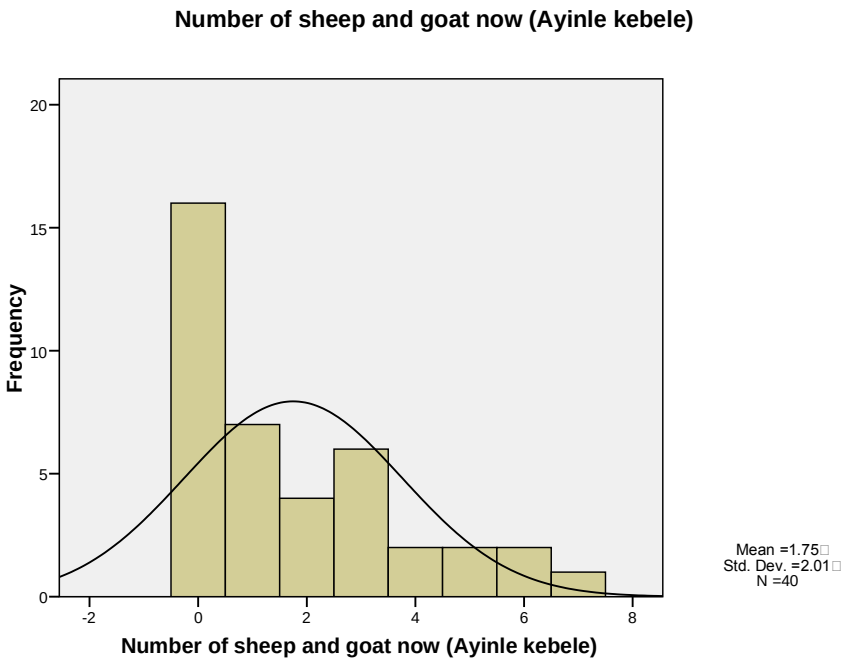


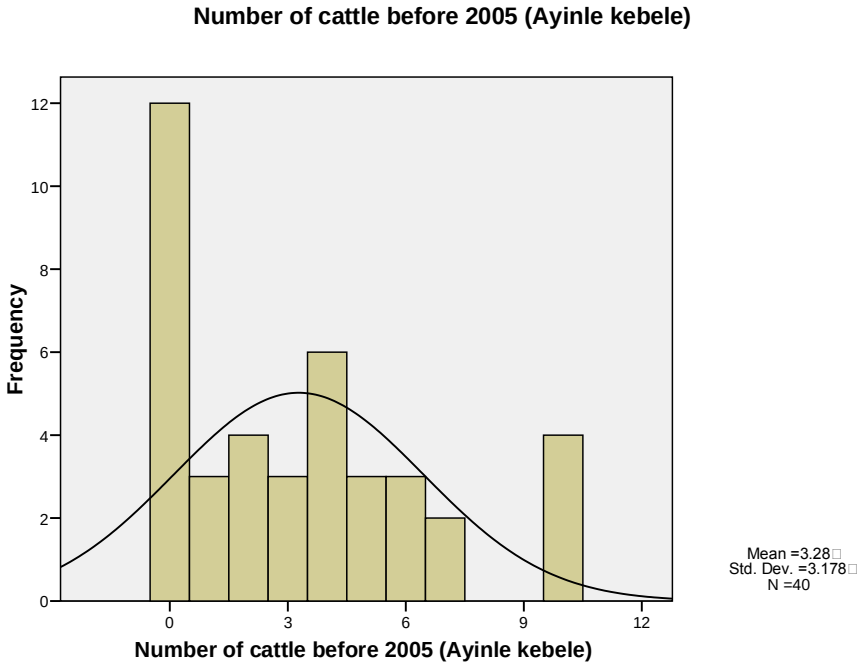
Figure 13: Comparison of average number of shoats (sheep and goat) per household in Aynile community before 2005 and now

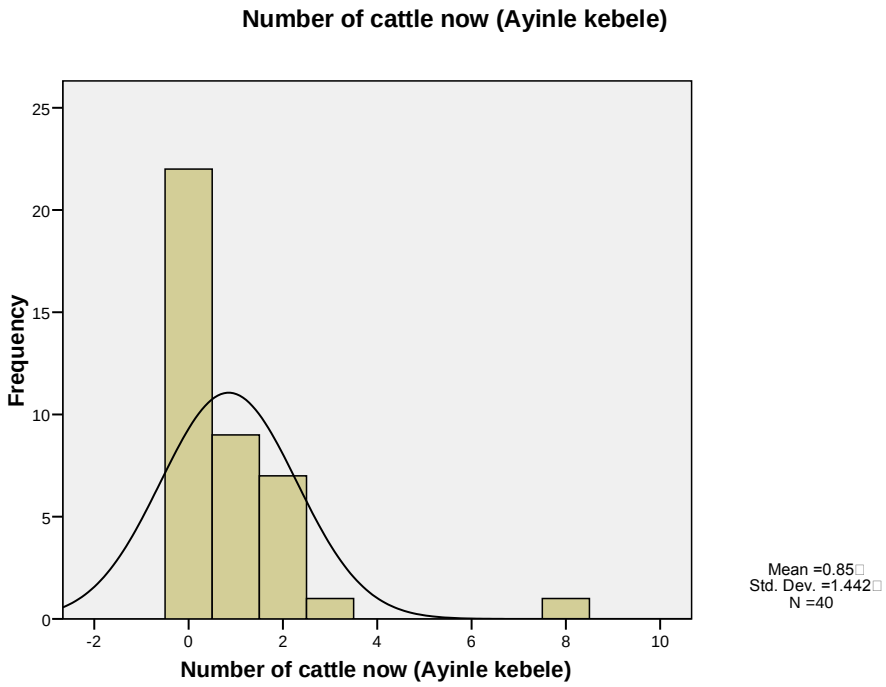




This graph clearly demonstrates that average number of sheep and goat per household in Aynile kebele has reduced from 9.15 to 1.75.

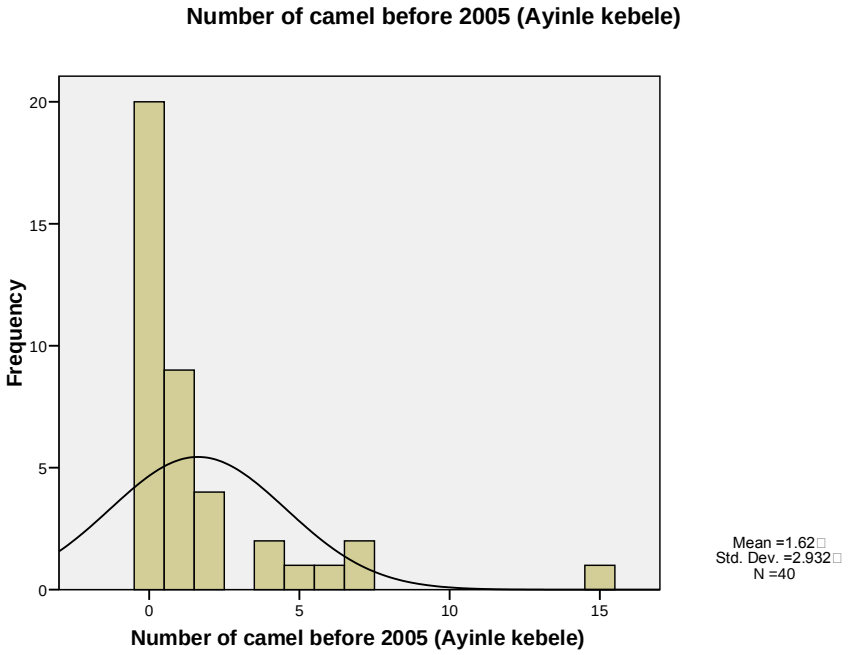
Figure 14: Comparison of average number of cattle per household in Aynile community before 2005 and now

