

CRP livestock genetics flagship ICARDA report

Assessment of gendered participation in breeding cooperatives in CBBP target sites: Gender relations, constraints and opportunities

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Summary of results

- The desk review has shown that the process of setting up CBBP was participatory in a sense that various stakeholders including farm HHs were part of the process. Nevertheless, the views of women in male headed households and youth were not captured as these were not consulted. In terms of targeting agro-ecology and farming system, site selections were well justified, yet gender context targeting was not equally considered. However, efforts were made to understand and consider gender issues in the course of implementations.
- The breeding programs in Ethiopia on SR have so far achieved important economic and social outputs for the participating households in the target sites. Changes in the lives of participant women as a result of their participation in CBBP realized the breeding cooperative as a means to access other economically important assets and as a bridge out of poverty (Gutu et al, 2015).
- However, the process of community consultation influenced by the existing gender norms affected the type of information generated and best-bets identified for intervention which tend to favor men livestock keepers. Selection of participant farmers based on criteria such as flock size and interest alone for CBBP could result in systematically marginalizing women, particularly women in male headed households, and youth small ruminant keepers from joining breeding cooperatives and benefit equally with men.
- When disaggregated by gender, women membership across the breeding cooperatives assessed is extremely low. Almost, all the registered women members are household heads. Although, membership is open for all interested members of the communities as per the cooperative principles, women spouse membership is restricted due to various reasons such as lack of appropriate flock size, wrong men's perception about the link between ownership and leadership role within the HH, lack of understanding about the coops principles on the sides of leadership, facilitators and members, lack of capacity in identifying gender based constraints and acting upon it, etc.
- Except in few cooperatives, general meeting of members is rarely held which could affect information flow within the cooperative and may result in undermining transparency and trust between members and coop leadership. Rather, leadership members met more frequently to discuss about cooperative's management issues which is to be strengthened. In terms of composition, women are less/or not represented in the leadership position. The reasons behind male dominance and absence of women in the leadership includes few number of women members in the cooperative, lack of experience, domestic work burden and stereotype image- wrong perception about women among community members such as that women do not have the capability to bear leadership role at household and community levels.
- Generally, women members have registered better participation level than their men counterparts. They supply good standing breeding rams/bucks, follow instructions and implement, regularly attend meetings and trainings, and etc. Although, women spouses are not registered member of the coop, much of coop activities and breeding ram/buck managements are being undertaken by them who usually available behind at home unlike that of men in male headed households. Participation of communities in the cooperative is reinforced mainly by the services accessed as result of ones' membership to the cooperative. Both men and women members are enjoying benefits resulting from a collective effort such as better access to improved breeding rams, animal health services, improved husbandry practises, market services, and training and advisory services. More specifically, women members have accessed windows of opportunities as a result of their membership.

- The drivers for women's active participation and contributions in the breeding cooperatives are that they attach higher value to the benefits obtained from their membership, their better access to services which otherwise hardly possible to access, better reputation and access to opportunities as a result of their membership in the breeding cooperative.
- The low/no membership pattern of married women in the breeding cooperatives across the sites is due to gender based constrains and lack of knowhow by the coop leadership and facilitators with regards to cooperative principles. The key gender based constraints (GBCs) to women's participation in breeding cooperatives are the wrong perception in the community that only men are HH makers (productive assets such as animals are named after men and if women have control over of animals men's leadership will be challenged); women's low level of awareness/ knowledge about breeding coops their functions and benefits; lack of control over of HH assets (e.g. Sheep/goats flock); and women's domestic work burden ("[...] men have two hands while women have only one [...]". Demotivating factors are related to coop leadership and capacity for men whereas for women groups mostly related to gender relations that exist at HH level.
- The communication model that has been put in place in some of the cooperatives helped for effective information sharing and for management mechanism that address both men and women members. Although, women (in men headed households) are the ones who does the actual works with regards to breeding ram/buck management, nevertheless, they are often excluded from general meetings or any kinds of trainings organized at cooperative level because they are not registered member.
- Both men and women members have equal stake in the decisions taken by the cooperative's administration according to the participants on men and women FGDs. However, their capacity to influence decisions in such social groups is always questionable due to the fact that women often fear speaking in public gatherings as a result of their low self-esteem and confidence. Consequently, women's presence in general meetings alone cannot guarantee their effective participation in decisions that affect their lives without having the knowledge of factors constraining them and putting in place facilitation mechanisms that ensure their quality participation.
- Cooperatives leadership lack the basic leadership knowledge and facilitation skills. They lack the capacity to notice existing gender based constraints affecting the performance of the cooperatives they are in charge of leadership position. They require tailor made capacity development interventions that aimed at strengthening their leadership skills and ability to identify gender based constraints with strategies how to overcome them.
- Therefore, even if the cooperatives have registered a number of success stories, it is hard to find such stories in documented form. No documenting practices observed with regards to cooperative success factors and failures across the assessed breeding cooperatives. Yet, it is very urgent to support respective cooperatives to start systematically documenting the process, success stories and challenges encountered which could be used for own development and shared with others interested in setting up similar interventions.
- The breeding cooperatives assessed developed partnership with various development partners. Nevertheless, there is weak linkage and coordination exist among them. They also mentioned that ensuring coordination among these actors is a matter of an urgent issue to help grow, expand cooperatives and benefit both men and women members. MoU among service providers could be the first step in ensuring coordination and commitment of service providers to the breeding cooperatives.

1. Introduction

About two-thirds of the world's 1 billion poor livestock keepers are rural women (Kristjanson *et al.*, 2010). On average, women comprise 43 percent of the agricultural labour force in developing countries (FAO, 2016). Small ruminants (SRs), which account for more than half of the domesticated ruminants in the world, are an important component of the farming systems in most developing countries (Kosgey 2004; Tedeschi *et al.* 2011). Since they require less investment compared to large ruminants, small ruminants are a more suitable livelihood resource strategy for poor households, and particularly for women who are often the most vulnerable members of society in the developing world. In the crop–livestock mixed farming systems, small ruminants are considered as a diversification strategy to cushion market and climatic risks and optimize the use of available resources (Oluwatayo and Oluwatayo 2009).

