

# A review of Ethiopia small ruminant value chains from a gender perspective

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## Executive summary

Sheep and goats are generally considered a key asset for rural livelihoods with advantages over other large livestock. They also play significant economic and cultural roles. In the Ethiopian highlands mixed crop-livestock and lowland pastoral system, goats have a very important role contributing to food security as well as mitigating environmental risks due to their unique adaptation to arid and semi- arid conditions.

They can also be an entry point to promote gender empowerment in rural areas because (a) in most societies, all household members have access to sheep and goats and are involved in production; (b) livestock activities are a daily occupation - animal products such as milk, butter and meat are produced, processed and marketed in all the sites, with women responsible for the bulk of the work; (c) sheep and goat production systems offer the potential to introduce a wide range of project activities relating to gender mainstreaming, including improved production methods and redistribution of intra-household tasks and responsibilities.

For these reasons, it is important to understand gender dynamics within the sheep and goat value chain (including the various gender roles played by men and women, access to and control of resources and benefits, and the institutional factors which enhance or hinder men and women to equitably benefit from the value chain). It is also important to explore the economic and cultural roles of sheep and goat within the household and in the community.

This report is based on a desk review of the synthesis and of site specific reports from the small ruminant value chain rapid assessment studies conducted in eight sites in Ethiopia in 2012: Abergelle (Amhara), Abergelle (Tigray), Atsbi, Horro, Doyogena, Menz, Yabello and Shinelle. To fill gender information gaps, face-to-face interviews, telephone interviews and email were used to collect the information. Results from the study revealed that women and men's roles in the sheep and goat production system varied across sites within the different regions.

The distribution and ownership of sheep and goats among women and men was associated with social, cultural and economic factors. In most areas, sheep and goat ownership and managements was reported as a joint task. However when the rearing of small ruminants became a more important source of family income, ownership and control turned to men. Management practices were mainly carried out by women including feeding, cleaning, watering and milking. Herding was mainly done by men and boys. Decision-making, marketing, and control of income from sale of sheep and goats was mostly done by men. In most of the sites, women controlled income from sale of milk, cheese and butter.

Generally, increasing women's access to resources, services and control of benefits would enhance their income from sheep and goat products (i.e. milk, meat, butter and wool) and at the same time improve their nutrition and ability to support their children in their education and access to medical services. Women are, however, constrained by limited participation in marketing and decision making power. For small ruminant value chain development to be successful and benefit women equitably, ownership of small ruminants, access to production services, markets, knowledge, income and increasing self-esteem of women have to be considered.

## Foreword and acknowledgements

In mid-2012, stakeholder discussions and planning for the Livestock and Fish small ruminant value chain development project were initiated by the International Center for Agricultural Research in the Dry Areas (ICARDA), the International Livestock Research Institute (ILRI) and national partners.

After selecting eight research sites meeting various criteria, the first step was to conduct rapid value chain assessments in each site. In November 2012, national teams were formed and trained to carry out these assessments (including for the associated 'safe food fair food' project). Field implementation of the rapid value chain analysis took place in December 2012 and January 2013 with mixed teams comprising staff from CGIAR and national organizations. The teams used a toolkit developed through the Program and undertook focus group discussions with farmers using checklists and participatory methods as well as key informant interviews with local experts, traders, butchers, livestock researchers, transporters, veterinarians and NGOs.

The preliminary reports from these assessments were reviewed at three multi-stakeholder workshops held in March and April 2013. In these workshops, participants from research and development partners validated the value chain analysis and formulated initial 'best bet' intervention plans for each of the sites.

These activities are documented at <http://livestockfish.cgiar.org/category/countries/ethiopia/>

We would like to thank all the respondents for their willingness to participate in the study, especially the following people: Samuel Aytenfsu (Addis Ababa University), Embaye Kidanu (Mekelle Agricultural Research Center), Ashenafi Mekonin (Southern Agricultural Research Institute), Lijalem Abebaw (Sekota Drylands Agricultural Research Centre) Gemeda Duguma (Oromia regional agricultural research institute), Getachew Legesse (ICARDA), Leulseged Kassa (Sekota Drylands Agricultural Research Institute), Beneberu Teffera (Debre Birhan Agricultural Research Center), Solomon Gizaw (Debre Birhan Agricultural Research Center).

## Acronyms

ASF	Animal source foods
AAU	Addis Ababa University
ARC	Areka Research Center
ARARI	Amhara Regional Agricultural Research Institute
CABP	Community Asset Building Program
CRP	CGIAR Research Program
GO	Government organizations
HAB	Household Asset Building project
HTP	Harmful traditional practices
ICARDA	International Centre for Agricultural Research in the Dry Areas
ILRI	International Livestock Research Institute
MHH	Men-headed households
NGO	Non-governmental organization
OARI	Oromia Agricultural Research Center
SARI`	Southern Agricultural Research Institute
SFFF	Safe Food Fair Food project
WHH	Women-headed households

# Introduction

The diverse biophysical and agro-climatic conditions in Ethiopia make it suitable for the production of different kinds of livestock. The sheep and goats population of Ethiopia, including expert estimates of the pastoral areas, is about 66 million heads of which about 35 million are sheep (Negassa et al. 2011). They provide about 46% of the national meat consumption and 58% of the value of hide and skin production (Awgiww et al. 1991).

Sheep and goats have many advantages over large ruminants for most smallholder farmers, including among others: less feed costs, quicker turnover, easy management and appropriate size at slaughter (Wilson 1991; Abegaz 2002; Donkin 2005). They have also greater tolerance to less favourable conditions, as they suffer far less in mortality during periods of drought than large ruminants (Galal 1983; Wilson 1991). In addition, subsistence farmers prefer sheep and goats as the risk of losing large ruminants is too great (Sölkner et al. 1998).

Apart from subsistence, livestock also play economic and cultural roles. In highland mixed crop-livestock and lowland pastoral systems, goats have a very important role in contributing to the food security as well as in mitigating environmental risks due to their unique adaptation to arid and semi-arid areas.

Sheep and goats are primarily used for milk production for home consumption and meat production for sale. With the increased environmental degradation and drought cycle due to climate change, the pastoral community is expanding goat production as a means of adaptation. According to the Ethiopia small ruminant synthesis report, the increase in international demand for meat in general and the high demand for sheep and goat meat in the Middle East countries is also another incentive for increased sheep and goat production in Ethiopia (Legese et al. 2014).

The lowland areas are the home for over 12 million pastoral people who are highly dependent on livestock for their economy and social well-being. Animal source food (ASF) food security is defined as the availability, accessibility, affordability, consumption and nutritional status related to ASF.

Availability and accessibility are two different things; food may be available, but not accessible for consumption, especially for women and children. Therefore, if more ASF is produced in households, this doesn't necessary imply that food security and nutritional status of men, women and children in poor households improve at all, or in similar ways. Household consumption depends on intra-household decisions about consumption or sales of own-produced ASF; purchases of ASF; and the distribution of ASF across family members. These decisions are affected by gender norms and societal expectations. Therefore, while women are often responsible for food provision and preparation in the household, they are not necessarily the decision taker about sales of own produced ASF or about who consumes what. Food culture, taboos and beliefs which are often gender specific, also affect consumption patterns and inequality in food access.

## Gender and small ruminant production

Women contribute to small ruminant production by carrying out a number of tasks, such as milking, cleaning, animal shade, harvesting fodder and other dairy related activities. Young girls are very often engaged in the same range of activities and they are more likely than boys to be kept home from school to help their mothers with agricultural tasks including gathering feed and providing water for livestock (FAO 2012).

Although small ruminants are frequently owned by women, it is often men who are responsible for their disposal and thus in charge of taking decisions related to their sale. Young boys and girls are

also frequently responsible for herding and grazing small ruminants; however young boys tend to be more engaged than girls in this specific task (FAO 2012).

When managing small stock, women tend to face a greater number of challenges, as compared to men, in accessing, maintaining and improving the flocks. Factors such as poor or scarce technical skills in animal care, poor marketing skills, limited access to veterinary and extension services and markets, and limited financial and natural resources tend to limit women's opportunities to access, control and expand their small ruminant stock and production. These factors can also influence women's access to improved exotic breeds. Keeping exotic or cross-bred livestock can be more difficult and usually requires a higher level of technical and veterinary expertise. As a consequence women often only manage and control local breeds which are frequently easier to rear but often far less productive than the improved exotic breeds (FAO 2013).

## **Gender issues in sheep and goat value chain development**

Value chain development is key to achieve increased production and improved livelihoods of the rural poor, especially women. Value chains offer tremendous opportunities to women through better market linkages and employment opportunities. At the same time, the way these value chains operate can affect women negatively (Njuki et al. 2012). The distribution of risks and gains along the value chain varies according to the gender of producers, processors and market agents (input suppliers, traders, transporters etc). Creating and sustaining competitive markets require integration of gender components in value chains (IFAD 2010). Even though women and men are more likely to be involved at different stages of the value chain, areas where women are involved most tend to be invisible despite being critical nodes at which change and upgrading could occur to develop the value chain (Mayoux and Mackie 2007; Bhattarai and Leduc 2009).