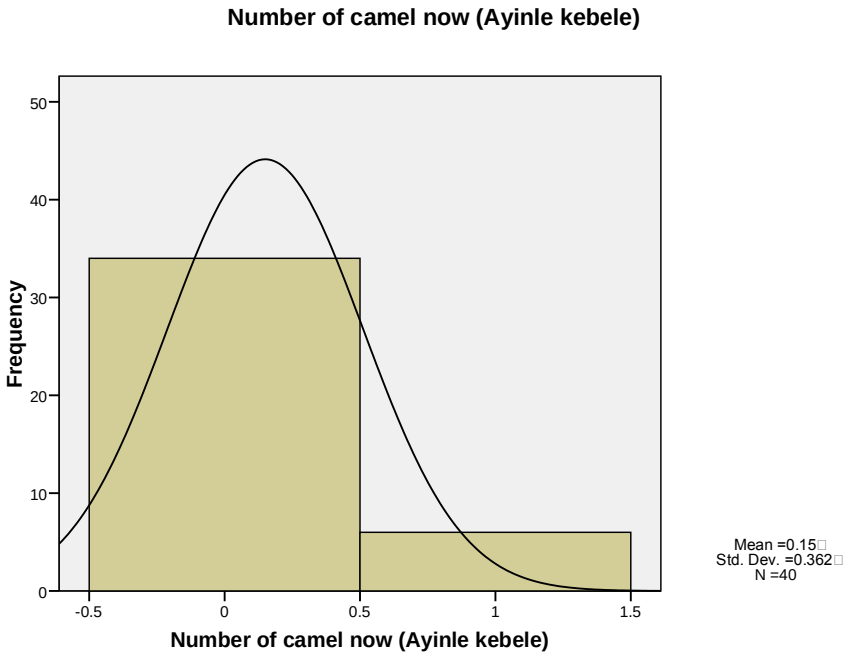




This graph shows that average number of cattle per household in Aynile kebele has reduced from 3.28 to 0.85.

Figure 15: Comparison of average number of camel per household in Aynile community before 2005 and now





This graph shows that average number of camel per household in Aynile kebele has reduced from 1.62 to 0.15.

The frequency distribution tables and graphs conducted for each of the three kebeles has revealed that average number of livestock (sheep and goat, cattle and camel) in pastoral and agro-pastoral households has reduced despite the presence of PSNP program. This means that productive safety net program does not help pastoral and agro-pastoral households to protect household assets in particular key breeding stock. The study also discovered that pastoral kebeles like Aynile tend to have relatively more average number of livestock and children than agro-pastoral kebeles. But in all of the two livelihood production system namely pastoral and agro-pastoral households are similarly lose their household asset regardless of continued safety net program support for the last six years. The underlying reasons for cause of loss of livestock will be discussed in the following section.

8.1. How significant is the loss of livestock at household level over time in the last six years?

In practice, valid conclusions about large groups of individuals or observations are always based on taking representative samples. Most of the time, this is done with incomplete information, because it is impractical to look at the whole population; thus we do sampling of a population. Then we look at a sample from the population and *infer* what the population might look like. The analysis is inferring certain facts about the population from results found in the sample. This process is known as *statistical inference*. Statistical significance is a term used in research that indicates the results of a study are not mere coincidence or simply due to chance. Therefore statistical significance in other words means that the data suggests my hypothesis is probably

correct. When discussing weather something is statistically significant, we always need to remember that we see the whole population under discussion. However, by studying (or sampling) a representative portion of the total, we can get a good picture of what the entire thing look like. In inferential statistics, we begin by developing a hypothesis for something we are studying and in this research the hypothesis is framed as ***"pastoral productive safety net program prevents asset reduction at household level mainly of sale of key breeding livestock".*** This means either the results of the study are empirically (or statistically) supported or they are not. Inference involves making predictions about the unknown. Through deductive reasoning, we can analyze a subgroup known as a sample and then generalize these measures to the entire group or the population.

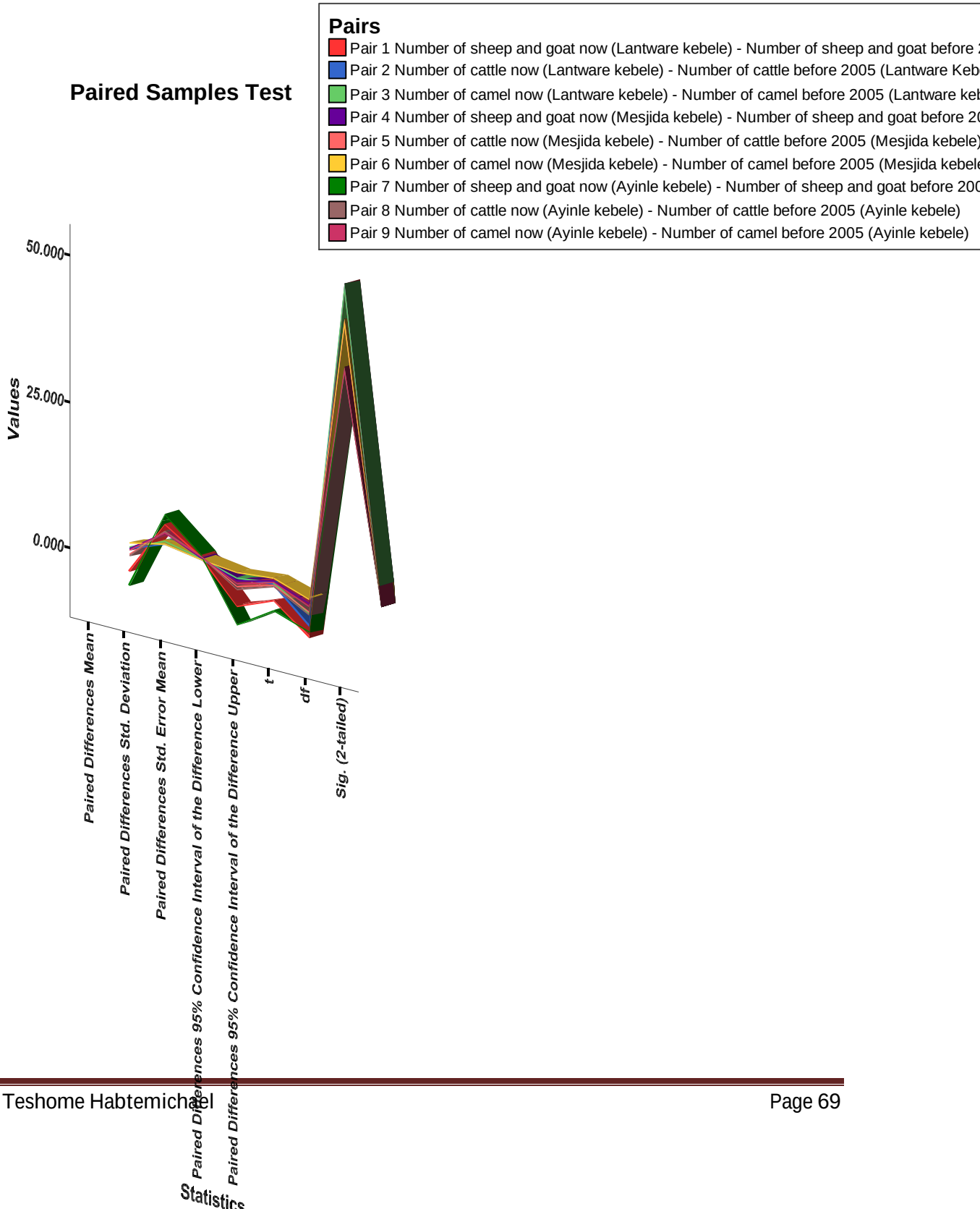
Hypothesis testing with inferential statistics starts with the application of the central limit theorem to a normal curve. In inferential statistics, it is normally define a large sample as one having at least 30 observations. In this research the sample size is 142. The level of significance used is 0.05, which means 95% confidence interval. The frequency distribution table and graphs has already discovered that average number of livestock (sheep and goat, cattle and camel) in pastoral and agro-pastoral households has reduced despite the presence of PSNP program. In order to validate a hypothesis about a population mean using sample and see how significant the loss of livestock is, two tailed t-test has been used with the help of computer SPSS statistical software. Output of the analysis is shown below in the following summary table.