Women's labour and responsibilities in animal production remain under recognized and underappreciated (IFAD, 2004; Niamir-Fuller, 1994). In contrast to considerable research on the roles of women in crop farming, little research has been conducted on rural women's roles in livestock production (Thornton *et al.*, 2003). Although, while women's roles in livestock production and marketing differ from region to region, country to country and from one production system to another, women do provide most of the labour in livestock in sub-Saharan Africa (Njuki *et al.*, 2013). Globally, women share responsibility with men and children for the care of animals, and particular species and types of activity are more associated with women than men. For example, women often have a prominent role in managing poultry and dairy animals and in caring for other animals that are housed and fed within the homestead. The influence of women is strong in the use of eggs, milk and poultry meat for home consumption and they often have control over marketing these products and the income derived from them (FAO, 2016).

In Ethiopia, both men and women farmers are actively involved in livestock production (Hulela, 2010; Ragasa *et al.*, 2012). However, numerous research reports revealed that, at national level, significant gender differentials exist in Ethiopian agriculture, putting women and their vital involvement in a recognized position (Leulseged *et al.*, 2015; Lemlem *et al.*, 2010). Despite the fact, in Asrat and Getnet (2012), the practical and symbolic importance and placement in the exclusive domain of men has resulted in the construction of a particularly male centric notion of what it means to be a farmer, whereas rural women are placed in the position of helpers and caretakers, despite their involvement in and vital contributions to the process of agricultural production.

Small ruminants (sheep and goats) play an important role in the Ethiopian economy and ensure food security for millions of farmers (Akililu *et al.*, 2014). The country has a combined sheep and goat population exceeding 49 million (CSA, 2013). Sheep and goat are integral to the mixed crop-livestock farming system in the highlands and in the pastoral and agro-pastoral production system in the lowlands. Both men and women farmers in Ethiopia are actively involved in their management activities (Hulela, 2010; Ragasa *et al.*, 2012).

1.1 The CBBP in Ethiopia

However, the current level of productivity of the indigenous Ethiopian breeds under the smallholder production systems is low FOA (2009). Cognizant of this fact, in order to sustainably improve the small ruminant sector in major sheep and goat producing regions of the country, The International Centre for Agricultural Research in the Dry Areas (ICARDA), the International Livestock Research Institute (ILRI), and the University of Natural Resources and Life Sciences (BOKU), in partnership with the Ethiopian National Agricultural Research System, have designed and implemented community-based sheep breeding programs being funded by an Austrian Development Agency from 2007 to 2011. Up to 2011, about 500 households owning about 8,000 sheep have been enrolled in the project from four potential sheep and goats producing areas namely Afar, Bonga, Horro, and Menz (Haile et al, 2011). After the end of the project the more successful breeding programs have been continued under the CGIAR Research Program on Livestock and Fish by ICARDA, ILRI and the NARS in the three sites (Menz, Horro and Bonga) and expanded to three more new sheep and goats sites (Doyogana and Atsbi, and T/Abergelle, respectively) with increased number of participating sheep and goat keeping households (Gutu *et al*, 2015).

The program has put in place innovative institutional arrangement, breeding cooperative, in order to maintain sustainable breeding improvement intervention in the target sites. The intension is to organize sheep and goat farmers in to cooperative for stronger collective actions including for effective breed improvement and better market participation through strengthening their bargaining power (Kidoido, 2014). Accordingly, sheep and goat breeding cooperatives have been established across the target sites in collaboration with the various respective stakeholders. In Bonga, Doyogena and Menz sheep breeding cooperative whereas in T/Abergelle goat breeding cooperative was established. The number of breeding cooperative have been increasing from time to time particularly that of sheep breeding cooperatives. Both men and women small ruminant keepers were target members of the breeding cooperative.

1.2 Why gender in small ruminant value chain development?

Analysis of gender relations at the household level play a key role in determining the extent to which men and women interact within a given value chain. Degrees of participation and gains are shaped at the household level by gendered divisions of labour/time, budgets and decision-making/control and at the value chain level by differentiating access to chain functions, services, and resources, and by gender related power disparities in chain management (Mutua *et al.*, 2014).

Although, literature that mainly addresses the issue of gender roles in livestock husbandry practices in Ethiopia is scant, the existing scarce research reports reveals that livestock husbandry practices are gendered to a greater extent. By surveying women and men in households that were headed by women and that were headed by men in three pastoral and agro pastoral communities of Afar, Akililu *et al* (2014) reported that women in male headed households spend more time on livestock activities than women in women headed households and men in men headed households. However, women in women headed households take more advantage of extension services like training opportunities and participating in farm groups.

There are several activities on which men and women jointly involve. In crop-mixed farming system parts of the country, both men and women participate in husbandry practices like feed preparation and feeding; cleaning of shades; watering; and herding. Other household members may also participate although the extent of their involvement vary. Similarly, women and men involve in selling milk and milk products but women dominate in this activity (Akililu *et al*, 2014; Yisehak 2008; Kristjanson *et al*, 2010; Lemlem, 2007; Watson, 2010). However, although, several animal husbandry practices jointly carried out by men and women there are certain roles specific to each HH members. Women actively participate and solely carry out the work of cleaning barns for small ruminant; look after calves, kids and diseased animals; herd small ruminants; milk, process milk products; and marketing of these products. Women are typically engaged with activities related to the safety and wellbeing of the livestock that are performed around the homestead. These are activities closely related to their household chores such as storing, processing and adding value to the livestock products (Lemlem *et al*, 2010; Yisehak 2008; Lemlem, 2007; Belete, 2006; Azage, 2004).

On the other hand, men are usually the key players in high value livestock such as cattle, camels, small ruminants and apiculture (Lemlem *et al*, 2010). Men usually do the work of herding and feeding oxen; taking sick animals to vet clinics; and selling of animals (Akililu *et al*, 2014; Hulela, 2010; Yisehak, 2008; Kristjanson *et al*, 2010; Watson, 2010). Moreover, in specific locations like North Eastern part of Ethiopia, milking is mainly done by adult males (Belete, 2006). According to Belete, in this particular area, apart from men and women, cattle herd keeping mostly done by children of both sexes although children plays different roles in animal husbandry practices in assisting their fathers and mothers with respect to their sexes. In pastoralist farming system, Lemlem find out that livestock marketing in general is the work of men (adult and elder men). But, women control the sale of milk and milk product, although if the business increases significantly in size this may change, while cash income from the sale of livestock is generally controlled by men (Lemlem, 2007).