Livestock value chain analysis is essential to understand the existing markets (market opportunities); structure and relationships (power relations); participation of different actors, men and women; and the constraints that limit growth of livestock sector and the compositeness of smallholder farmers (IFAD 2010). Gender is an important aspect of value chain analysis since gender relations both affect and are affected by the ways in which value chains function. Such gender analysis and integration of gender issues is usually however the weakest point in most value chain analyses and largely ignored in most value chains (IFAD 2010; Njuki et al. 2012). Gender issues fundamentally shape the totality of production, distribution, and consumption within an economy but have often been overlooked in value chain development. From production to processing to disposal, gendered patterns of behaviour condition men's and women's jobs and tasks, the distribution of resources and benefits derived from income generating activities in the chain, and the efficiency and competitiveness of value chains in the global market (Rubin 2010).

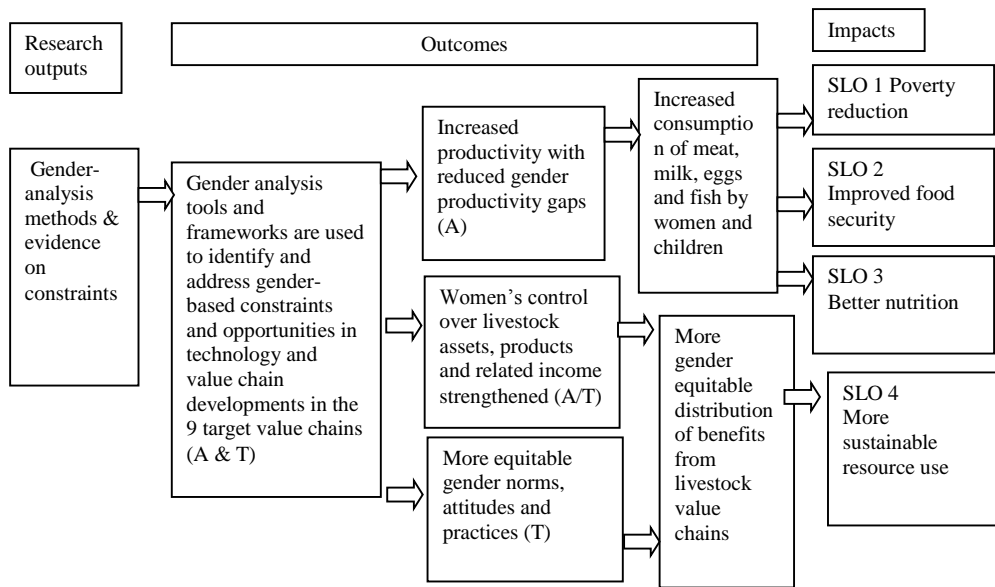
To increase productivity, the equity and inclusiveness of livestock production and value chains need to improve, informed by careful analysis of bottlenecks at micro, meso and macro levels and research and action to address these constraints. Understanding and responding appropriately to the social and economic contexts within which women engage in livestock production, processing and/or sales are thus central to achieving the goals of the CGIAR Research Program on Livestock and Fish.

The program's gender strategy includes approaches that start from a careful understanding of these contexts, and either 1) work within these contexts to improve how women are included, or 2) seek to improve the equity of the social and institutional environments in which value chains function to enhance the range and quality of choices and outcomes poor women and men have within them (figure 1).

The effects of gender on sheep and goat value chains are therefore the point of focus in this review.



**Figure 1. Gender impact pathway for the CGIAR Research Program on Livestock and Fish (A=accommodating; T=transflectormative)**



Source: CGIAR Research Program on Livestock and Fish (2013)

# This study

## Objectives

- Review the small ruminant value chain rapid assessment results from a gender perspective and document women's participation along the value chain.
- Identify existing opportunities that have the potential to change gender norms that inhibits the range and quality of women's engagement in target value chains.
- Document the distribution and consumption pattern of meat and milk in poor households and the factors which hinder women's consumption of meat and milk.

This report presents the approach used to review the small ruminant value chain rapid assessment results and primary data collection, it presents findings from the desk review and discusses the gender dynamics in the small ruminant value chain. It further discusses the impact of sheep and goat ownership on household nutrition, highlighting factors constraining effective participation of women in the sheep and goat value chain. It concludes with a set of recommendations.

## Approach

This review is based on a desk review of the synthesis and site-specific reports from the small ruminant value chain rapid assessment study conducted in Ethiopia. It highlights the main gender issues along the core stages of the sheep and goat value chain.

It starts by analyzing which gender issues are important to address in relation to sheep and goat value chain development from input supply to consumption (data requirements). Gender information gaps from the review of the reports are highlighted and the data required for a gender sensitive value chain analysis is suggested.

Following identification of information gaps during the desk review, a checklist was designed to collect missing information and individual in-depth interviews (face-to-face and telephone) were conducted with 9 research assistants who implemented the rapid value chain assessment study.

## Gender analysis of value chains

Gender analysis involves collecting and analyzing sex-disaggregated data and other qualitative and quantitative information on gender issues, including access to and control over assets (tangible and intangible), as well as beliefs; practices, and legal frameworks (Rubin 2010).

To employ gender analysis along the core functions of the sheep and goat value chain, the following information was identified as critical to enhance our understanding of gender in sheep and goat value chain development and consumption of animal source foods:

1. Gender roles and relations within the sheep and goat value chain;
2. Gendered access to and control of resources and benefits that accrue from use of those resources;
3. Gender-based constraints and opportunities or enabling environment.

### Gender roles and relations

Capturing this data helps us understand the roles of men and women along the value chain, how men and women relate to each other, where activities are conducted and the extent to which different household members are involved at each stage of sheep and goat value chain development.

The roles assigned to men and women have an impact on their ability to access resources and influence their power to decide upon resources and the benefits that accrue from using those resources. The assigned roles also influence the opportunities that might be available for women and other marginalized groups to participate in more remunerative nodes of the value chain. In many societies gender norms influence who is supposed to carry out certain types of activities and who is expected to complete certain tasks, which differentiation may reinforce or transform gender inequalities (CARE 2012).

Feeding, herding and taking care of sick animals are mentioned in the Doyogena VCA as being carried out by women. This information is missing in the other site reports. In the same way, selecting of breeding rams and marketing was done by women and men interchangeably depending on the location in Doyogena; but this finding is not mentioned in other reports. Neither chilling nor meat exporting data was disaggregated by gender in the reports, and the time spent by women in managing sheep and goats was not spelled out in any of the site specific reports.

To capture comprehensive data on roles and gender relations within the sheep and goat value chain, the following data needs to be captured:

- Who does what along the sheep and goat value chain, with whom, when and where (indicated by sex and age). How long does it take to accomplish those tasks? This will give a description of the sexual division of labour in sheep and goat value chain development (input supply, production, marketing, processing and consumption) and indicates the proportion of time spent on an activity by each gender.
- What resources do men, women, boys and girls need to accomplish their respective tasks?
- Where along the value chain are women involved most? Are women involved in stages where value is added? This establishes where actual income is earned.

What are the gendered implications? Understanding the different roles and tasks that women, men, boys and girls play in relation to management of livestock within households is fundamental to:

- Design projects and programs that are tailored to the needs of women, men, girls and boys in different contexts. This limits implementations of interventions that reinforce gender inequalities or harm women.
- Undertake awareness rising among specific target groups (e.g. researchers, extension workers, decision-makers, leaders, men, etc.) to change mentalities/perceptions about women's roles.
- Determine the different actors along the value chain for future intervention.
- Present opportunities to loosen rigid gender norms about what men, women girls and boys are allowed to and capable of doing.

Rubin (2010) asserts that “women can be engaged as actors beyond the production stage, providing valuable services to men and women producers as input suppliers, veterinarians, and sales agents. Women are already doing so in many places, including Albania, Cambodia, and Kenya, and evidence from Zambia suggests that there may be greater potential for expanding women's opportunities. In Pakistan, women were trained as sales agents, providing not only market linkage services but also improving the flow of information and services between producers and retailers.”

## **Access to and control of resources and benefits**

Since value chain development aims at improving the livelihoods of poor families and enhances the potential of women to provide for their families, it is important to understand access to and control of resources and the benefits from various productive assets.