Table 7: Result of paired sample T-test analysis and level of significance

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Number of sheep and goat now (Lantware kebele) - Number of sheep and goat before 2005 (Lantware kebele)	-5.074	4.505	.613	-6.304	-3.844	-8.276	53	.000
Pair 2	Number of cattle now (Lantware kebele) - Number of cattle before 2005 (Lantware Kebele)	-1.056	1.204	.164	-1.384	-.727	-6.442	53	.000
Pair 3	Number of camel now (Lantware kebele) - Number of camel before 2005 (Lantware kebele)	-.963	1.648	.224	-1.413	-.513	-4.294	53	.000
Pair 4	Number of sheep and goat now (Mesjida kebele) - Number of sheep and goat before 2005 (Mesjida kebele)	-1.125	3.015	.435	-2.000	-.250	-2.585	47	.013
Pair 5	Number of cattle now (Mesjida kebele) - Number of cattle before 2005 (Mesjida kebele)	-2.021	3.405	.491	-3.010	-1.032	-4.112	47	.000
Pair 6	Number of camel now (Mesjida kebele) - Number of camel before 2005 (Mesjida kebele)	-.292	1.091	.157	-.608	.025	-1.853	47	.070
Pair 7	Number of sheep and goat now (Ayinle kebele) - Number of sheep and goat before 2005 (Ayinle kebele)	-7.400	6.209	.982	-9.386	-5.414	-7.538	39	.000
Pair 8	Number of cattle now (Ayinle kebele) - Number of cattle before 2005 (Ayinle kebele)	-2.425	3.350	.530	-3.497	-1.353	-4.578	39	.000
Pair 9	Number of camel now (Ayinle kebele) - Number of camel before 2005 (Ayinle kebele)	-1.475	3.021	.478	-2.441	-.509	-3.088	39	.004

Note that: If the sig. (2-tailed) column in the right corner indicates a significance level below 0.05. We reject the null hypothesis and conclude there is a significance difference.


Pairs
Pair 1 Number of sheep and goat now (Lantware kebele) - Number of sheep and goat before
Pair 2 Number of cattle now (Lantware kebele) - Number of cattle before 2005 (Lantware Keb
Pair 3 Number of camel now (Lantware kebele) - Number of camel before 2005 (Lantware keb
Pair 4 Number of sheep and goat now (Mesjida kebele) - Number of sheep and goat before 20
Pair 5 Number of cattle now (Mesjida kebele) - Number of cattle before 2005 (Mesjida kebele)
Pair 6 Number of camel now (Mesjida kebele) - Number of camel before 2005 (Mesjida kebele
Pair 7 Number of sheep and goat now (Ayinle kebele) - Number of sheep and goat before 200
Pair 8 Number of cattle now (Ayinle kebele) - Number of cattle before 2005 (Ayinle kebele)
Pair 9 Number of camel now (Ayinle kebele) - Number of camel before 2005 (Ayinle kebele)
Paired Samples Test
50.000
25.000
0.000
Values
Paired Differences Mean
Paired Differences Std. Deviation
Paired Differences Std. Error Mean
Paired Differences 95% Confidence Interval of the Difference Lower
Paired Differences 95% Confidence Interval of the Difference Upper
t
df
Sig. (2-tailed)
Statistics

The summary table and graph shows that the trend analysis of the number of livestock holding (shoats, cattle and camels) of pastoral and agro-pastoral households reduced significantly (with 95% confidence interval) since from 2005 even if productive safety net program is supporting targeted households. With the exception that in Masjida kebele loss of camel population is not statistically significant. Communities agreed amongst themselves that approximately 100 shoats and some large animals would be required for a family to be 'self-sufficient' although this is probably not taking into account their additional revenue streams. Consequently pastoralists utilize many different income streams now rather than rely solely on livestock. These include informal labour, selling dry land products, in some cases remittances, as well as traditional livestock. It will be important and challenging, to set a benchmark for graduation that will maximize the number of beneficiaries who can graduate and leave the program and therefore those that can benefit from PSNP without being at a level where they would dip down back into vulnerability with small shocks and might need to re-enter the program. Moreover current levels of beneficiary livestock assets noted in the graphs are well below the level required, indicating that without additional inputs graduation from the program is not possible.

Project implementation mechanisms are appropriate to the cultural context and pastoral way of life, building on and supporting community practices as well as being sufficiently flexible to take into account the environment and context of Region 5. Wealth profiles of communities are exceedingly flat with little difference between large numbers of people at the lower end of the spectrum and there appears to be a trend in recent years shifting

downwards between wealth categories with possibly increasing drop-out rates for pastoralists and associated changes in mobility and settlement patterns.

Therefore we can conclude and generalize that pastoral productive safety net program alone do not prevent asset reduction at household level in protecting key breeding livestock.

8.2. Factors that may affect fulfilment of program objective

8.2.1. Targeting

Then PSNP beneficiaries will further be categorized in to two groups as public work and direct support beneficiaries. Public work beneficiaries are those known to be in a lower economic status but having able bodied family members that can engage in public work activities. Whereas direct support beneficiaries are those with lower economic status and do not have able bodied members of family. The two main methodologies for identification of program participants have been:

a. *Community values based targeting methodology*: This approach is based on the knowledge, values and norms of each individual community who select the poorest and destitute among themselves according to their own criteria and definitions founded on past experience of assisting each other through *zakat* and *sadaqat*

b. *Community triangulation targeting methodology:* Three separate groups conduct targeting in an area to identify the needy among the population. Each group creates a separate list then crosschecks the names with the other groups. If a

beneficiary is mentioned by all three they will automatically be chosen. If the beneficiary is on only one or two of the groups then discussion about that beneficiary will ensue until the three groups reach consensus with one agreed beneficiary list

This is particularly innovative response within the Southern Ethiopian circumstances reflecting the social context.