1.3 Gender and agricultural cooperative

Scholars argue that cooperatives play an important role in economic and social development of both men and women. It does this through voicing of their common goals, enhanced participation in agricultural value chains, protection of producers from unfair pricing thus enabling them to leverage enhanced market opportunities that they would not individually be able to access, and by building individual capacities- improving incomes and leadership skills of members (Emana, 2009; World Bank, 2009). However, in Ethiopia, women participation in agricultural cooperatives is generally very low as compared to their male counterparts. They face major obstacles in joining and being active members of typically male-dominated cooperatives. Various factors are sought to be responsible for this. Firstly, prevailing gender norms and relations responsible for women to assume lower socio-economic status, expectations that they are primarily responsible for all domestic work and their uneven reproductive, productive and community work burdens. Secondly, their restricted freedom and mobility as compared to their male counterparts which limits their opportunities to access and

participate in formal groups. Thirdly, their restricted access to, ownership, and control over of productive resources often used as primary conditions for group membership and leadership such as land, credit, and information, as compared to men (FAO, 2011b; World Bank, 2009).

There is growing evidence that, although cooperatives have been recognized as beneficial to both particularly women through improving their access to technical and managerial skills, finance, agricultural inputs and services as well as to marketing and business networks, women have very low level of participation in cooperatives. Of various factors, their lower socio-economic status, resulted from their restricted access to, ownership and, control over, and information, as compared to their men counterparts often constrained them from meeting required conditions of formal group membership and leadership (Woldu et al., 2013; FAO, 2011b; World Bank, 2009). On the other hand, membership to a cooperative provides women with an opportunity to ownership and control over resources (Mosedale, 2005; Naryaan, 2002) which in-turn improves their participation in social programs through provision of additional services (Barham and Chitemi, 2009).

Literature suggest that quality of group members' participation is influenced by several factors such as credibility and trust, relevance, agency, and care taken in the process of developing strategies for realizing the group's goals (Shirk et al., 2012). Moreover, according to Sseguyaa et al (2015), "[...] community members have different assets, experiences, and attitudes, which they bring to the group effort, and these affect the functioning of the group in various ways". By adopting the framework suggested by Sanginga et al (2006), we analyze the participation of small ruminant keepers with special emphasis of women's quality participation in breeding cooperatives. The two components of participation suggested by the framework are building blocks and management principles. The building blocks focus on analytical variables associated with participation whereas the management principles focus on methods, skills, principles of facilitation, and reflection and systematization of learning processes (ibid). In this study, we focus on both components of participation given their fit with the study objectives.

2. Objectives

The general objective of the current study is to identify how members are participating in the CBBP through the established breeding cooperatives and factors that facilitate or constrain the quality of their participation. Specifically, by adopting quality of participation framework suggested by Sanginga et al (2006) the study aims to address the following two specific objectives:

- 1) To assess the status of women and men participation in the established breeding cooperatives in the CBBP target sites.
- 2) To identify gender based constraints and opportunities to women's participation in breeding cooperatives and draw recommendations for gender equitable interventions.

3. Methodology

3.1 Study Area

The current assessment on gender participation in breeding cooperative was carried out with selected breeding cooperatives at Bonga, Doyogena, Menz and T/Abergelle CBBP target sites. Bonga and Doyogena is located in South part of Ethiopia while Menz in North Central highlands and T/Abergelle is located in the central Tigray region of Northern part of the country.

Table 1. Characteristics of the study sites

<i>Breed</i>	<i>Habitat</i>	<i>Production system</i>	<i>Major use</i>
Bonga	Wet, humid (1070–3323 m.a.s.l.)	Mixed crop–livestock	Meat
Doyogena	Wet, humid (1900–2300 m.a.s.l.)	Mixed crop–livestock	Meat
Menz	Tepid, cool highland (1466–3563 m.a.s.l.)	Sheep–barley	Meat, wool
T/Abergelle	Hot to warm sub-moist lowland (1300-1500 m.a.s.l.)	Agro-pastoral/Pastoral	Milk, meat

In all the four areas, agriculture is the mainstay of the community and mixed low-input crop-livestock farming system is practiced. Sheep and goat production has always been an integral part of the traditional subsistence mixed crop-livestock production system in these areas (Edea, 2008; Gizaw et al., 2014). Sheep are kept as a source of cash to meet households' basic needs and to supplement crop production Bonga, Doyogena and Menz whereas goat in T/Abergelle. Bonga and Doyogena sheep are characterized by fat-long-tailed breed, and are highly valued for their meat production. The Menz breed is raised for its coarse wool, used for weaving traditional blankets and carpets, in addition to meat production (Mirkena et al., 2012). Bonga and Doyogena areas receive relatively higher rainfall and are believed to be surplus producing parts of Ethiopia. Menz is less suitable for crop production due to low and erratic rainfall and frosts and farmers largely depend on sheep farming for their livelihoods (Gizaw et al., 2014). Goats are sources of milk and meat for household's consumption in T/Abergelle. They offer a major source of finance for buying large stocks as well. The rainfall patterns in this area is characterized as low, erratic and unpredictable.

Some farmers, including members of the CBBP, in these areas are food insecure and fall under government food safety net program implying the potential of sheep to improve farmers' food security. All the sites are located in areas where there is lack of market infrastructure and linkage to markets in urban areas.

3.2 Data collection and analysis

3.2.1 Desk review

Secondary data was generated from a comprehensive review of program and project documents and flagship outputs. In reviewing, we employed both electronic and manual literature search strategy. Available program and project documents from desk was manually reviewed. Both

published and unpublished sources were included. Electronic searches were done primarily using program’s wiki and CG spaces and published materials from internet. The key electronic search strings used were “small ruminants”, “value chain”, “gender”, “sheep”, “goats”, “breeding flagship” and ‘Ethiopia’. The keywords/strings were rearranged to phrases close to gender consideration in small ruminant’s value chain development in Ethiopia. The searches for unpublished manuscripts were done exclusively with the programs wiki and CG spaces.

3.2.2 Focus group discussions (FGDs)

Data was collected through in-depth group interviews with members of the breeding cooperatives supplemented with key informant interviews (KIIs) with coop facilitators, kebele administrations and service providers such as woreda cooperative promotion offices and livestock development agencies. At the time of the assessment, there are 32 functional sheep and goat breeding cooperatives in the selected regions. Of the 32 breeding cooperatives, 7 were purposively selected based on their accessibility and distribution (kebeles and woreda within the Zones). About 27 members from each breeding coops (ten men, ten women and 7 leadership members) were invited to participate in the separate interviews. The total number of participants on the FGDs and KIIs across all cooperatives combined was 170 cooperative members and 29 service providers, respectively (see Annex). Separate men, women and cooperative leadership members FGDs were conducted in all the study sites (table 2).