Access to and control of resources determines the extent to which women and other marginalized groups can participate in the value chain, their decision making power and potential to directly benefit from participating in the value chain. Research studies have shown that a significant global gender gap exists in asset ownership, control, and decision making power between men and women, and how costs and benefits are shared. Research evidence also shows that women's participation in decisions that affect their livelihoods is still marginal. Hence for women to fully benefit from value chains there must be spaces where they can actively contribute to decisions, raise their voices, have their ideas heard and considered, take part in leadership and decision making. Power and decision making is a key challenge that rural women face. However gender was marginally addressed in the Ethiopia synthesis and site specific reports studies.

Review of the reports revealed that the decision to purchase or slaughter live animals was made by men in Abergelle, Yabello and Doyogena, and by both men and women in Atsbi, Horro, Menz and Shinelle. Men selected the animal for slaughter in Atsbi; men and women jointly selected animals in Abergelle, Horro, and Shinelle; and women chose the animals in Yabello and Doyogena. In all sites, choosing an animal to buy in the market was the sole responsibility of men. Decision making on the type of and number of sheep and goats to be sold are made by women and men interchangeably in the case of Doyogena but this information was not mentioned in other site reports.

Buying meat from butchers outside the community, as occurs occasionally in Horro and Menz, was also considered the sole domain of men. In Yabello, the decision to purchase meat from butchers or markets within the community was made by men; in Dire Dawa, this decision was made by women. In both cases, actual selection of the meat was performed by women (Tasman 2013).

In the case of Doyogena, women were organized in a group by the HAB (Household Asset Building) project to provide them with two ewes or goats, but there is no information whether men accessed the same or not. In other site reports this information is not provided. Information on access to revolving fund, feed, and credit was not disaggregated by gender in all site reports. The synthesis report mentioned funds for breeding stock but does not discuss how these funds were distributed to men and women and how it improved women's and men's participation. Moreover the proportion

of women-headed households (WHH) accessing this input was not mentioned. In the same way the reports do not mention whether WHH and men-headed households (MHH) access natural resources such as grazing equally.

Sheep and goat ownership by gender is a good indicator that shows the dynamic of power relations but this information is missing in all site reports. Except in the Doyogena report, actors engaged in sheep and goat transaction were not disaggregated by gender. Information that would enhance this understanding includes but is not limited to:

- Who owns different kinds of productive resources important to livestock production?
- What is the proportion of sheep and goat owned by women and men?
- Who has access to important productive resources? Do women and men have equal access to productive resources, credit, extension services, information, land, and labour, membership to associations, breeding stock, veterinary services, and processing technologies in order to perform their tasks?
- What is the knowledge, educational and business skills opportunities available to men and women which can facilitate access to employment along the value chain?
- Are men and women informed of and able to access technologies that support on-farm productivity;
- Who sells/purchases the animals? Who makes decisions on the use of income from sheep and goat sale? How are decisions on sale or purchase of sheep and goat made?
- Men and women's bargaining power in negotiating and managing vertical and horizontal relationships and in advocating for change in the business enabling environment (Rubin 2010).
- How are decisions related to consumption made? Who gets the nutritional benefits and who bears the risks? These questions identify distribution of ASF at household level.
- What is the proportion of women in leadership positions?
- Who makes important decisions in the household and community? (e.g. decisions over land, livestock, income, equipment etc.)
- What strategies do women employ to gain control over productive assets, their labour and income?

What are the gendered implications? Access to and control of resources has important implications on:

- Women's capacity to participate fully in sheep and goat value chain development and equitably reap benefits from participation.
- Household division of labour, women's execution of their roles and capacity to participate in decision-making about household income and assets.
- Improving women's control over resources and benefits (income) generated by the activity at household level (empowerment - ability to make choices).
- Determining gender differences in ownership and power relations in sheep and goat production.
- Informing gender transformative interventions that change people's attitudes towards women.

## Gender-based constraints and opportunities

Gender-based constraints are factors that inhibit men's or women's access to resources, behaviours, participation, time use, mobility, rights, and exercise of power based on their gender identity (Rubin 2010).

The restriction of jobs based on the perceived roles appropriate for men and women, for example, is an important way in which labour markets reflect gender relations. This often leads to the concentration of men and women in particular sectors or occupations. Furthermore, perceptions that men are the primary income earners and women are secondary income earners, known as the male breadwinner bias, often limit women's earning potential and upward mobility' (Rubin 2010).

Gender-based opportunities are "structural and institutional factors that facilitate women's and men's equitable access to resources, behaviours and participation, time use, mobility, rights, and exercise of power". Gendered influence on enabling factors helps to determine how women/men leaders can influence policy-making and legislations to promote their economic rights and make the overall environment more conducive to gender issues (Terrill 2011).

The gender aspect of challenges such as credit, veterinary services and shortage of drugs was not specifically stated in all the site reports. Furthermore cultural constraints were not well discussed in the site specific reports except in Abergelle where women and girls are forbidden to consume whole milk. Policy frameworks that support smallholders in small ruminant value chain were not elaborated in the review of materials, and there was no information showing how women and men benefited. The synthesis report highlights government policies that support large scale sheep and goat exports but does not discuss the policies which influence actors' downstream by gender.

Information that could aid understanding of the gender based constraints and opportunities includes but is not limited to:

- Are there any household or community norms which restrict women from accessing and controlling resources or consuming animal source foods? How do women negotiate such constraining norms?
- Are there any policies that constrain or enhance effective participation of women and marginalized groups in the small ruminant value chain? How do policies, norms and by-laws hinder or promote women's participation in livestock production and marketing?
- Are there any farmers' associations or producers' organizations focussed on livestock marketing? Do both women and men access such groups?
- Excluding time; are there any restrictions for women/men to dispose of the sheep and goats or their products? (This indicates the restrictions on men's or women's access to resources or opportunities that are based on their gender roles or responsibilities).
- Gender based limitations of sheep and goat meat/milk consumption. (This indicates gender specific consumption patterns and inequality in food access. It identifies the health risks of ASF handling and consumption.

## Conclusions

In all the reports, gender is poorly addressed. Gender analysis would have helped provide information needed to predict gendered effects associated with sheep and goat production. In almost all the site reports, gender disaggregated information was missing. For any future comprehensive gender analysis along the value chain, information is needed on: (1) various tasks performed by women and men along the value chain, including timing and intensity of labour for different activities, (2) access to and control of resources and benefits and (3) constraints, and opportunities associated with sheep and goat production.

## Gender dynamics in the value chains (empirical evidence)

This section presents data from the in-depth interviews conducted with nine researchers who conducted the initial studies. These interviews were conducted to fill the gender information gaps discussed above.

The results discussed are from six sites including Abergelle Amhara, Tigray, Horro, Doyogena, Menz, and Yabello. The information was collected through face-to-face interviews, telephone interviews and email contacts.

Some limitations need to be mentioned:

- Most of the interviews were conducted through telephone, and hence the response was very brief.
- It was difficult to get a hard copy of the direct response of the farmers.
- The follow-up interview was conducted one year after the initial activity and some of the research assistants could not recall all information captured during the focus group discussions.
- In Yabello; Menz and Abergelle Amhara, most of the questions in the checklist, which were formulated to capture gender differences, were not asked during the focus group discussions. Hence information from those sites was not available.

## Gender dynamics in the Amhara Abergelle value chain

### Input supply

Assessment of access to and use of inputs revealed that there were similarities as well as differences among women and men. Such inputs included breeding stock, livestock feed, credit and access to veterinary services. Access and use of the respective inputs and services is discussed below.

*Breeding Stock:* Both men and women used breeding stock obtained from their own farm, market or NGOs who are involved in breed supply under the restocking program. The restocking program operates as a revolving fund to close food security gaps as well as enhance asset creation, with priority given to women farmers. Both men and women have their own preference for breeding stock. Women have colour preference which is usually red or white and women go for milking goats while men go for male sheep for fattening purposes. Colour preferences among men seem to be marginal in order to capture diverse clients.

*Feed:* Livestock feeding in this area depends mainly on grazing/browsing in the bush which is for communal use. Both women and men accessed the communal grazing lands. The availability of supplementary feed for sheep and goats is not practical and almost all of the sheep and goats browse in the bushes on communal land. The kids were kept around the homestead for women to look after, and they water, carry and feed the kids with the available feed around the house.

*Credit:* There were micro-finance institutions which provided loans to farmers on a group collateral basis. However, the services were not efficient because the terms of loan repayment discouraged all beneficiaries since they did not consider the availability of cash (timeliness) among farmers. The group collateral mostly affected women-headed households (WHH), whereby; women were discriminated against most in the collateral system which requires trust. In most cases women were poor and organizations don't have the courage or willingness to form a group with the poor and take the risk. In addition the high interest rates were not appealing to both men and women farmers. As a result, farmers prefer to join the NGO revolving fund which is subsidized and in most cases

repayment is in kind. Dynamics in access to credit limits women's capacity to fully engage in sheep and goat value chain development as it hinders their ability to access other complementary resources required in livestock production.