The feedback from all stakeholders consulted including the communities was that these were operating well in identification of the correct beneficiaries fitting the criteria. However, given the broader findings of the research noted below, that the wealth profile of the lower portions of the community is very flat with little differentiation between households in terms of wealth this makes it exceedingly difficult for any mechanism to assign beneficiaries without some controversy. The feedback from communities was consistent that most people who were receiving the benefits were the correct ones that mean the poorer ones. But that does not mean that some beneficiaries are relatively better off than the majority as it has been triangulated and seen from many appeals presented from the community for decision.

More importantly food sharing amongst themselves is quite common among Somali community. As they said they are doing that due to the fact that case load of needy population is by far larger than available resources. This has in turn strengthened their social cohesion. All communities have cultural and social mechanisms within them of ensuring survival. Sharing of food (or provision of a milking animal – *Irmaansi,* etc) with

relatives and neighbors is a social obligation and form of social insurance which is still strong in the pastoralist and agro-pastoralist livelihood zones in the Somali region. It is important not to undermine this vital mechanism and the reality is that in communities that are so reliant on their environment it would be inconceivable to be eating well while your neighbors or extended family are going hungry. Food is shared when requested. In fact due to the poor pasture over the past few years this traditional mechanism has been under considerable stress as elders have noted in discussions. This has meant that, according to the elders, with PSNP supporting many of the neediest households it has freed up the traditional mechanism to support many of those others who perhaps should fall within the PSNP mandate. This important finding from the ground directly contradicts perceptions held by some other stakeholders and is a very positive and key contribution being made by PSNP.

Targeting of beneficiaries is sound and more than reasonably accurate under these very difficult circumstances. The food transfers received are being used for a variety of purposes, but the bulk of it is consumed by the recipient family. Food is also shared more widely with neighbors and relatives, reflecting both the traditional practice as well as the very high level of need in the community. While this sharing can absorb a significant percentage of the package, aside from the direct benefit of this food assisting others, it is also alleviating strain on the broader traditional support system for those in need, allowing the support from *zakat* and *ermaansi* traditions to assist others.

8.2.2. Predictability of Food Transfers

A key aspect of the program design is the assumption that the food is transferred in a timely manner to coincide with the periods of need or the 'hunger gap' so that families do not have to sell their household assets (in particular livestock) in order to be able to feed their families. Given the inaccessibility and difficult terrain in the Somali region, as well as the higher level issues of delivering food from the USA, feedback from communities on the predictability of food transfers was that it is very timely. There were a few examples given where food had been delivered later than hoped for and livestock had been sold as a consequence to purchase goods (not always food) but these were by no means the general rule. An important additional aspect of predictability is the psychological knowledge that food is going to be delivered. With this knowledge people explained that they tried to 'hang-on' until it arrived, utilizing traditional coping mechanisms (in particular, borrowing from family members or neighbors) rather than depleting assets that are difficult to replace. This meant that when the transfers and distributions were late the impact on asset depletion was not as pronounced as it might have been.

Logistics and pipeline issues at the macro-level have been extremely challenging for the implementing organization. Obtaining food from the US and getting consistent and timely delivery is hard and these issues at the higher levels of the pipeline impact on all aspects of the program down to the ground. A feature of the program that deserves very positive mention has been the development of mini-warehouses as focal points

close to several communities. These are built by communities and are an enormous aid in reducing the distance people have to travel and the effort and energy that people have to invest in collecting their food. This enables fewer deliveries from secondary warehouses having to be made and increases the efficiency of the program significantly by enabling small stockpiles close to the beneficiaries and smoothing delays and issues higher up the chain that could impact negatively on the predictability of the food transfers.

There are still a few glitches to be worked on in the pipeline: feedback directly from staff members and formalized within internal reports notes suggest that, aside from the issues at the macro level, there have also been a few logistical issues in the pipeline with the delivery of food between primary and secondary centers as well as from secondary warehousing to beneficiaries. In the first case this appears to have been due to very variable amounts of rain in the wet season and consequential poor road conditions, which is beyond the project's ability to influence. The research student had undertaken a useful identification and analysis of the issues concerning the logistics, but this initial work does need to be followed up and possible solutions considered (if there are any) as this variability does increase the risk for beneficiaries that transfers will not be on time and consequentially puts pressure on their resilience and resources.

In Filtu some difficulties regarding the unwillingness of contractors to take less than a full load to remote areas exacerbated by limitations in warehousing space at the PCAE

compound have created a few challenges that are being addressed through the mini-warehousing approach. The constrained storage capacity may also impact on the capacity of PCAE to undertake emergency distributions in the future in parallel to PSNP and without impacting on the program. As a result this aspect needs to be analyzed and the level of risk confirmed.

8.2.3. The level of resourcing for PSNP

The level of availability of resources to assist communities is making a large *contribution* to addressing the need but does not appear to be sufficient for the current need and number of beneficiaries that fit the criteria for participation. This finding is evidenced by comprehensive and consistent feedback from ***all*** groups of stakeholders consulted (including government at woreda level who were very vocal on this issue). Stakeholders stated in various ways that their view was that there were many more people who needed assistance and should be included within the program than were currently being catered for. While a direct comparison of levels of food before and after distributions was not undertaken in discussions, all communities acknowledged that they would be significantly worse off without PSNP and in fact many would be in a disastrous state without the level of support that they are receiving. This was strongly stated, so there is little doubt that PSNP is important and as noted contributing to addressing a need. If the level of food being distributed currently was sufficient or more than sufficient to meet the need however, then one might expect to see greater evidence of asset creation and possibly a reduced level of drop-out rate from pastoralism than was seen by the research (if one assumed that people do not choose to change their way of life and 'drop-out').

There was a widespread questioning of the validity and appropriateness of the current process and basis being employed to allocate resources to woredas for PSNP. This is currently based on taking historical data from previous emergency food distributions underpinned by the assumption that this is representative of the needs rather than approaching the issue by undertaking a specific or annual needs assessment. The views expressed were supported by the wealth ranking exercises overlaid by beneficiary profiles, which consistently pointed to large numbers of households falling into the lowest ranking category with little apparent difference between households.

Furthermore, communities were asked to describe what they would do if they were to undertake a hypothetical re-targeting exercise. This question was aimed at probing and cross-checking the high level of need being reported. Participants responded in two ways: either by saying that all beneficiaries needed to be changed, as many of those previously better off are now in a worse condition than program participants. Alternatively they said that no beneficiaries should be changed as otherwise these households would fall off completely. Validation was potentially provided by the number of appeals that were in the system. One explanation for delays and inability of the appeals mechanisms to solve problems was provided by the appeals committee; their view was that the issue was that appeals were indeed valid but providing assistance to these people would mean denying someone else in the same situation much needed assistance. This again suggests that there is a much higher level of need than can be currently catered for.

This explanation though should be validated and explored further by PCAE through an analysis of the number of outstanding appeals in the woreda and the basis on which they are being put forward. Beneficiaries also noted that full family targeting was not effective and the degree of sharing between recipients and their relatives and neighbors was also exceptionally high, indicating a high level of need and a degree of stress on this traditional coping mechanism. If the feedback from stakeholders does indeed accurately reflect an important difference between need, rising vulnerability and insufficient resources this will inevitably result in difficult decisions to be addressed unless additional funds and resources are obtained.

8.3. PSNP plus other complementary programs (the case study of livelihood diversification groups)

A major success of the PSNP program has been the establishment of livelihood diversification groups. Beneficiaries perceived these generating groups as being exceedingly positive. This was evidenced by three very powerful indicators; firstly they reported very high demand from people requesting membership in the groups. Secondly, the increasing levels of membership in the established groups and thirdly the replication of the income group system. Communities in peri-urban environments reported additional groups being organized by themselves, or examples of groups mentoring others and sometimes groups split into two when demand was so high.