Average group attendance was 8.5 members, with a range of 6–11. The interviews focused on gender participation status in the breeding cooperatives activities and the factors that facilitate or impede active participation of members’ particularly that of women members and wives of men members. A guiding checklist with semi-structured open-ended interview approach allowed for maximum input from respondents, a breadth of responses, and emergence of a wide variety of viewpoints.

Table 2. Number of FGDs and KIIs conducted with coop members and service providers

Woreda Name	FGDs with Coop Members			KIIs with Service providers			
	# of FGDs with Men	# of FGDs with Women	# of FGDs with Coop leadership	# of Coop facilitators interviewed	# of Coop Promotion Offices contacted	# of Livestock Development offices contacted	# of Kebele Administrations contacted
Adiyo	2	2	2	2	1	1	-
Doyogena	2	2	2	3	1	1	1
Menze Gera	1	1	1	1	1	1	-
Menz Mama	1	1	1	1	1	1	-
T/Abergele	1	1	1	2	-	1	1
Total	7	7	7	9	4	5	2

In general, the issues discussed included history of the group; gender roles in sheep production and breeding cooperatives; factors motivating or impeding participation; member’s aspirations; level and process of members’ participation in cooperatives’ activities (e.g. attendance of meetings; trainings; ram supply, selection and management; marketing; access to and perceived quality of services etc.); communication processes; gender based constraints; and members’ self-assessment of group success; methods/principles of facilitation and leadership skills;

reflection and systematization of learning processes; partnerships with other development actors (government offices such as cooperative promotion offices, livestock development bureaus, research centres, local administration bodies, etc.). All the interviews were digitally recorded as audio-files and then the recorded information was transcribed from the respective local dialects and transcribed into English for analysis.

The collected data through FGDs was analysed following the steps suggested by Charmaz (2006). Open coding followed by focused coding. And then the codes were further synthesized and categorized in to themes and linked these themes to the main objectives of the study: how members participate and the factors that facilitate or impede the quality of their participation. Narrative description with quotations around the identified themes were done. The data obtained from KIIs were used to complement and assure the trustworthiness of data obtained through the group interviews.

4. Results

4.1 Results from document review

The L&F goal is to meet its vision of making the people of Ethiopia benefit from equitable, sustainable and efficient sheep and goat value chains is to realize that smallholder households have reliable access to inputs, breeding and animal health technologies and services through innovative input distribution systems for improved small ruminant's productivity. The L&F research program acknowledge well the importance of gender consideration in its research work and has a clear indicators of achievements¹. These include increased gender capacity within CGIAR centers and partner organizations to diagnose and overcome gender based constraints within value chains; design and implement strategies and approaches through which women and marginalized groups improve the nature and level of participation in livestock and fish value chains; and strategies and approaches that increase women and marginalized groups entitlement to access markets and control resources, technologies, labor, power and the benefits of their work. The program is working on various flagships including small ruminant breeding and genetics in Ethiopia. The flagship on breeding and genetics implemented a community based breeding program (CBBP) in different selected sites in the country in order to improve the production and productivity of sheep and goats.

4.1.1 Animal breeding and genetics flagship: The focus

In setting up community based breeding program (CBBP), the four main steps followed were (1) Geographical targeting - identification of eligible regions/districts using GIS; (2) Stakeholder consultation at national level (ground-truthing of step one, defining soft selection criteria and identifying sites); (3) Regional stakeholder consultation to refine site selection and prepare site visits; and (4) Site visits applying agreed minimum checklist to validate selected sites².

In order to define the breeding objective of livestock keepers, focus group discussions (FGDs) and ranking of live animals to get first impression of the reasons why owners keep their sheep/goat flock was conducted. Detailed study on production systems, sheep/goat characterization, identification of breeding objectives and selection traits was done as a follow up³. Target farmers were part of the research process as it was evident from the research and intervention processes. Identifying the best-bet was participatory⁴ (Gutu *et al*, 2015). Target farmers for the various best-bet were selected based on sharing communal grazing land, their willingness to participate, neighborhood, and flock size owned.

¹ CGIAR Research Program on Livestock and Fish. 2013. Gender strategy of the CGIAR Research Program on Livestock and Fish. Nairobi, Kenya, ILRI: <https://cgspace.cgiar.org/handle/10568/32843>; [http://livestock-fish.wikispaces.com/Gender+initiative:indicators LF_gender process indicators_apr2014.p](http://livestock-fish.wikispaces.com/Gender+initiative:indicators+LF+gender+process+indicators_apr2014.p)

² <http://www.icarda.org/publications-and-resources/manuals-guidelines>

³ Best-bets CBB implementation: <http://livestock-fish.wikispaces.com/VCD+Ethiopia>

⁴ Peter Ballantyne, 2013. Targeting Action Research on Small Ruminant Value Chains in Ethiopia Notes from three multi-stakeholder workshops, March, April 2013: https://cgspace.cgiar.org/bitstream/handle/10568/27945/etvca_meetings_april2013.pdf?sequence=7&isAllowed=y

The breeding programs in Ethiopia on SR have achieved important outputs so far. For example, negative selection has been reverted as fast growing lambs are now being retained for breeding instead of ending up in markets. The acute shortage of breeding rams, observed previously in flocks of participating communities, has also been rectified as farmers are now fully aware of the importance of breeding males. Preliminary analysis of the recorded data indicates that the market outlet has increased through more births of lambs, bigger lambs at birth and weaning, and reduced mortality rates due to the combination of breeding with improved health care and feeding⁵ (Haile *et al*, 2011).

4.1.2 How the gender issues in small ruminant value chain was addressed

Target sites for the L&F research program in Ethiopia are widespread covering the four major regions of the country. Various production system such as pastoral/agro-pastoral, mixed crop–livestock and Sheep–barley were included which implies also the existence of variations with regard to socio-economic, cultural and gender contexts. In-terms of agro-ecology and farming system- highland, midland and lowland were among the target sites and thus well justified in-terms of geographical targeting. In order to identify constraints and opportunities, the L&F undertook rapid value chain assessment in all the target sites with the main aim of identifying best-bets for interventions. Diverse actors along the value chain including producers were consulted at HH, community and higher levels. Core functions, activities and actors along sheep and goat value chains in the L&F target sites were analyzed. Site specific constraints and available opportunities for the small ruminant value chain transformation were rigorously generated⁶ with respect to the diverse agro-ecologies.