*Veterinary services:* These had very poor coverage and were not easily accessed by livestock keepers, especially the women who faced challenges with the distance of the health post. Women had to go very far to get treatment for their animals and hence it is mostly men who went to the health posts.

The major constraints in access to inputs included lack of capital and labour shortages. Breeding stock requires capital and therefore women were more constrained than men since they have no cash. In addition, credit is not accessible to women farmers and the credit modality is against them. Women also have labour constraints to grow feed for the kids around the house which is common with men farmers after crop harvest. There is a practice among the communities whereby after every harvest, men usually plant a specific kind of fodder for any animals kept at home (such as the sick and young animals). However, due to labour constraints, women were not able to go to the fields to grow the fodder. Therefore, although both women and men were constrained by animal feed and veterinary services, women were more constrained.

### **Production**

There were gender differences in livestock production where women did most of the work related to production around the house including feeding, watering and milking. Herding around the house was carried out by girls, while men and young boys were involved in herding in places far from home. This was also to protect them from predators.

In relation to ownership of sheep and goats, sheep and goats were generally considered to be family property. However, decision-making was dominated by men. In some cases goat ownership depended on the number of goats that the woman brought in with her when she got married. In such cases the woman can own up to 50% of the goats, and what they produce afterwards is owned jointly. Usually there is consultation to sell and purchase goats but still it is male dominated. Income from the sale of goat was jointly used, but men made the final decision on use of income. Goat rearing was the major livelihood strategy (also insurance mechanism) in the area because of persistent drought and crop failures as goats can withstand drought.

The major production constraints mentioned were lack of capital to buy breeding stock, absence of milk processing technology, lack of churner for milk processing, and use of rudimentary methods limiting production. These technologies would save women's labour and bring better income. While traditionally goat milk is not for sale but only for household consumption, sales of goat milk would bring additional income for women farmers.

### **Marketing**

There was variation in the type of sheep and goat products marketed by men and women (women sold butter while men sold the sheep and goats), bargaining skills, mobility and control of benefits from sale of sheep and goats. Usually farmers sell their goats during big holidays and when there is a food shortage. In this particular area women never bought or sold sheep and goats. In the case of women headed households, they were supported by relatives, or they sold them within the village to local collectors. Men had better access to market information because they travelled frequently to markets and visited tea or *Tella* houses where men meet to drink. Women were limited to their community because of household chores which restrict their movement beyond the community. Hence their information was not adequate to bargain when they sold their goats within the village. It was not common to sell milk in the area but it would have brought in additional income for women in addition to butter.



The suppliers, local collectors and small traders were all men with no involvement of women in these areas, a situation that limits women's employment opportunities and benefits from more empowering activities. For this reason, there is a need to identify gender equitable market opportunities and ensure that women's participation along the sheep and goat value chain is encouraged. Women's economic decisions were made jointly with men when sheep and goats were purchased or sold. Income from the sale of goats was kept with the men, and women had knowledge about how the money was spent and the money left over. However it was the men who had the final say on matters related to money. This implies that men controlled income from sales of sheep and goats which might have negative implications on women's freedom to spend on issues that were critical to their lives and the children.

### **Processing**

Sheep and goat processing took place in butchers where men dominate and in a few hotels where women as well as men were involved. At the time of the study, no technology was available to both men and women with regard to milk processing. Women processed sheep and goat milk into butter using traditional labour intensive methods. Women smoke milk and butter containers with herbs and olive tree leaves to increase the shelf life of the butter.

### **Consumption**

Since 95% of the sheep and goats produced were for sale, goat meat was not consumed frequently at home. Slaughtering is not common except on big holidays such as Easter and New Year. Goat milk was used as the main food during the months of June to December. During this time sheep and goats give birth and there is enough feed for them; this means that enough milk is produced for household consumption and for the kids as well. However, women and girls were not allowed to consume whole milk, in the belief that it would make them stronger, and they would not obey their husbands. While both men and women indicated that availability of meat was not a problem, access and consumption was identified as a limiting factor because meat consumption depended on social status. Households with larger flock size and better crop production had better access to meat.

It was difficult to get information on health risks involved with ASF. However goat meat is cooked as *wat* or *tibs* and the rest is hung and dried as '*kointa*' to minimize health risks. Women usually smoked milk containers for milk hygiene.

Poor infrastructure for transportation of animals, lack of market information and milk processing technology for women, repeated taxation, remoteness from trading centres and short supply of feed were the major problems in livestock production mentioned by both women and men farmers.

## **Gender dynamics in the Tigray Abergelle value chain**

### **Input supply**

*Breeding Stock:* In Tigray Abergelle there were differences and similarities in access to breeding stock. Although both men and women accessed breeding stock from their own farms, there was a difference in that the government support favoured women more. The government organized women in groups and provided them with foundation stock so that women were actively involved in sheep and goat production equally as their male counterparts. Since women were given priority to have the breeding stock, women in this woreda had better access to breeding stock. However, more research needs to be conducted to find out the characteristics of women who have access to the stock, how it is utilized and the control of benefits from the stock.

*Credit:* This could be accessed by the women's group or mixed groups of women and men based on collateral, even though both the men and women were not happy with the group collateral scheme as they considered it as risky. While loans were distributed to individuals, each loan is considered a

part of the group loan and the group is therefore liable as a whole for the repayment of loans. This made individual members feel responsible for each other's loans. The failure of one member to repay (which happens some time) jeopardizes the entire group's access to future credit. The unfavourable terms of the repayment plan was another constraint because it does not take into consideration the unavailability of cash especially; at harvesting time. This affected women who have no extra money or income source other than sale of their crop.

*Feed:* Both men and women got their feed from their own farm during the wet season and during the dry season they bought concentrate and 'fagulo' (left over from oil seed) from private suppliers.

*Veterinary services:* The government office is the only provider of veterinary services in this site and its coverage was very limited for both women and men, hence they faced challenges treating their animals because of shortage of drug and animal health technicians. There was a private facility in the past which has since been closed.

With regard to inputs, the major constraints for both women and men were feed shortage and veterinary services. Supplementary feeds were very expensive and accessibility of veterinary service was a challenge due to its poor coverage.

### **Production**

Women performed most tasks related to sheep and goat production. They carried out activities such as feeding, cleaning, caring for the sick and young animals, and other duties around the house. Both women and men bred sheep and goats mainly for immediate cash needs and they preferred goats to larger livestock because they are easily manageable.

Regarding access and control, both men and women decided and had control over sheep and goat production and sheep and goats were mostly jointly-owned. While women rarely went to the market to sell sheep and goats, income from sales of the sheep and goats directly went to the women and was used for common purposes. In addition men could use the money earned for extra expenses like tea or *Tella* and food after market. With regard to decision-making on resource use, although it was made jointly, men tended to have more power over this. About 30% of the goats in the community were owned by women-headed households.

The major constraining factors in sheep and goat production, mentioned by both women and men were random selection of breeding stock which compromised the quality of breeds selected, poor management practices and absence of improved feeding practices.

### **Marketing**

As mentioned previously, women were not actively involved in marketing. Market information is also more accessible for men rather than women since men had more personal contacts with market operators than women. This is because of women's limited mobility due to demanding household chores and other responsibilities. Hence they were limited to their villages and had no chance of meeting different people in the market who are sellers and potential buyers. In addition, men listen to the radio more and have mobile phones through which they shared information; whereas women farmers lacked access to radio or mobile phones which limited their network.

Sheep and goats were sold for the purpose of buying agricultural inputs e.g. animal feed or for any other household expenditure. Men were considered better negotiators in sheep and goat transaction and hence were usually involved in buying and selling of sheep and goats. In the case of women-headed households they were supported by male relatives, older sons or brokers. This causes women's dependency on others for them to access income. In general women in this area were traditionally limited in their involvement in sheep and goat/livestock marketing for reasons not explained. This highlights some of the gender norms that need to be explored and transformed if

women are to actively participate in marketing. Furthermore, there is need to enhance their bargaining skills. The main question is how to enhance the mobility of women living in conservative communities and get them to participate in markets. Except in Abergelle, women in the other sites were involved in marketing although they required 'blessings' from their husbands. However, there was no clear evidence to what extent they were involved.

Major constraints related to marketing were that women were restricted from sale of their own products. For both women and men, the quality of sheep and goat produced was low and did not meet export standards; there was poor veterinary service coverage and lack of transport for the animals.

### **Processing**

In the study area, processing is mainly carried out by hotels/restaurants to prepare different dishes where women and men were involved. Butcheries slaughtered goats mainly to sell raw meat and this is mainly a men's domain. Abergelle's export abattoir is also functional with both men and women working there. Men had better knowledge than the women on quality measures. However at the time of the study, no processing technology was available to either women or men. Access to remunerative downstream markets could present an opportunity to develop the meat processing industry in order to increase women's employment opportunities. In addition, enhancement of women's knowledge on quality standards would elevate their chances to participate in higher nodes of the value chain.