Increased Income and social capital: Additional income for the household was being generated according to the participants and this was being used to purchase food

supplies, clothes, medicines, and education. This income was highly valued and was certainly the driver for the exceptional increased demand for membership in the groups. In addition there were indications of increased social capital being developed through the groups. This dimension also deserves more attention from staff to look into into and understand the positive implications and the levels of attributability of this empowerment to PSNP. Some examples described included additional mutual support by the women in addressing domestic violence and discussions of how the women now, and increasingly, valued education and school attendance for all of their children, both boys and girls. Again an important positive aspect has been the eagerness and motivation generated amongst the participants by these activities. Reported levels of confidence from the women had increased according to them and they were enthusiastic about their achievements. It is probable that there are many factors and additional inputs contributing to these changes but the women strongly felt that the groups had played a role.

The higher incomes and turnover of the businesses started is very welcome and increased levels relative to the beneficiaries' previous income significant given their poverty. Considering the economics of the businesses within a less micro and comparative basis, the level of profits are in the range per person within a group of between ca Eth Birr 100 and Eth Birr 500 profit per month and deliberation of how the levels of profit generated could be increased would augment further the contribution this activity is making. Increased profit would enable asset accumulation to occur at a more rapid rate with consequential increased resilience and reduced vulnerability to shocks.

Different businesses generate more value: It was clear as well that some types of business have more value than others and this needs to be explored. Positively, and perhaps reflective of the increased confidence generated in the women, (and the understanding noted above that some businesses will yield better results), some groups had diversified their businesses and undertaken new ventures that spread their risk and increase the opportunity for wealth generation.

Irrigation groups: The livelihood diversification groups are complex. Some detail provided in an example raises contradictory aspects that illustrate both the evolving nature of this work as well as the responding inventiveness of both participants and staff. Thus for example irrigation groups have successfully enabled graduation to occur but on the other hand participants simultaneously reported increasing constraints that were preventing them from making very much money (and hence future graduation). These included two critical aspects, the high costs of maintenance for their water pumps and a lack of ability to undertake some of this work themselves. The second aspect and lesson learned by staff and participants (and now translated into practice) is the importance of incorporating an aspect of land ownership into this activity. Rents are high and increasing, reducing profits and a lack of certainty in tenure can translate into a lack of motivation in the group to invest too highly in the land in case they are no longer able to rent it and the benefits of their work is accrued solely by the owner.

This naturally leads on to questions concerning availability of land and its cost. It appears as though close to the town land is all already owned but not necessarily all of it is utilized. Land prices are increasing, ironically and possibly due to the increase in use of water pumps and success of irrigation groups and people's realization that money can be made and the land be more productive.

There is therefore much potential within the agro-pastoralist livelihood zones for development of river front agricultural plots. However, irrigation appears not to be a panacea. Firstly there are examples of conflict between pastoralists and those along the river as the pastoralists' animals access the water. In particular agriculturalists noted that the camels at night wander out of control and can be very destructive. Secondly, there are increasing salinity issues of the land close to the river area. Consideration of how best to maximize productive small-holdings would seem to be the most appropriate way forward in utilizing this land.

A further aspect that has been very positive with the irrigation groups has been the inclusion in the crop diversification of growing different fodder types. This is an increasingly valuable commodity with a strong market. There is thinking that different types of fodder such as 'Sudan Grass' with improved irrigation techniques that reduce the rate and possibility of salination of the soil. Investment from the implementing organization in technical staff is of direct benefit to the groups and increases their capacity for the longer term as well as improving their income. This approach yields

results and is a very worthwhile way to maximize resources and translate them into success.

Livestock and cross-regional trade: The research student did not meet specifically with a livestock marketing group and therefore cannot comment on the success or otherwise of this activity within the suite of livelihood diversification groups. The researcher did however; meet with a group of women in Dekha close to Region Four whose primary business was trading in livestock. This one discussion cannot therefore be taken as representative of the project but nevertheless raises a couple of issues that need deeper understanding, in case they have broader impact and as they influenced the success and levels of profit experienced by this particular group. They reported having to pay a 'cross-regional tax' of Eth Birr 60 per goat if they take the goats to market in Region Four. This clearly makes trading considerably more difficult. In the same village there were also implications surrounding other trade using goods from Addis or other parts of Ethiopia versus cross-border trade with Kenya and Somalia. Not using goods from Mandera as the basis for their petty trade meant they could not compete effectively in the market but if they did use the goods then they were vulnerable to having their stock confiscated by customs officials. In discussion with this group, while they were happy with the small monies that they obtained from their trading, they acknowledged that often they did not always make any money on a month by month basis as sometimes the cost of inputs on medicine or feed for the goats often wiped out the profit margin or the loss of an animal set them back.

Level of business activity; More broadly the researcher observed that the *level* of business activity is an aspect that with attention could bring further increased profits in the livelihood diversification component (ie the overall size of the business). Participants appeared not to be increasing the size of their businesses, although there was some evidence of growth with a few individuals. One consequence of this may be that participants are not able to buy in bulk at the moment or invest in being able to reach the next stage of production or scale with the current level of capital that they are able to accumulate. If this is indeed a constraining factor then access to micro-credit could be one solution.

It is important to distinguish between the success achieved to date by the project in increasing levels of income, which is welcome and enables families to manage their cash flow and smooth fluctuations in fulfilling household needs, and the degree of asset or capital accumulation that is required to move to the next level of success. This latter constraint now needs to be tackled and given the level of engagement, enthusiasm and success of the women involved in these activities, there is now a strong platform and exciting potential that could be built on to move to the next stage of wealth creation.

Arid land products: A second thread that deserves examination is consideration of how best to improve the resource base on which pastoralists are reliant and PCAE has already started this through their NRM work. An example is found in the many different types of incense trees (mainly *Acacia spp*) that are known to be productive and can be utilized in this region. There are tremendous technical difficulties with growing more of

these trees, but there have been successes in other parts of East Africa with harvesting products from arid land plants such as gum Arabic, aloes and others (there is also some potential with frankincense and myrrh in Ethiopia). The initial difficulties appear to be around collecting enough of the product; some are dependent on rain and so can only be harvested in the wet season, and then getting it to market. While there may be any number of failures too and reasons not to try, it would seem worth while undertaking a detailed review across the arid lands in Africa to find success stories around plants, products and how to scale up and the work of Susie Wren, commissioned by Save the Children is a first step along these lines. There are also other possible products such as honey that could be introduced.

Small industry: A serious challenge that faces pastoral areas is the lack of small industry or investment in business given the limited resources and markets and the isolation of the areas. There are also a number of small industry and small enterprise activities that have had some success in other similar environments that do not yet appear to have been attempted in the Somali region and that could also be explored and trialed. While by no means an expert in small business enterprise development, ideas that came to the mind of the researcher during the field trip included: the production of camel milk and selling in markets such as Nairobi for Somali and pastoralist diasporas (this has been undertaken in Kenya). The selling of solar cookers and then later the establishment of workshops for their construction once a demand and market has been established. Added value with some easy to grow vegetables like sun-drying tomatoes can also be sold both in local markets and even as a specialist product

in towns if of a high enough quality (that is the tricky bit). The challenge as ever is in achieving scale and quality.