Best bets interventions were designed based up on these constraints and opportunities specific to the various target sites. Apparently, it seems that geographical targeting was the main premises up on which recommendations were made for best-bets identifications and interventions. Specific gender based constraints and opportunities were not in the forefront at this stage and thus the gender contexts targeting were not taken in to consideration during the best-bets identifications. However, in the course of intervention processes, various attempt has been made to understand, identify and address the existing gender based constraints and opportunities in order to guide the interventions of best-bets in the various L&F target sites (Legese *et al*, 2014a; Legese *et al*, 2014b).

Gender related interventions were identified as a cross cutting issues for the L&F best-bets across the target sites. These includes build on / learn from existing programs of women’s groups and microcredit for them; identify roles, responsibilities, resource access, household decisions and ownership of men and women in VCs; assess whether the contribution of women is recognized in VCs, and if not, why and the implications (e.g. income) of this; identify the work of women in VCs to make them more visible and valued, and find ways to empower

⁵ <http://livestock-fish.wikispaces.com/VCD+Ethiopia>: Evaluation of CBBP.docx.

⁶ <http://livestock-fish.wikispaces.com/VCD+Ethiopia>

them; and reinforce the roles and contributions of extension/advisory agents in targeting and training women⁷.

However, during the implementations of the identified best-bet, CBBP, participation of women and youth livestock/small ruminant keepers were not as expected (Gutu et al, 2015). For example, defining breeding objectives from a gender perspectives is lacking as the who was consulted and how the consultation was made reveals from the approach followed. The views of women livestock keepers in MHH, who constitutes half of the population, was not captured as usually it was households heads, commonly men, who were invited to participate across the research and interventions processes. Moreover, less number of women headed household (WHH) was present during community consultations since their number in communities is small as compared to men headed households (MHH). Furthermore, the process of community consultation was not disaggregated by gender (by men only, women only and youth only groups). This could affected the information generated and more likely tend to favor men given the existing gender norms and cultural contexts in Ethiopia. Likewise, the flock size ownership criteria⁸ used in identifying participant farmers, for CBBP, could have resulted in systematically marginalizing women and youth segments of the rural population from joining these best-bets interventions and benefit from the initiatives. Although, currently there is no evidence with regard to difference in flock size among MHHs, WHHs, WMHHs (women in male headed households), and youth it is expected that less flock size is owned by WHH, WMHH and youth as compared to MHHs.

4.1.3 Institutionalization of the CBBP and its gendered benefits

Farmers association in the form of primary cooperative was introduced in to the CBB program with long-term objectives of institutionalizing the approach in order to sustain the program in the target communities. Participants in the breeding association were selected primarily based on their interest to participate in the breeding cooperatives and other criteria used for target farmers identification. These breeding cooperatives are currently at different stage in the formalization process across the target sites in the four regions of Ethiopia. Some of them have been legally registered as formal primary cooperatives and in full operation which opened up windows of opportunities for members such as access to various extension services (like animal health, marketing et.) and trainings (including financial record keeping and better access to free auditing services from district cooperative promotion office) as evidenced from the CBBP evaluation study. The cooperatives were led by committees elected democratically⁹. Although women are members of the leadership at some locations, usually dominated by men as a result of work burden on women from the domestic domain and their high rate of illiteracy. These prevented them not to equally play community level leadership, provide links between site

⁷ Peter Ballantyne, 2013. Targeting Action Research on Small Ruminant Value Chains in Ethiopia Notes from three multi-stakeholder workshops, March, April 2013:
https://cgspace.cgiar.org/bitstream/handle/10568/27945/etvca_meetings_april2013.pdf?sequence=7&isAllowed=y

⁸ Jane Wamatu .2015. Modification of Existing Flock Feeding Practices to Improve Fattening Performance in Community-Based Sheep Breeding Sites in Ethiopia: Phase 1; Frame-work for setting up CBBP:
<http://www.icarda.org/publications-and-resources/manuals-guidelines>

⁹ Best-bets CBB implementation: <http://livestock-fish.wikispaces.com/VCD+Ethiopia>

level team and the community, assist and manage logistics at community level, report community level developments to the site level team leader with their men counterparts¹⁰.

Given the challenges women are facing, the CBBP helped those participant women SR keepers to achieve an impressive progress. Apparently, the CBBP has contributed to empower rural women and in supporting households to feed themselves. Decision on income from sheep as a result of participation in CBBP is jointly made by men and women. Changes in the lives of women as a result of their participation in CBBP realized the breeding cooperative as a means to access other economically important assets and as a bridge out of poverty (Gutu et al, 2015). However, CBBP could have benefited more rural women if gendered differences in domestic domain and other aspects of rural livelihood addressed. Generally, the CBBP was successful in achieving its objectives. Success of participating farmers have attracted other farmers, and members of the sheep breeders cooperatives are growing across the target sites although there are few drop outs due to various factors among which wrong perception about the scheme is one of the key reasons identified during the evaluation phase of the program (*ibid*).

4.1.4 Gendered constraints and opportunities

Low level of women's literacy and their engagement in the domestic domain as a result of their gender roles, they are not actively participating in the CBBP and also less represented in the leadership of breeding cooperatives. Moreover, these constraints hindered them not to equally play community level leadership, provide links between site level team and the community, assist and manage logistics at community level, report community level developments to the site level team leader with their men counterparts¹¹.

Best bets interventions were designed based up on generalized constraints and opportunities specific to the various target sites. Geographical targeting and non-gender disaggregated views was the bases up on which recommendations were made for CBBP best-bet interventions. Although, in terms agro-ecological perspectives, the best bets were justified, specific gender based constraints and opportunities were not addressed well at this stage and thus the gender contexts targeting were not taken in to consideration during the analysis of the value chain studies.

However, during the implementations of the various best-bets including CBBP best bets, the L&F research program has made a continued effort to integrate gender issues. As a result, although, the program helped those participant women (SR keepers) to achieve an impressive progress in realizing the breeding cooperatives as a means to access other economically important assets and as a bridge out of poverty (Gutu et al, 2015), however, CBBP could have benefited more rural women if gendered differences in domestic domain and other aspects of rural livelihoods addressed.