### **Consumption**

Due to the shortage of feed and veterinary services, farmers did not produce as much to fulfil their ASF requirements. Sheep and goats were mainly produced for sale. And it is only during big holidays such as New Year and Easter that households consume meat. About 80% of the sheep and goats were for sale and the remaining 20% for household consumption. Men slaughter the sheep and goats and the women cook and distribute the meat to family members. And due to respect and culture, the best piece goes first to the man, the children then the woman respectively.

Awareness levels on food safety or health risks of ASF were very poor, which needs further research. It is common to eat protein source food like lentils, chickpeas and beans during fasting and outside fasting months because they do not have enough meat to eat frequently.

## **Gender dynamics in the Doyogena value chain**

### **Input supply**

*Breeding stock:* Both men and women equally used breeding stock, but it was men who selected the breeding stock. Both men and women can access breeding stock from the community based Sheep Breed Improvement Program. Shortage of breeding rams is a challenge for both men and women, as the rams were sold very young.

*Credit:* The Government safety net program had provided breeding stock on credit to a few women farmers hence only a few women were benefiting from the program. The Household Asset Building (HAB) NGO in collaboration with the government works on the Productive Safety Net Program (PSNP) which provides credit, (with the help of Development Agents – government extension workers) for cattle fattening, sheep rearing/fattening and irrigation farming for both women and men but the coverage was very limited.

*Feed:* Grazing was the common feeding practice in the area and both men and women grazed on their own farm. Women preserved animal feed when it was available. Men and women also used supplementary feed such as wheat bran, wheat middling, mixed concentrate feed, oilseed cake and

improved forage seeds supplied by NGOs. As indicated in the study report, less feed was purchased by women than men.

*Veterinary services:* Veterinary service is provided by the government but the coverage was very limited. Both women and men faced challenges in treating their animals due to shortage of veterinary drug supplies. One health post served about 2,000-2,400 households; hence it is very difficult to reach all farmers.

With regard to input supply, the major constraints were accessibility to breeding rams and the high price of supplementary feed, where women were more constrained. In addition, both men and women face shortages of veterinary drugs and a limited service. These findings show that women and men equitably access inputs along the sheep and goat value chain. However women were more constrained in input supply.

### Production

Tethering was practiced in the area with women taking on this task. Women were also responsible for feeding, watering and cleaning and providing livestock shade. Sheep and goat ownership and decision-making on sheep production was area-specific. Both men and women farmers were constrained by lack of improved sheep and goat management practices.

**Table 1. Role of women and men in sheep production and marketing in Doyogena**

Sheep production/marketing activity	Person responsible to handle	
	Gomora	Bakafa
Deciding which animals to rear	Men	Both
Managing small ruminants (feeding, herding, cleaning, health care, etc.)	Women	Women
Selecting breeding rams and ewe lambs	Men	Men
Deciding on the type and number of small ruminants to be sold	Men	Both
Deciding time of selling	Men	Both
Marketing of sheep	Both	Men
Control over the proceeds from sheep	Both	Men

Source: Ashenafi et al. 2013

### Marketing

Marketing was mainly dominated by men, while women were rarely involved in marketing. Women in Gomora brought very young sheep (yearlings) to the market for sale to small traders. Thus women should be supported with the necessary inputs to raise their sheep to the required standards. Women did not participate in sheep fattening unlike men who were able to bring bigger sheep and goats to the market. This could be attributed to the high feed costs and labour required in fattening. With respect to market information, while there were marketing cooperatives in the area, women's membership was not clearly known and there was not much information to document on this aspect.

Both men and women sold their sheep and goats when they were short of cash to purchase inputs like fertilizer, improved seeds, for school fees and other expenses related to school. Farmers sold sheep and goats during big holidays to small traders and hotels and sometimes to individual consumers. Women were considered as better negotiators in this area and got better prices than men with the same type of sheep because women persisted until they got a good price. However, this takes much time and happens rarely; because decisions on when, what type and the number of sheep to be sold were predominantly made by men. Low quality of sheep and goat production was the major constraint related to sheep and goat marketing. Others included poor veterinary service coverage and lack of transport for the animals.

### **Processing**

Slaughtering was the only processing activity carried out in the area, and mainly done in municipal slaughtering houses and individual houses by men. Men had better knowledge than the women on quality measures. However, at the time of the study, no improved processing technology was available. There were opportunities available such as; an increasing interest of farmers to rear sheep; large sheep population; increasing trend in sheep demand; increased intervention by government and non-governmental organizations in sheep improvement and especially here to establish community based sheep improvement programs.

### **Consumption**

Sheep were reared mainly for immediate cash needs and household members mainly consumed milk and butter as their ASF. Farmers rarely consumed meat, mostly during big holidays (such as Meskel and New Year) or when a family hosted a respected guest. In addition, a few farmers bought meat from butchers during harvesting time when they earned some money from sale of crops. About 20% of what they produce may be consumed at home but this needs further research.

Women were responsible for cooking and sharing whatever was cooked in the house. Husbands were usually favoured as they get the best part of the meat, then the children and the lastly the woman. In addition men travelled more frequently than women; hence, had more chances to eat meat in hotels on market days.

Awareness towards the health risk of ASF was very limited but people in the area avoided eating sick or dead animals. With regard to food safety, women preserved meat using local knowledge. During the fasting season, farmers in the area used pigeon peas as a protein source food. Root crops were consumed as staple food all the year round.

### **Opportunities**

The government is offering some support, for example the safety net program where rural women were organized in smaller groups and provided with foundation stock (two female sheep or goats.)The women used this as a revolving loan by transferring the first two sheep or goats to the member of another group organized and waiting for the loan. The purpose of this approach was to reach several households. However this group was not strong enough to sustain the program and it was discontinued. Strong community-based associations are opportunities to enhance access to quality breeds.

These should be promoted and supported in order to serve as an entry point in tackling gendered based constraints such as HTP (harmful traditional practices), community awareness creation on constitutional rights of both women and men.

## Gender dynamics in the Menz value chain

### Input supply

*Breeding stock:* Both women and men as families owned the breeding stock. They mostly obtained it from the research office of agriculture, NGOs, other farmers and own breeding animals. It was the men who bought the yearling i.e. young sheep for the purpose of breeding stock. Control and decision making was also a joint task and both women and men had equal access to the use of sheep. Access to improved rams was a challenge for both women and men.

*Feed:* Both women and men used feed but men used much more than women. Both women and men collected and stored feed from the fields. Purchase of supplementary feed was not common; grazing was the common practice for sheep.

*Credit:* Credit services were available in the community. However the services were not effective because it was inaccessible especially for rural women whose mobility was limited by household workloads. Since men frequently travelled to the markets, they were relatively in better position to access and use the loans. In addition, loans were based on group collateral hence the usage by both women and men was very limited.

*Veterinary services:* Drugs were managed by men, unless the household head was female.

*Extension services:* Extension workers mostly targeted male farmers and it was common to exclude female farmers. They usually overlooked women's contribution to livestock production especially sheep and goats. As a result, it was the men who had more access to extension services.

Both men and women were constrained by shortage of improved rams, veterinary drugs and equipment, land, labour; and transportation of animals to health posts. These results imply that although women and men had equal access to breeding stock, women were more constrained by extension service, and credit; thus women need increased access to appropriate extension services and credit schemes.

### Production

In sheep and goat production, women were often involved with activities closely related to their household activities and were often responsible for feeding, watering, and storing feed.

Similarly, sheep were primarily reared for income for household expenditures. Sheep and goats were owned jointly as already mentioned. However most of the time it was the household head (be it men / women) considered as the owner and decision maker although there was a tendency towards cumulative decision-making (including adults in the household in any matter related to sheep and goat production).

There were a number of advantages of having small ruminants as an integral component of the farming system. The small size of small ruminants had distinct economic, managerial, and biological advantages. They were conveniently managed by children or women, occupies small housing space, have lower feed requirements, and supply meat in quantities suitable for immediate family consumption, which is important in view of lack of means (Beneberu et al. 2013).

### Processing

Both men and women were involved in cleaning, chilling, and preserving meat. The women did the cooking. Both men and women obtained market information by direct observation and/or through their agents. It is not known whether women and men had access to processing technology. The question for knowledge about quality and measures to meet quality standards was not asked. Processing of sheep skin was accomplished by both women and men; men collected the wool from the sheep and women spun and changed it into carpets or *Bana* (locally handmade blankets from

sheep wool). Lack of wool processing technology constrained women farmers. They spun by hand, which is time consuming and laborious. Women could gain better incomes if they accessed modern processing technologies.