One can still be wondering as to why the PSNP program do not prevent asset (key breeding stock) reduction at household level in pastoral and agro-pastoral of Somali Region.

Contextual Challenges

The PSNP is being executed under difficult contextual conditions which are affecting the achievement of its aims and objectives. This section considers some of the complexity of the broader environment that appears to be influencing the implementation of the PSNP.

1. Possible changing patterns of rainfall pattern and their consequenceses

An exercise was undertaken with all community participants that asked them to graph the last ten years comparatively in terms of drought intensity. It appears from this exercise that unseasonable, sporadic and erratic rains have resulted in recurrent 'drought' over the course of the last ten years with at least five of those years experiencing significant drought. Rainfall data and records from Addis present a mixed picture as changes in the overall amount of rain in a year in some parts of Southern Ethiopia do not reflect a clear pattern of reduction. Nevertheless when suggesting this to communities they responded by saying that the objective data and their experience

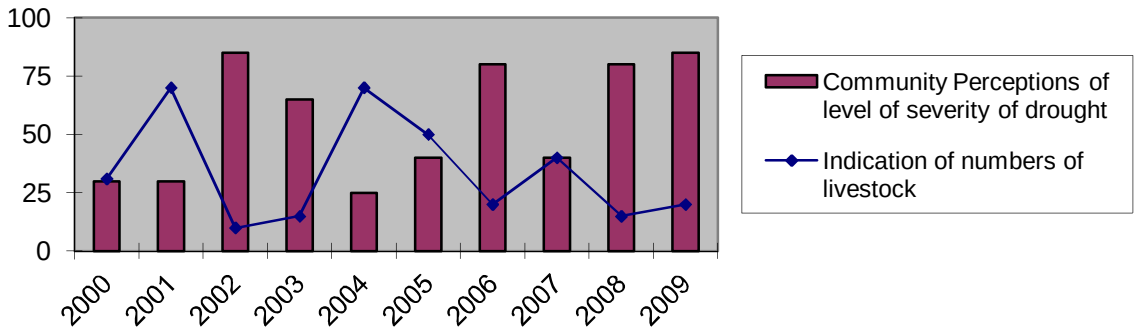
can still be reconciled as sometimes there is very heavy localized rain that produces an enormous amount in a day that would 'normally' be over perhaps a three day period of medium rain. Or instead of ten days of consistent rain in the past they may receive only light rain for a couple of days and then a downpour for a shorter period of time. There are additional aspects that may well be influencing the environmental conditions and stakeholder perceptions of drought.

The consequences of these changes in the nature of rainfall or environmental impacts is one of poorer pasture regeneration (for instance perhaps only lasting for 20 days instead of a couple of months) which is vulnerable to overgrazing, resulting in further compaction and increased subsequent run-off and weakened stock unable to reproduce and possibly with heightened susceptibility to disease. There appears to some debate over whether in times of drought livestock succomb only to starvation or indeed whether starved animals do have a weakened immune system and hence are more vulnerable to disease. If this latter relationship was a direct correlation, one would expect to see increased levels of disease in livestock every time that there is a drought. This pattern was not clearly apparent during the consultations, so the research is lead to suggest that the relationship between drought and levels of livestock disease is significantly more complex. The review did not research the literature regarding this debate and so the report reflects the community perception and understanding of what is happening on the ground rather than a more scientific approach.

Changing seasonal patterns appear also seem to be having an impact on the mobility of pastoralist groups. This picture was consistently described by all communities

consulted with and a couple of examples of this are encapsulated in the diagrams below. Within the context of livestock numbers, for instance the graphs did not differentiate between the different types of livestock. Some years might impact more heavily on camels and other year's cattle or shoats, so this is an 'average' picture. Secondly in diagram for Masajid, the level of livestock remained constant in the last few years despite the fact that there was actually 'drought' three years in a row. One explanation provided lies in the fact that livestock were vaccinated and communities believed that this provided them with some protection against disease - despite being weakened by drought. The other clear trends on the graph are (a) the overall downwards trend in livestock numbers (despite some high peaks and troughs in Aynile and Lantware). This overall trend was confirmed and consistent across the two kebeles where the exercise was undertaken. (b) the recurrent periods and levels of 'drought', even though this may also vary a little in perceptions of severity and years of severity in the different communities consulted with but which illustrated at least five years of poor rains over the ten year period.

Figure 16: Pattern of drought for Aynile over the last ten years with 'shocks' and comparative overlay of livestock numbers:

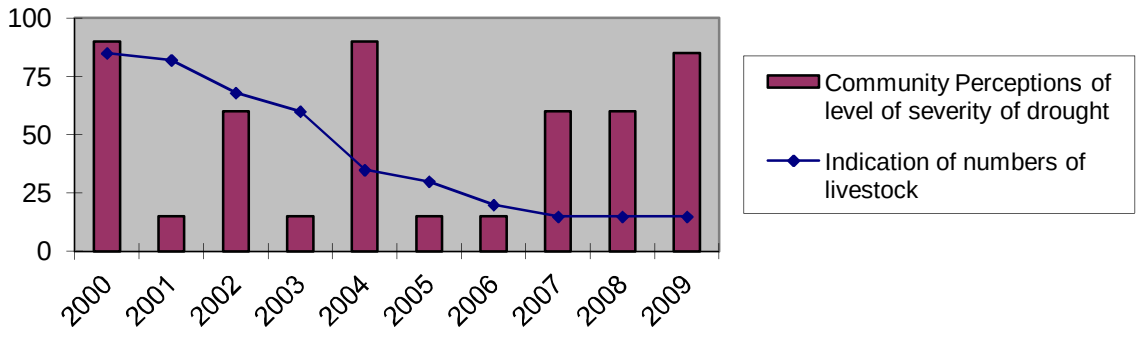


Year	Type of significant shock that impacted on the community
2000	Floods, Rift Valley Fever (livestock), Human disease (bad year for malaria, rift valley fever disease[1]) 15 people died mainly children
2001	Nothing significant
2002	Livestock disease (not defined)
2003	Livestock disease, human disease (diarrohea, malaria, people died mainly

[1] Rift Valley Fever (RVF) is a viral zoonosis that primarily affects animals but also has the capacity to infect humans. Infection can cause severe disease in both animals and humans, leading to high rates of disease and death. The disease also results in significant economic losses due to death and abortion among RVF-infected livestock. This might be one of suspected causes of abortion in livestock and this linkage needs further investigation and diagnosis.

	children and women)
2004	Floods, malaria, dysentery, (ca 15 people died both children and adults from the dysentery)
2005	Livestock disease
2006	Human Disease (cough, malaria, diarrohea)
2007	Nothing Significant
2008	Livestock Disease
2009	Livestock Diseases, Human diseases (malaria, cough and diarrhoea)

Figure 17: Pattern of drought for Masajid over the last ten years with 'shocks' and comparative overlay of livestock numbers:



Year	Type of significant shock that impacted on the community
2000	No pasture, no food, Human Disease (Diarrohea – ca.15 died)
2001	Chicken disease
2002	Lack of Pasture, livestock disease, market shock, human disease, no food
2003	Nothing significant
2004	In Migration, Human disease (diarrohea – ca. 7 children died), no food

2005	Nothing significant
2006	Camel Disease
2007	Nothing significant
2008	Livestock disease
2009	Lack of pasture, Human disease (diarrohea)