¹⁰ Frame-work for setting up CBBP: <http://www.icarda.org/publications-and-resources/manuals-guidelines>

¹¹ Frame-work for setting up CBBP: <http://www.icarda.org/publications-and-resources/manuals-guidelines>

The L&F research and development partners and technical scientists are now recognizing the importance of considering gender issues in their work more than ever. For example, the participatory nature of CBBP, participatory epidemiology and gender (PE&G) and FEAST under the L&F research program in Ethiopia helped technical researchers, NARS and partners to recognize the potential impact of gender inclusion in research for development. Moreover, it is believed that the participatory processes of L&F best bets identification and intervention laid a smooth ground for better identification and intervention of gender based constraints and opportunities which will help to advance the effort to transform the SR value chain development in the country.

The SR sector is one of the agricultural sector where women predominantly involved in along the value chain. Various studies (Belete, 2006; Konjit, 2006; Hulela, 2010; Ragasa et al, 2012) has shown that women and youth actively involved and more likely to share the benefit from their work as compared to the other agricultural sectors particularly large animals and crop farming. Because SR in most of the farming systems and socio-economic contexts in Ethiopia are believed to be at the disposal of women's benefit. Complementary gender interventions in this sector will more likely ensure the benefits of women and youth from SR value chain development in the short run.

Participant livestock keepers of which 86% are men headed households at the start of the intervention benefited from the CBBP interventions. It is true that SR Value chains offer tremendous opportunities to women, youth and marginalized groups through better market linkages and employment opportunities. Although, the nature of CBBP tends to work with SR keepers with large flock size, women and youth within the targeted HHs had better access to the market linkages and opportunities created. Apparently, the participatory nature of the CBBP, gender strategic¹² and gender integration studies¹³ carried out within the L&F target sites more likely contribute to the effort of improving shared benefit by all participant actors along the SR value chain in Ethiopia.

However, the process of community consultation influenced by the existing gender norms affected the type of information generated and best-bets identified for intervention which tend to favor men livestock keepers. Participant farmers selection based on criteria such as flock size and interest¹⁴ alone for CBBP best-bet could resulted in systematically marginalizing women and youth SR keepers from joining these best-bets interventions and benefit from their works. Moreover, effective participation of women livestock keepers who were the target of

¹² http://livestock-fish.wikispaces.com/VCD+Ethiopia:ethiopia_gender_analysis_draft.docx; Ethiopia Gender Capacity Development Report_2015.pdf; sfff_ethiopia_gender_aug_2014.docx

¹³ [http://livestock-fish.wikispaces.com/VCD+Ethiopia:Engendering the FEAST Tool_Feedback; ProtocolFGD.pdf](http://livestock-fish.wikispaces.com/VCD+Ethiopia:Engendering_the_FEAST_Tool_Feedback;ProtocolFGD.pdf)sfff_ethiopia_gender_aug_2014.docx; protocol serosurvey 2015.pdf; ethiopia_cbbp_gender_framework.docx; ethiopia_cbbp_gender_tool.docx

¹⁴ Jane Wamatu .2015. Modification of Existing Flock Feeding Practices to Improve Fattening Performance in Community-Based Sheep Breeding Sites in Ethiopia: Phase 1; Frame-work for setting up CBBP: <http://www.icarda.org/publications-and-resources/manuals-guidelines>

best bets across the L&F target sites in Ethiopia was limited to some extent by the gender roles, domestic works, they are responsible for and their low level of literacy¹⁵.

4.2 Results from field assessment

4.2.1 History of the coops and some basics

Sheep/goat community based breeding program, although not well organized and functional as such, has been tried for a bit longer time in the target sites by the national agricultural research system. Following a comprehensive studies ICARDA in collaboration with ILRI and national research systems set up a well-organized CBBP for indigenous sheep and goat at various potential sites in Ethiopia which evolved in to breeding cooperatives across the CBBP intervention sites. They provide technical support to the sheep and goat breeding communities and stakeholders in the value chain. For the breeding cooperatives, target farmers were selected based on sharing communal grazing land, neighborhood, flock size owned, and their willingness to participate. The breeding program is based on selection of best breeding rams/bucks from sheep/goat flocks of all participating farmers.

In order to enable the program function successfully, financial support and awareness creation was provided for farmers for better breeding practices. Moreover, revolving funds were arranged for the sheep breeding cooperatives to buy best rams/bucks selected by the cooperatives and keep these animals for optimum service period. Through the respective research centers and community facilitators hired, daily monitoring and data recording has been done for each breeding cooperatives. Complementary interventions such as animal health services, feed/forage development, fattening techniques of culled animals, and market facilitations were provided to the breeding cooperatives. Likewise, construction of sheds to be used as store and candidate rams/bucks holding yard were constructed with contribution from sheep breeding communities.

All the assessed breeding coops were licensed and legally registered at the respective woreda cooperative promotion agencies. Although, farmers were very reluctant to form a breeding cooperative at the beginning of the CBBP intervention, they gradually accepted and developed interest among even non-members in their respective communities. The continued effort through awareness creation and service provisions such as veterinary services greatly contributed to the positive changes in farmers' perception about collective action through cooperative. This is evident from the gradual increase in total registered membership across the breeding cooperatives particularly with *Boka Shuta sheep breeding cooperative* in Adiyo woreda, Bonga. Moreover, when disaggregated by gender, women membership across the breeding cooperatives assessed is very low (figure 1). Almost all the registered women members are household heads. Although, membership is open for all interested members of the communities as per the cooperative principles, women spouse membership is restricted due to various reasons discussed in the following sections.

¹⁵ Frame-work for setting up CBBP: <http://www.icarda.org/publications-and-resources/manuals-guidelines>