### **Consumption**

Adequacy of sheep meat for consumption at household level is a relative measure, since households have different economic status. Generally, if they had large size of flock they could slaughter at every festive celebration; about 4-5 times or even more depending on their economic status in a year.

However there were also people who may or may not get meat even once in a year. In general, 15% of the produced sheep and goats is used for household consumption and the rest (85%) is for sale.

What to sell, when to sell and what to consume is a joint decision. Faba bean and other pulse crops were alternative protein sources during fasting periods. Eating sheep or goat meat was allowed for both sexes, but milk was not commonly used as it was left for the kids (young sheep and goat). Safety measures were not common but community members had basic knowledge on how to avoid risks associated with ASF. This was demonstrated by thorough cooking and hanging of meat to dry.

#### **Box 1. Marketing in Menz**

Women were involved in advising their husbands when they were about to sell a sheep (why, when and how). Where they have knowledge of the current sheep and goat price on the market, they informed their spouses to get the best from the market. Men in general had better market information as they go to the market on a regular basis and they have good opportunities to communicate with others. Therefore the couple together decide on the price at home before going to the market based on the previous market day price. Women are supposed to be price makers due to their negotiating power. Both men and women used parameters which depend on the purpose (e.g. breeding, fattening, consumption etc). Body condition, colour, sex, horn style, weight, etc. are preferences when buying a sheep.

The decision of men and women on when and how to sell their animals depended very much on the reason why they are selling a specific animal; some people sell live animals in response to specific needs, and others sell when prices are right. In the latter case, knowledge on marketing systems becomes more important and influential. Men in general have better access to this knowledge as they go to the market on a regular basis and are more often literate. Farmers sold their animals to any person who gave the best offer and it was the driving force to whom to sell their animals. There was no legal agreement in sheep and goat transactions so trust is critical.

## **Gender dynamics in the Horro value chain**

### **Input supply**

*Breeding stock:* All household members - men, women, boys and girls - owned breeding stock. They obtained them from their own farm. In addition breeding rams were produced by the community-based sheep breeding project members; where women and men have equal access including from neighbours.

*Feed:* In addition to grazing, both men and women used supplementary feed for sheep production such as oilseed cake and concentrate from factory product. Low grade crops (such as beans and maize) were also used for fattening purposes. However in order for farmers to use the loan, appropriate and affordable loan systems should be in place.

*Credit:* A microfinance institution was in place from which farmers and other actors accessed loans. However, because of the high interest rate and group collateral, farmers were not interested in obtaining credit from the microfinance institution in the area.

*Veterinary Service:* All family members used veterinary services although the coverage was very limited. Lack of transportation, coupled with shortage of skilled technicians and facilities made the services inaccessible. Hence to address the health problems in the area, concerned governed offices and NGOs need to allocate budgets, provide motor cycles and offer job training to the technicians.

*Extension Service:* Usually extension workers targeted men so women were discriminated from accessing extension services.

The major constraint was related to insufficient input supply especially lack of supplementary feed (like concentrates) and seasonal shortage of natural pasture. Lack of feed is likely to limit the size of stock, hence involvement of men and women in value chain development. Investment in improved fodder production would address the problem of feed shortage.

### **Production**

Youth were responsible for sheep herding especially when schools were closed. Supplementary feed were owned by all household members. In this area, it was established that even small children have sheep attributed to their names and management was carried out by their parents. Control and decision making on sale and purchase of sheep was mostly done jointly because they were owned as a family. Thus sheep ownership was not a problem in the area. The difference was in control of income from sale of sheep as it was the men who sold the sheep and kept the money. The women were not involved in marketing nor in decision-making on the income.

Men were collectors and retailers in sheep marketing with the one exceptional case where a single woman supported by ICARDA was actively involved in collecting sheep from farmers and selling to small traders. Generally it is men's domain to supply sheep to traders.

Sheep and goat certification was carried out in the area by the ILRI-ICARDA-BOKU project and as a result, women were entitled to sheep and goat ownership.

"The outcome of certification was very interesting ... it increased women's awareness of their rights. In one of the training days, after the certification, the extension agent was planning to conduct a session, and as usual he invited only men excluding the women; This time the women did not accept him; so they claimed that as far as they were entitled with the sheep and goat certification, they deserve the training as well. As a result the agent was convinced and the women were able to attend the training."

This demonstrates the importance of women understanding their rights. It also illustrates the importance of institutions in influencing gender stereotypes about women's roles in livestock. However, sensitization of women about their rights requires women to have the mobility to access public spaces where such discussions are held. Public service providers should also be accountable to the people they serve.

### **Marketing**

Women were actively involved in the production but they were not actively involved in marketing. Farmers sold sheep when the need arose, especially for the purchase of agricultural inputs. It was the men and young boys who were mostly involved in sheep transactions. Availability and access to market information was generally poor in the area unless farmers went to the market. There was no systematic way of transmitting market information in the area. So men were relatively better in accessing market information due to their mobility.



It was believed that women were not good communicators so they were restricted from sale of sheep and goats. According to the men, women lacked market information, were rigid, and they could not easily sell animals in a short time and bargained a lot. For this reason, men were taking their place and becoming major actors in sheep marketing.

The main constraint highlighted was loss of animals from theft. Since the market place was an open area, animal theft was very common.

### **Processing**

Both women and men were involved in processing e.g. in hotels. Neither the women nor men had access to processing technology. Those farmers targeted by ICARDA, mostly men, did have better knowledge of quality breeds for export quality. Therefore the program should address more women and other marginalized men.

### **Consumption**

Similar to other sites, the purpose of rearing sheep and goat in this area was mainly for immediate cash. It was very rare that households consumed sheep. About 20% was consumed at home, and the women were responsible for cooking. Since the whole family ate from the same plate, household members accessed similar diets. However there was a tendency to give the better part of the meat to husbands. Consumption of meat was based on income of the household. If the household earned better income, the possibility of eating meat was higher among both male and women headed households, however the frequency of consumption was not asked.

There was relatively good knowledge by community members about the health risks associated with ASF. It was culturally engrained to avoid sick and dead animals. Keeping meat in a hygienic place was not common; hence women need more awareness about food handling and safety with regard to hygiene and sanitation. Lack of an independent income usually hinders WHH's from eating more meat.

## **Gender dynamics in the Yabello value chain**

### **Input supply**

*Breeding stock:* Men and women got their breeding stock from their own farm, the market, Bussa Gonofa (community support program), and neighbours. Access and utilization was the same for women and men and no special preferences were mentioned.

*Feed:* No supplementary feed usage was noted; grazing was the common practice and communal grazing land and bushes for sheep and goats were accessed equally by both men and women.

*Credit Service:* Men and women had equal access to credit services. However the micro finance institutions were not actively functional. NGOs, (HABP, USAID), were providing credit to women to purchase breeding stock. Loan repayment was in kind through a 'merry go round' system. The condition was to give the first kid born to the next beneficiary. This loan repayment method was appropriate, and farmers were happy with it. Both women and men had access to the loan although priority was given to women farmers.

*Veterinary services:* Coverage of veterinary services was relatively good compared to other sites. Drugs were stored in health posts. Both women and men received treatment for their animals except for those who lived far from the post. Those who lived further from the health posts (especially women) faced problems accessing the health posts. Household chores constrained women and limited their mobility.

Both women and men were constrained with feed during drought (which is prevalent in the area) and distance to the health posts affected women-headed households more.

## **Production**

Feeding and watering sheep and goat around the house was the responsibility of women while herding larger livestock like cattle was men's task including watering. Both men and women were involved in maintaining and cleaning the housing. Milking and milk processing was entirely the women's task.

Women and men owned sheep and goat jointly and decision-making on sheep and goat sales and purchases was made jointly. Farmers/pastoralists sold their sheep and goats for specific purposes (e.g. purchase of feed, agricultural input, food, and for school etc). Sometimes men sold sheep and goats without consulting the women; in this case men had the influence over the usage. Major constraints were feed shortage during drought (which is prevalent in the area) and the inaccessibility of the health posts.

## **Marketing**

Both women and men farmers were involved in primary marketing. But men were involved both in primary and bigger markets. Men mainly collected sheep and goats from other farmers and sold to bigger traders or abattoirs. Women sold in primary markets to small traders or consumers. There was no formal way of transmitting market information. Market information was transferred informally through friends. In this aspect men had better access to information since they travelled more than women.

Goats were sold when cash was needed to buy items (such as fertilizer, feed when there was drought, and for schooling). Women preferred to sell to consumers rather than brokers who were profit makers. This was done in order to get better revenue. In general, women were better negotiators and as a result received better revenue by selling at a better price. At the time of the study, there was a marketing cooperative but it was not active. Pastoralists sold the goats to anybody and there were no formal customers as there was no legal agreement in the transaction process. Drought, coupled with seasonal marketing and lack of market information constrained both women and men.