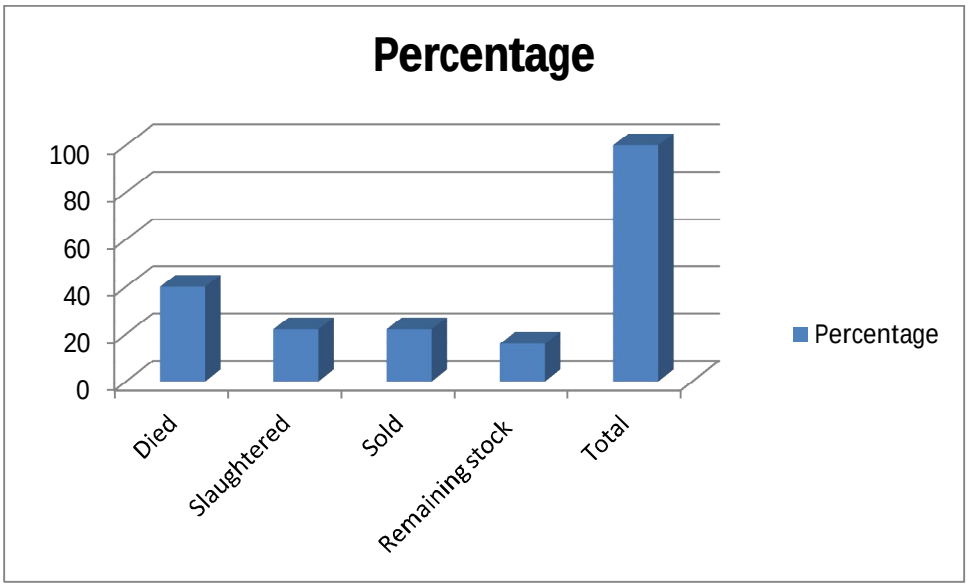
What is clear though, is that there is not yet a good enough set of data across the region that provides accurate records of the weather and, importantly, differentiates between absolute rainfall and effective rainfall (ie that which can be absorbed by the land and translated into pasture). It would be useful to set up a simple system of recording rainfall and run-off/ infiltration coupled with a communication system that could be utilized better within the context of natural resource management and improved grazing management. Given the public debate over climate change, the lack of a sound understanding of its complexities in the Horn of Africa, and the inherent long term nature of the phenomenon it is not too late to put in place a data collection system and process that might yield important information in the next ten years or more. This could be explored in the form of a low cost schools project across Somali Woredas at the new community ABE schools – a rain guage, run-off plot, thermometer, set of record books to build up a picture across the region.

2. Prevailing livestock diseases

A focus group discussion in Lantware noted the importance of livestock disease in the loss of animals over the period and the symptoms of the diseases facing livestock

owned by communities included Haemorrhagic septicemia, Blackleg, Anthrax, and Clostridial infection. These diseases account for 40% of livestock deaths in the kebele. In times of severe drought, pastoralists move long distances with their livestock in search of forage and water. These movements have serious health implications. The animals which are then under nutritional as well as physical stress, succumb easily to diseases. Physical stress results from long distance movement and overcrowding due to unplanned movement. Some animals may die on the journey while others carry and transmit diseases to new areas. It is also common practice to move animals to valleys in search of forage and water during drought. These areas may be infested with disease vectors, leading to economic losses in the purchase of drugs as well as animal mortality. The debilitating effects of disease are exacerbated by nutritional stress during drought. Crises caused by civil strife also result in mass exodus of livestock with similar animal health implications to those induced by drought. Above all, the sharing of grazing and water resources by animals from different areas as well as wildlife exposes them to the risk of disease transmission. Effective strategies for coping must therefore include the management of livestock movements, water and grazing resources as well as disease control. The following graph also exemplifies this fact.

Figure 18: Graphical presentation of factors attributing to loss of livestock in Filtu woreda (Lantware kebele)



In common with human mortality in times of drought, livestock mortality is often associated with disease. During drought, large numbers of animals congregate around diminishing feed and water resources, and the combination of stress and close proximity encourages the spread of transmissible diseases. This situation can be further exacerbated by inflow of animals from neighboring areas or countries. It follows that basic veterinary care can treat existing diseases and prevent diseases outbreak.

Based on many years experience with community-based animal health workers (CAHWs) in Ethiopia, federal government policy now supports the use of privatized CAHWs under veterinary supervision, and federal minimum standards and guidelines are available for the use of CAHWs. The basic approach involves networks of CAHWs connected to private veterinary pharmacies which are owned or managed by veterinarians or animal health assistants. As CAHWs are selected from the communities they serve are highly mobile and efficient, they represent a crucial resource for the

delivery of animal health inputs in times of drought. However, the general trend of privatization of clinical veterinary services presents a particular challenge with regard to relief interventions. Specifically, it has taken many years to persuade government to support privatization and CAHWs, and in pastoralist area, private practitioners cite an unfair competition from government as a major constraint to their business. In the case of relief veterinary programs, when these programs provide services free of charge and in isolation of the private sector, the private sector suffers. In the long term communities may be left with a weakened veterinary service after relief programs.

3. Increasing vulnerability

As a result of this emerging pattern of recurrent drought/ effective rainfall over the past ten years, there appears to be an increasing vulnerability amongst pastoralist and agro-pastoral communities with significant loss of livestock and consequential 'drop-out' rates and shifts downward within wealth categories. Estimates of the incidence of pastoral drop-out (in the pastoralist livelihood zones) are imprecise but in the communities consulted ranged from 6-20 households in the past year to up to 80 households over the past three years (Lantware). Estimates were given in some kebeles (3) of a shift from the middle wealth ranking section of the population to the low wealth portion of approximately 20-30%. There also appear to be indications of other changing patterns such as shifts from the pastoralist communities that are mobile to those that are settled in communities but still see themselves as pastoralists. The reasons reported behind this change in lifestyle range from a loss of numbers of animals and therefore no longer the need to be so mobile in search of grazing, to other potentially more positive drivers

of change such as improved provision of services, such as schools or permanent water. The research did not obtain a clear picture of the significance of these changes on a quantitative basis nor all the primary and secondary reasons for the changing lifestyles. Changes in mobility of communities is an aspect of pastoralism that could be worthwhile exploring in more depth as it clearly also links with changes in environmental impact.

4. Population pressure

The average number of children per woman in Filtu districts found through this study is on average 7.3 and the formal 2007 census noted that the population is increasing at an annual rate of 2.6%. Common perceptions from women consulted were that the more children the better as they obtained some status from having large families and this was not necessarily seen as a burden in terms of mouths to feed. It was not unusual to meet women proudly stating that they had between ten and twenty children. Rapid population growth is having and will inevitably have an increasing impact on the environment as resources are depleted to meet the needs of the population whether this is through the number of herds grazing or the rates of tree cutting. Family planning is a sensitive issue and touches the centre of many cultures but increased education around spacing and number of children can have a large impact on the wellbeing of women and families. While not within the scope of PSNP, this aspect is worthy of more attention

5. Seasonal unpredictability

An exercise was undertaken with all community participants that asked them to confirm the intensity of the hunger gap, which months it takes place and then cross-check the picture that emerged with project data when the beneficiaries are actually receiving food, and when they may need to sell livestock or assets to buy food or other items.

The expected and established picture of hunger reflects the dry seasons but there now appears to be significant seasonal variability in this picture and there are impacts felt throughout the year.