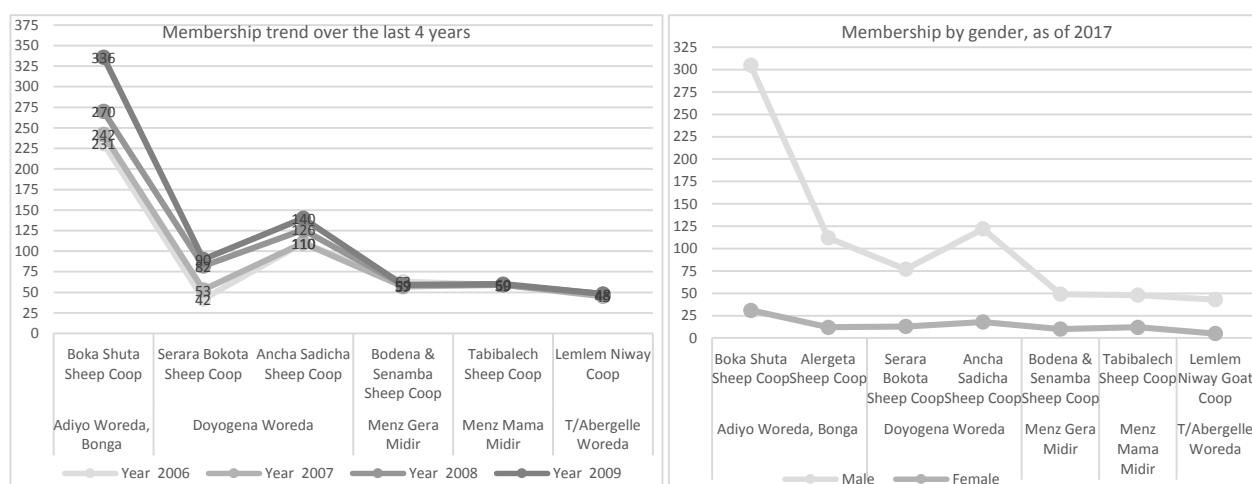


Figure 1 Membership trend and by gender for selected breeding coops

In the assessed breeding cooperatives male headed households (MHH) own more than twice sheep/goat than that of female headed households (FHH). The average max and min flock size for male headed (MHH) and female headed households (FHH) in the assessed breeding cooperatives is 77 and 4 sheep and 35 and 3 sheep, respectively whereas 80 and 25 goats and 40 and 22 goats, respectively. As to the participants, sheep/goats are jointly owned by spouses in MHHs, however, study has shown that there is variability of local understanding of ownership of resources in Ethiopian context and resource arrangements favored men (Galiè et al, 2015). The *Boka Shuta Sheep breeding Cooperative* use the highest number of breeding rams per year (up to 280 rams) as compared to the rest. All members of the assessed cooperatives have received technical trainings (2 to 5 times on average up to now). Except *Alergeta* and *Serara Bokota Sheep Breeding Cooperatives*, general meeting of members is rarely held. Rather, leadership members met more frequently to discuss about cooperative's management issues (table 3).

Table 3. eFlock Size and number of breeding rams in use, training received & frequency of meetings

Woreda	Cooperatives	MHH Average Flock Size		FHH Average Flock Size		#of Breeding ram/buck in Use/year on Average	# of technical training received	Frequency of general meetings/Y ear	Frequency of leadership meetings/mo nth
		Min	Max	Min	Max				
Adiyo, Bonga	Boka Shuta Sheep Coop	10	15	6	10	280	2	1.2	2
	Alergeta Sheep Coop	4	11.3	3	5.3	220	3.5	4	1.8
Doyogena	Serara Bokota Sheep Coop	3.3	6.7	1.7	4.7	54.7	3	2.4	0.3
	Ancha Sadicha Sheep Coop	5	15	3	8	83.3	3.5	0.8	2
Menze Gera	Bodena & Senamba Sheep Coop	13.3	76.7	7.7	20	32	3	0.4	1
Menz Mama	Tabibalech Sheep Coop	20	51.7	10	35	31	5	0.4	0.1
T/Abergele	Lemlem Niway Goat Coop	25	80	21.7	40	32	4.7	1.2	1

The breeding cooperatives were being run by a leadership set up of various committees with different functions. The number of members in the cooperative leadership varies across the selected cooperatives with max 17 and min 7 members dominated by male members (figure 2). In the two of the assessed cooperatives women are not represented at all in the leadership. The reasons behind male dominance and absence of women in the leadership includes few number of women members in the cooperative, lack of experience, domestic work burden and women's stereotype image- wrong perception about women among community members such as that women do not have the capability to bear leadership role at household and community levels.

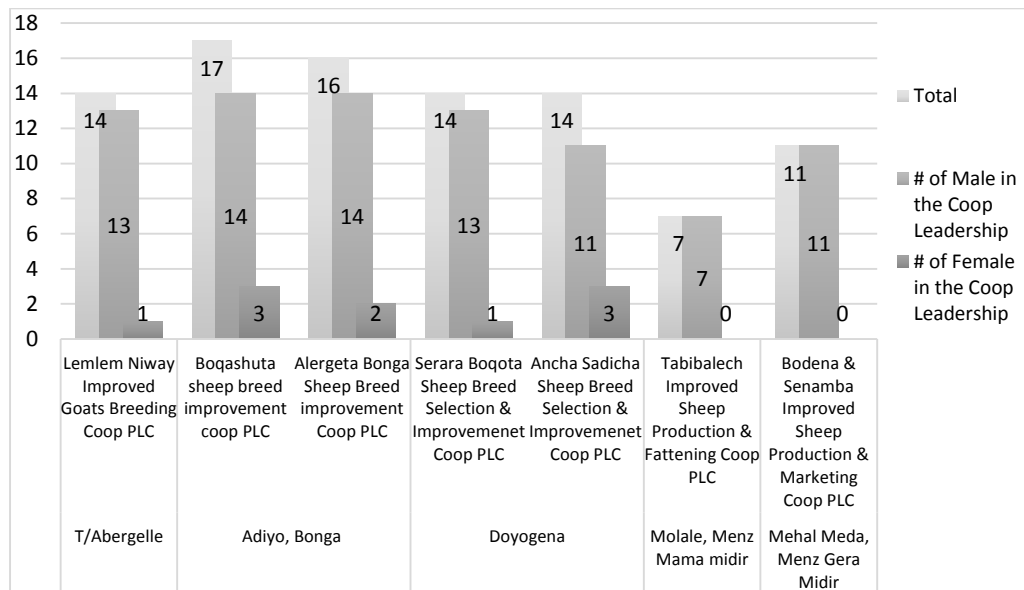


Figure 2 Gender participation in coop leadership

4.2.2 Gender roles in sheep production and breeding cooperatives' activities

Participants in the FGDs identified a set of small ruminant management activities need to be undertaken in order to at least keep sheep and goats. This includes such as shade construction, breed selection, feed collection and feeding, supplementary feeding, barn cleaning, health monitoring, water collection and watering, herding in the grazing field, separating weak and small animals and tethering, flock monitoring (during night), taking care of pregnant animals and weak and assisting during delivery, marketing, and managing income from sheep. Overall, these activities are performed by men and women. However, there are specific tasks carried out by each HH members. For example, the work of shed construction, breed selection, marketed supplementary feeding, flock monitoring overnight, marketing of animals, and managing the income generated is mainly done by adult men. Whereas, barn cleaning, water collection and watering, feeding animals with HH leftovers, separating and tethering, and taking care of weak and pregnant animals are mainly performed by adult women. Nevertheless, activities such as feed preparation, herding, and flock health monitoring are jointly shared. Children also observed in assisting both men and women with most of these activities.