## **Processing**

At the household level it was the women who cooked meat after the men slaughtered the sheep and goats. In hotels and restaurants, both women and men were involved in processing. It was only the slaughtering that the women were not involved in. Exporters had good knowledge of market information nationally as well as internationally. There were national standards for export quality measures but they were not functional.

## **Consumption**

No farmer produced livestock for the purpose of consumption. Livestock was primarily raised for sale for immediate cash, so there was not enough sheep and goat meat for household consumption. Farmers slaughtered goats for household consumption once or twice a year. Who decides on consumption was asked but there was no response from the participants. However both women and men used restaurants to buy meat and consume on their own and also bought from butchers. Both men and women and the community as whole never ate sick or dead animals. Sheep and goat meat was eaten cooked and it was not common to eat raw sheep and goat meat as is done with oxen. Households used more milk than meat and it was the women who were responsible for milk sales and consumption. They also had control over the income earned.

## Impact of sheep and goat ownership on gender and household nutrition

Security of intra-household nutrition is a concern in the literature on food security. Women and children are sometimes discriminated against among the members in the household, frequently due to inadequate food supply. As indicated across all sites described above, men were given better shares of the limited food supply. Such discrimination directly affects women and children, because their protein requirements are frequently higher.

Ownership of sheep and goats can give more opportunity to improve household ASF consumption and increase women's income through sale of surplus milk, butter and other sheep and goat products like wool. However in most sites this is constrained by lack of improved technology and practices. For example, milk was processed traditionally in all sites and in Menz, wool was processed in a way which is time consuming and tiresome. Therefore to reduce women's workload and increase their income, investment in improved labour saving technologies is necessary.

Consumption of ASF provides both nutritional value and has potential sanitation issues as well. If ASF is not kept in a safe place and handled in a safe manner, it can be a source of bacteria, food contamination and animal parasites. Therefore proper veterinary service and improved sanitation and hygiene are very essential.

Generally increasing women's access to resources, services and control of benefits would enhance their income from sheep and goats and their products (milk, meat, butter and wool) and at the same time improve their nutrition and ability to support their children and family.

# Factors constraining the effective participation of women

Synthesis of the results indicates that there are several factors that constrain women's full participation in the small ruminant value chain. The key constraining factors include:

1. **Lack of access to labour saving on-farm technologies** (on-farm and domestic technologies); they also lack knowledge on better management practices to increase the quality of sheep and goats demanded by buyers and consumers.
2. **Social expectations** in the community shape beliefs about the type of work that is appropriate for men and women. These social expectations influence both men's and women's pattern of time allocation. Women are constrained from putting more time into market-oriented sheep and goat production as they are expected to stay home taking care of household chores. Women are often constrained from active participation along the core function of sheep and goat value chain development because of discriminatory social attitudes towards women.
3. **Lack of appropriate credit service and terms of repayment** often do not consider the nature of livestock production. The microfinance institutions demand that farmers start repayments immediately after the loan is extended. Farmers are often forced to either borrow from informal lenders or sell household assets to repay the loan, and both women and men farmers were discouraged from using the credit services. In addition, loans were distributed to individuals but each loan was considered part of the group loan. The group is therefore liable as a whole for the repayment of loan. This made individual members feel responsible towards each other's' loans and failure of one member to repay jeopardized the entire group's access to future credit. Women have greater difficulty in accessing financial capital. They obtain fewer loans than men which limits their access to other resources important for livestock production and scale of production.
4. **Poor access to extension and veterinary services:** Men and women are often constrained from improving the quality and quality of their sheep and goat production because of poor extension and veterinary services.
5. **Household chores:** Women are constrained from putting more time into market-oriented sheep and goat production because they are expected to take care of household chores, including care of children.
6. **Ownership of productive assets:** Although small ruminants are traditionally owned by women, it was often men who were responsible for their disposal and thus were in charge of slaughtering and taking decisions related to their sale.

## Conclusions

Women play a significant role in overall management of sheep and goat value chain across all sites. They gather feed and provide feed to the animals, water, take care of the sick and young animals, contribute to cleaning the animal shelter, milk and contribute to sale of the products.

Men are specifically involved in herding, cutting forage, marketing and taking sheep and goats to health canters. Sheep and goat ownership between men and women is strongly related to social, cultural and economic factors. It also depends on the kind of livestock they raise.

In all the sites, large livestock are owned by men while smaller animals such as goats, sheep, and poultry (that are kept near the house) are mostly owned by women. Although small ruminants are often owned by women, habitually it is the men who are responsible for their disposal and thus in charge of making decisions related to their sale.

Milking and milk processing in all sites was managed by women who had control of the income from milk and milk products. However, not all women have control of the income from the sale of sheep and goats. Therefore, to contribute to household security, women should be supported as sheep and goat owners, processors and users of benefits while strengthening their decision making power at the household level.

To break the cycle of poverty, women should be supported economically as well as socially. Processing and marketing of sheep and goat products (such as milk and butter) generated more income for rural women in both Abergelle and Yabello (and wool in the case of Menz) than from the raising and selling of live animals. This is because they have control over income from the products. In addition, in Abergelle and Yabello sites, consumption of milk and butter added nutritional benefits for the whole family.

Processing in most of the sites was not well developed. Both men and women lacked improved meat and milk processing equipment. Men and women also lacked knowledge of the quality requirements/standards for export. However, this was exhibited more among women especially those employed in processing. Factors such as poor technical skills in animal care, limited veterinary services, limited access to markets and poor marketing skills, limited access to financial and extension services, high illiteracy levels and constraining norms and traditions, tend to limit women's opportunities to access, control and expand their small ruminants stock and production.

Persistent gender inequality hinders progress of vertical relationships along the sheep and goat value chain and requires different combinations of tangible and intangible assets. Asset inequality has significant implications as the agricultural sector grows, and different types of assets can inhibit or promote different agricultural investments.

## Recommendations

Several recommendations arose from the reviews described above. They are presented in table 2 below, including recommendations from the authors.

**Table 2. Recommendations to reduce gender inequalities in access to and control of resources in the small ruminant value chain**

Identified gaps	How to address the Issue	Implementing bodies
Lack of understanding of men and women's roles and relations	Participatory training program to enhance practitioners' understanding of men and women's roles in sheep and goat production and how they relate to each other.	Concerned GOs and NGOs
Limited consideration of special needs of women that arise from assigned gender roles: e.g. time constraints	Take into consideration women's time and mobility constraints when designing sheep and goat development activities such as trainings  Design technologies and practices that meet the needs of both women and men  Introduce labour saving technologies for women	Development agents, value chain practitioners, research institutions, private sector
Limited women's participation in marketing	Undertake a sheep and goat value chain analysis to identify opportunities for women's broader participation in markets. Encouraging and facilitating the establishment and strengthening of farmers' groups, cooperatives, producers' organizations and associations to build social and economic empowerment as well as boost their bargaining power.  Support the development of solutions that create equal opportunities for both women and men  Subsidize some investments as incentive mechanisms to involve poor women and men in sheep and goat value chain development. For example low interest rate for the loans provided.  Gender awareness creation for community members including service providers to change their stereotypes and attitude towards women.  Encourage participation of women in trainings aimed at improving women's marketing, trading and business skills.	Researchers, practitioners, government financial institutions, community elders and influential people
Lack of informal formal market information system	Identify and build market information systems that target the information channels used by men and women  Organization of women and male farmers into mixed groups to build social capital and enhance information flow.	Practitioners, cooperatives and or concerned agencies
Limited access to credit	Establishment and strengthening of farmers' groups, cooperatives, producers' organizations and associations.  Expand access to credit and financial services with more favourable terms of re-payment to encourage access by both women and other marginalized groups.  Transform the modalities of micro-financial institutions.	Government organizations, development organizations

Lack of gender skills	Sensitization workshops and gender mainstreaming trainings to development agents, woreda administrators, department heads and other practitioners  Hire more women agricultural extension officers	Women's affairs offices and other relevant expert organizations, development organizations and researchers
Beliefs and perceptions(gender stereotypes) that exclude women from participation in activities that are important to sheep and goat production (including decision making) and also equitably benefit from sheep and goats production	Sensitization of women about their rights  Community sensitization about the role of women in sheep and goat production  Transformation of norms that hinder women's participation in markets, decision making and consumption of sheep and goat milk	Women's Affairs offices  Collaborative NGOs, and international organizations  Office of justice
Limited knowledge on health risk associated with ASF	Consider the dimension of occupational health and safety risks such as handling of raw meat, and dairy products. As women have the main responsibilities for household meals, targeting many women in food hygiene training to achieve the desired impact.	Concerned GO and NGO, researchers

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# Annex 1: Gender analysis check list