PSNP food transfers are undertaken every two months for a period of six months with participants receiving two months of food rations in one transfer. The project design is built on the assumption of seasonal predictability with the two rain fall periods being the *Guu* or primary rainy season (March to May) and the *Deyr* or second rainy season (October to December) and food transfers take place to cover the dry seasons.

Feedback from all stakeholders including government (kebele food security task forces), indicate that the experience of predictability is no longer always consistent with the design premise. For instance communities noted that often they now have periods of hunger that are extended further and earlier during the dry seasons as there is a longer lag period at the start of the rainy seasons while pasture is growing and animals become productive.

The consequences of these changes in experience have implications. Firstly the woreda, PSNP and implementing NGO cannot always rely on the food transfers alone to address the needs. Secondly this suggests that there is a place for a more sophisticated early warning mechanism and response to deal with seasonal shortages. Such a mechanism may require the design of a monitoring system of proxy indicators, perhaps of livestock markets and cereal prices that could be cross-checked with other data such as rainfall or pasture monitoring. This would serve two purposes; firstly if collected consistently over a period of time and analyzed it could yield information about

patterns that would verify or not the feedback on seasonal predictability provided from this study. Secondly it may provide information concerning 'micro-conditions' in certain areas that may trigger the use of the contingency fund or rapid small emergency 'top-up' distributions. The strategic use of the contingency provision does provide an opportunity to explore this issue of how best to address unpredictability.

If the pattern described by stakeholders continues or deteriorates further, this will undermine the PSNP objectives and increase the difficulties in securing assets.

Operation Design-Relevance and Appropriateness

The study found that the premise under which the PSNP operates is appropriate to the situation in the Somali Region under 'normal' circumstances. One of the most primary development issues facing the populations in Filtu woreda is indeed chronic food insecurity; with recurrent shocks in the environment that impact on people's ability to maintain their assets, with the result that it is difficult for the population to raise themselves from a fundamental vulnerability without additional assistance.

Key Feedback from Lantware Kebele:

- **Direct Support beneficiaries 27 households (from the bottom left section of the table – direct support households do not have relatives and therefore access to milk)**
- **Public Works beneficiaries 100 Households**
- **Total PSNP beneficiaries = 127**
- **10 households have dropped out to an urban centre this year as they had lost all their animals**
- **100 households have now settled and in the community permanently as they do not have enough animals**
- **The Appeals Committee has 200 appeals of which 120 are still outstanding and have been referred to the WFSTF**
- **The community perception of need is that there are 265 Households that deserve to be on the PSNP program as their food security needs are of a similar degree of gravity**
- **Lantware estimated that they now have only one third of the number of animals that they did in the year 2000 *(this perception does not say anything about the degree of potential overstocking)***

The challenge for the program lies in the fact that it is being implemented in an apparently changing environment in the pastoral areas over the past 10 years coupled with additional stresses such as population pressures, whose impact on people's livelihoods is overwhelming in nature compared to the ability of the PSNP to achieve its stated objective.

Without complementary and additional programs the efficacy of PSNP to address chronic food insecurity is also limited. This is acknowledged by all stakeholders and supplemented with emergency interventions and other longer term programs such as PLI alongside PSNP. Emergency interventions have also been undertaken illustrating the regularity and size of the shocks that PSNP has to deal with. The implementation of additional programs such as these also inevitably impacts on the efficacy of ongoing programs and takes up the energy of implementing agencies, Ironically both affirming the need for programs such as PSNP and simultaneously reducing the impact of it as gains in assets may be absorbed by the shocks reducing growing resilience.

Chapter 9: Conclusion and Recommendation

Like in other parts of Ethiopia the fundamental issue underlying the need for the PSNP and being addressed through the program is the availability of viable long term livelihood opportunities for rural people. This is taking place within a background where unpredictable seasonal variation, increasing population, and accompanying stress on the environment are constraining factors that are increasingly impacting on food

insecurity. It is within this context that PSNP is aiming to provide transfers to chronic food insecure communities and prevent the depletion of household assets.

The discussions that were held and the evidence that was seen by the researcher points out that where PSNP is making a contribution in a 'holding' role. The program is preventing destitution within communities as there is little doubt that the situation would be far worse in these program areas were the food transfers not taking place. Existing traditional coping systems such as *zakat* and *irmaansa* are under significant strain exacerbated by the recurrent drought-like conditions and PSNP is supporting and relieving this system so that not only those specifically targeted by the program but others within the community can also benefit. Feedback from all stakeholders, including government, indicates that more people fit the criteria for program participation than are being catered for and there is increasing vulnerability across the woreda. ***PSNP alone is therefore not able to protect assets at the household level but helping targeted communities as a life saving.***

While PSNP appears, at this stage and under these conditions, not to have been able to improve the asset base at the individual household level, nor enable graduation from the program to occur except within a very few of those who have been supported in building other livelihood options; nevertheless it has played a significant role in the creation of community assets and its associated positive impacts and in providing a strong sense of a possible positive future for communities.

The conclusion therefore is that PSNP needs to be recognized as an important pillar and foundational 'holding' program in addressing the huge challenges facing pastoralist communities in southern Ethiopia. It is not a solution however, to these challenges given the experience to date and assuming a continuation of current broader trends and as such there is no clear end in sight for the program. For the higher objectives and aims of PSNP to be achieved within the pastoral context, it therefore requires a suite of additional activities and program components combined in a comprehensive approach that aims to address the factors that are constraining the success of asset protection.

Chapter 10: References

1. Draft Guideline for the Implementation of the Productive Safety Net Programme Pastoral Area Pilot, Version 2, Addis Ababa, August 2007. Pp 5-11
2. Food Security Programme 2010-2014, Ministry of Agriculture and Rural Development, August 2009, Pp 5-6
3. Food Security Programme 2010-2014 Productive Safety Net, Ministry of agriculture, August 2009, Pp 8-12
4. G/Michael, Y. Impact Assessment of the Ethiopian Pastoralist Day (EPD): A Final report, Addis Ababa. (2004), P 1
5. Guidelines for Livelihoods-based Livestock Relief Interventions in Pastoral Areas, PLI Technical Coordination Team Feinstein International Famine Center Tufts University. (2006). Pp 2-15.
6. Lemessa, D. Beekeeping: A Livelihood strategy in Pastoral and Agro-Pastoral Dryland Areas of Southern Oromiya (Liben District) and Somali Regional States (Filtu and Dollo Ado Districts), Addis Ababa. (2007), P 6

7. Pastoralists Under Pressure, FAO Food Security Analysis Unit, (2001)
8. Pekk V, Eero P, Dereje T. Global Climate Policies, Local Institutions and Food Security in a Pastoral Society in Ethiopia, The Journal of Sustainable Development Vol. 5, Iss. 1 (2011), Pp 96-118
9. Project Performance Assessment Report, Ethiopia, PSNP (2011), Document of the World Bank, Pp 4-6
10. Sandford, J and Ashley, S. Livestock Livelihoods and Institutions in the IGAD Region, IGAD LPI Working Paper No. 10-08, Pp 4-5
11. Serrat, O. The Sustainable Livelihoods Approach, Asian Development Bank (2008).
12. The League for Pastoral Peoples, “Pastoralists”. http://www.pastoralpeoples.org/pastoralists.htm . Accessed on March 19, 2012.
13. USAID Office of Food for Peace, Ethiopia, Bellmon Estimation (2010), P 13