- A. Input supply analysis
  1. Breeding stock
    - 1.1 Are there any differences between men women in use of breeding stock in sheep and goat value chain? This means?
    - 1.2 What role do women and men farmers play as breed producers in the sheep and goat value chain?
    - 1.3 How do women head of HH benefited from the restocking support from the community?(Yabelo)
    - 1.4 Who are major suppliers of small ruminants (producers, local collectors, small traders, etc.)? What is the main source of breeding stock? How does it vary among men and women?
    - 1.5 What is the number/proportion of each of the suppliers? How many are men and women? Which of these suppliers are regular suppliers?
    - 1.6 What are the major constraints in acquiring breeding stock? Do the constraints differ among men and women? If yes, how do they differ? (the constraints to access breeding stock are mentioned but the discussion lacks a gender dimension).
  2. Veterinary services
    - 2.1 What veterinary services do women and men use?/get
    - 2.2 For which of the diseases are farmers coming to get veterinary drugs?
    - 2.3 Who frequently comes (men/women)?
    - 2.4 Who are the main clients of veterinary service providers? What proportion of clients are women farmers? Men farmers?
    - 2.5 Do women benefit from the revolving fund for drug supply from the regional states program? If yes, how? If no, why?
    - 2.6 Which service providers (private versus public) do the sheep/goat owners commonly use? Why? Is this the same for men and women?
  3. Credit service
    - 3.1 Who were the major beneficiaries of the revolving fund managed in the area? Did both women and men benefit from these equally? How effective were these schemes?
    - 3.2 Do both men and women have the same terms and conditions? Any affirmative action for women?
    - 3.3 Who are the major customers (those who are currently using credit scheme)? Do equal numbers of men and women use the current credit scheme? Yes
    - 3.4 Who are the most credible credit users? Who are the usual defaulters? Do men and women have different reasons for having credit? What are they?
    - 3.5 Is credit available to poor small holder farmers especially women?
    - 3.6 Are there any government rules and regulations limiting the accessibility of the credit services by farmers? Do these rules affect women and men differently?
    - 3.7 What are producers suggested solutions for these problems? Are the problems similar for women and men?
    - 3.8 What are trader's sources of capital in sheep and goat/milk trade? (Owned, credit from bank, credit from informal market...)
  4. Feed supply
    - 4.1 What is the main source of feeds? How does it vary among men and women?
    - 4.2 How many feed suppliers are found in the area? What proportion of these suppliers are women? Are women farmers involved in feed supply? If no, why?
    - 4.3 Who are major buyers? Does this vary with gender? What proportion of buyers are women farmers? Or men?

## B. Production analysis

1. What are the gender ownership patterns in sheep and goat value chain? Are there any differences between men and women in ownership and management of sheep and goat? If yes, please explain.
2. Is it mainly owned by men or by women? why
3. If owned by both men and women, what proportion of the women in the community would you say own? What are the implications of these differences?
4. What are the gender patterns in decision making on the overall management of sheep and goat value chain? how are decisions made on: purchase of sheep and goats, feeding, herding, etc
5. Decisions commonly made by men, Decisions commonly made by women Decisions that are commonly made by both, which ones?
6. Are there restriction for women/men to dispose the sheep and goat or their products what are the community norms and expectations about women's involvement in sheep and goat production?
7. Personal income by women and men from sheep and goat value chain?
8. Who is responsible for each task (herding housing, feeding, collecting fodder, care of sick animal, milking etc.?) men, women, boy and girls?
9. In which activities of sheep and goat processing do women involved more?
10. Proportion of activities performed by women and men boys and girls in sheep and goat value chain
11. Purpose of rearing small ruminants? Rank the three most important purposes for which producers' rear sheep and goat? Does this differ between men and women?
12. What is the importance of small ruminants compared to other livestock activities? Why? Is this the same for men and women farmers?
13. Do women own land? What differences do you observe for women and men with regard to their access to land and livestock
14. What difference do you observe for women and men on control over land, livestock, and control over production and sale?
15. If feed preservation is common in the area, whose role is feed preservation (men, women)? When is feed preserved?
16. Proportion of farmers/ pastoralists owning each of the breeds of sheep/goat? Is this different between men women farmers?
17. Do you keep any form of written records on the performance/ productivity of the flock? If so, which type of records do you keep? Is this different between men women farmers?
18. What are the major problems limiting the development of small ruminant value chain in the area in order of priority? What are producers suggested solutions for these problems? Are the problems similar for women and men?

## C. Market analysis

1. What are the current roles of women and men in sheep and goat value chain marketing(; Transporting, buying selling, collecting, retailing)
2. Are there gender based constraints in market
3. Who is mainly responsible for selling the sheep and goat?
4. Who controls the income from sheep and goat marketing?
5. How do producers and traders get market information (source)? Is this the same source(s) for both women and men?
6. Are market information reachable by women farmers/pastoralist
7. Is the current market information accessible to women farmers/pastoralists? Do men and women seek the same kind of information?

8. What are the quality parameters to be considered when buying animals? Do both men and women use the same parameters? If not, what do they use?
9. Do men and women receive the same prices for their animals? If not, why not?
10. From the experience, who is the main negotiator (men or women)?
11. Who are the major actors in sheep and goat markets in the area (estimate numbers if possible)? Proportion of women and men for each of the actors.
12. Are there any differences in the kind of markets accessed by men and women? When do men and women sell the sheep and goat and related products? (This could help us determine the length of men and women's value chains and proportion of proceeds).
13. Selling (Please describe how do they sell sheep and goats and sheep and goat milk)
  - 13.1 To whom do traders sell animals (types of buyers)? Are they the same for women and men farmers?
  - 13.2 Preferred buyers by the traders? Why? Do these differ between men and women?
  - 13.3 What are the major problems in selling your products? Are these problems the same for women and men farmers? If not, which problems are specific to men and women?
  - 13.4 Do traders usually have any legally binding contract agreement with their suppliers and buyers? If yes, was that a formal contract? Does it vary among men and women?
  - 13.5 What problems did you encountered in such arrangements? Do men and women use contracts equally?
  - 13.6 Is there any livestock traders' association/group? What is the main purpose of that group/association? Do women and men participate equally in these groups? If not, why? Do women hold any leadership positions?
  - 13.7 What are the major problems in transporting animals? Are these problems the same for women and men farmers?

#### D. Processors

1. Types of supplier by gender
2. How do processors get market information (source)? Is this the same source(s) for both female and male processors?
3. Who are the major actors in sheep and goat markets in the area by gender
4. In which activities of sheep and goat processing do women involved more
5. Access to processing technologies, labour and how this varies across male and female processors
6. Knowledge about quality and measures to meet quality?

#### E. Consumption analysis

1. Do households and individuals in the intervention area have adequate sheep and goat to obtain the Consumption of Sheep and goat meat (*wesla*<sup>1</sup>, *tibs*<sup>2</sup>, *dulet*<sup>3</sup>, *kiki*<sup>4</sup>, *key wat*<sup>5</sup> and other dishes) Sheep and goat milk, butter and cheese? And how does this change temporally and spatially?
2. Who consumes what? How do they prepare and store them? What do they know about nutrition and food safety needs?
3. % consumed at home and sold?
4. Who decides what % to consume or what % to sell?
5. Is there cultural, social and religious beliefs for women and men that affect consumption of sheep and goat meat and milk? If yes, please elaborate.
6. What are the alternative protein sources during fasting period?

#### F. Opportunities

1. What opportunities are there in sheep and goat trading in the area?
2. Are these opportunities equally accessible to men and women traders (if there are women traders)?
3. What problems are there to exploit these opportunities?
4. Do women and men traders face these problems equally? If not, please state why (if there are women traders)

## Annex 2 Key issues for research

Data disaggregated by sex. Work on gender and small ruminant livestock production is limited. In particular, there is a lack of gender-specific information such as data disaggregated by sex on roles, tasks, and access to resources, benefits and income. There has been little analysis of the various roles in terms of gender and most studies that have been conducted at the field level are more theoretical than empirical.

Gender-oriented research and analysis. Despite the complex nature of women's participation in small ruminant production, the problems of access to assets and other gender-related obstacles – lack of capital, credit and technical skills, inequitable allocation of livestock-generated income – are not well documented. More research is needed to achieve a better insight into their implications for household welfare and poverty reduction.

The correlation between women, nutritional status of children, and consumption of dairy products should be the object of further analysis, in particular: (a) the contribution of animal source foods to the nutrition of children and pregnant/nursing women, and (b) the lack of proper veterinary care and good standards of hygiene, which exposes children to the risk of serious diseases.

Research approach and methodology. Research on gender and livestock production needs to be undertaken using (a) a framework that has the flexibility to adapt to a changing socio-cultural environment; and (b) an inclusive approach to the overall functioning of livestock systems (crop livestock, pastoralist), with special attention to the interaction between the stakeholders and the surrounding elements" (IFAD 2007)