Similarly, FGD participants identified cooperatives' activities performed by individuals registered as members. These are registration fee preparation and making registration, ram

selection at home and tagging, bringing ram to selection centre, ram selection at breeding coop, participate in shade/selection centre construction, managing the selected breeding ram, monitoring inbreeding, castration and fattening of culled rams/bucks, participate in meetings arranged by the coop and leadership, reporting to data collectors, forage plantation, take part in marketing of selected breeding ram and fattened ram at collection centre, sharing dividend, and community mobilization to increase coop membership. Although, these activities are expected to be performed by HH member who became the member of the cooperative (usually head of HH who are men), FGD participants noted that much of these activities are being undertaken by women who usually available behind at home in the case of sheep cooperatives. Men's engagement in crop farming which is mostly done away from home is mentioned as a reason for women's involvement in most of the cooperative's activities in the absence of men despite their non-membership-ness. Yet, in the case of goat cooperatives, registered members are the primary responsible person in carrying out coop activities.

4.2.3 Level and process of members' participation in cooperatives' activities

Across the seven breeding cooperatives assessed, the participation of members in the cooperative activities reinforced mainly by the services accessed as result of ones' membership to the cooperative. Both men and women members witnessed that they are enjoying benefits resulting from a collective effort such as better access to improved breeding rams, animal health services, improved management practise, market services, and other extension services such as training and advisory services. Moreover, exposure to better opportunities as a result of their membership was mentioned by the women groups as additional benefits from the breeding cooperatives. Women who are members of the cooperatives able to own and have control over of sheep/goats and accessed meetings and trainings.

As a result of one's membership to the breeding cooperative, participation in various coop activities was expected. The cooperatives through its executive committee members monitor member's participation in these activities. It has put in place sanctions as measures against non-compliance which include payments for non-attendance at meetings or failure to execute breeding ram management activities and contribute labour for buildings constructed by the coop. However, in order to maintain group harmony, executive committee members reported flexibility in implementation of the sanctions. On the other hand, for successful members who implemented cooperative's activities and had regular attendance, the coop has incentives mechanisms in place including award as observed in the case of *Serara Bokota Sheep Breeding Cooperative* in Bonga Woreda.

All groups reported varied levels of members' participation in coop activities. Generally, all types of groups interviewed agreed that women members have registered better participation level than their men counterparts. Women participate in most of the cooperative's activities such as ram selection at home, cooperatives office building, community mobilization, managing the breeding ram, monitoring inbreeding, herding, health monitoring, fattening of culled ram, participate in meetings arranged by the coop, reporting, forage plantation etc. Moreover, the gender roles exercises also revealed that, even in men headed households where

only men are registered member, most of the breeding ram management activities are carried out by women. Most of the argument is that it is women who are left behind at home with small animals such as sheep and goats as men are engaged in crop farming activities usually done away from home. As a result, women are more available around in order to take care of the daily management of the breeding ram and give information to data collectors on regular bases.

Members in the two cooperatives at Bonga woreda in which number of members is increasing from time to time reported sentiments similar to the following: “[...] When the cooperative started, most women in the community feared about the initiatives and even unwilling to cooperate with their husband who wanted to be a member. But now, not only women headed households but also married women wanted to be a member of the coop [...]” (Women FGD participant, 19th July, 2017, Alergeta Kebele, Bonga Woreda. In another group, one member reported that: “[...] Although, only our husbands are registered member of the breeding cooperatives in our areas, we are happily taking the leading responsibilities in managing the breeding rams and also participating in cooperative’s matters in the absence of our husbands” (women FGD participant, 17th July, 2017, Boka Shuta Kebele, Bonga Woreda) (see also gender roles in Annex).

In general, across the assessed breeding cooperatives, number of women in the cooperative is very minimal. Almost all of the women in the coop are household heads whose number in the community is too small. The low/no membership pattern of married women in the breeding cooperatives is due to various factors such as lack of knowhow by the coop leadership and facilitators with regards to cooperative principles that it does not prevent couples membership; women lack registration fees, own sheep/goat flock to qualify for membership condition (must have certain number of ewes, 3-5 although varies from coop to coop), lack of awareness about coop principles; communities wrong perception about women’s participation in social groups (in men headed households if women become membership in coop in place of her husband it is often attached to taking over of the role of HH leadership as to the society); women’s domestic work burden which constrain women from fulfilling regular attendances of full-day meetings and etc. Similar studies has shown that women’s low income, resulted from lack of access to and control over land and crops, is an obstacle for satisfying membership conditions (Jones et al, 2012). Moreover, communities traditional norms and wrong conceptions regarding roles of women and men (World Bank, 2007) and women’s lack exposure to the public sphere and family resistance (ILO, 2002) affect women’s membership in cooperatives.

Across the cooperatives assessed, all the participants in the various FGDs agreed that, although women members are very small as compared to their men counterparts (figure 1), they have better participation status than men members in terms of contributing to the goal of capital accumulation of the breeding cooperative’s. They supply good standing breeding rams/bucks, receive and better implement instructions, regularly attend meetings and trainings, and etc. The drivers for women’s active participation and contributions, according to the cooperative leadership, are that they attach higher value to the benefits obtained from their membership, opportunities opened up for them, their better access to services which otherwise hardly possible for them, and their expectation that they able to generate reputation as a result of their

membership in the breeding cooperatives. As a result, the cooperatives' executive committees are putting high expectations on women members for the future betterment of the cooperatives and convinced to increase their membership in the future through mechanism such as mass awareness creation, awarding top performers, and couples trainings.

4.2.4 Representation in coop leadership

The sheep/goats breeding cooperatives covered by this assessment have legal status obtained from the respective woreda cooperative promotion offices. This enables them to access the various technical services from this office such as trainings in leadership, financial management, business plan development, auditory services, assist in drafting and execution of internal rules and regulations, monitoring and evaluation, and reporting. Each breeding cooperatives has executive committees elected by the general assembly. In addition to the executive committee, there are other committees organized with various roles and responsibilities. These are controlling committee (responsible to carryout day to day monitoring and evaluation), marketing committee (responsible to facilitate buying and selling of selected rams/bucks including weight estimation and price setting), fundraising committee (responsible to coordinate income generation activities for capital accumulation by the coop), and training and promotion committee (responsible for capacity development of coop members and mobilization of community to join the coop).

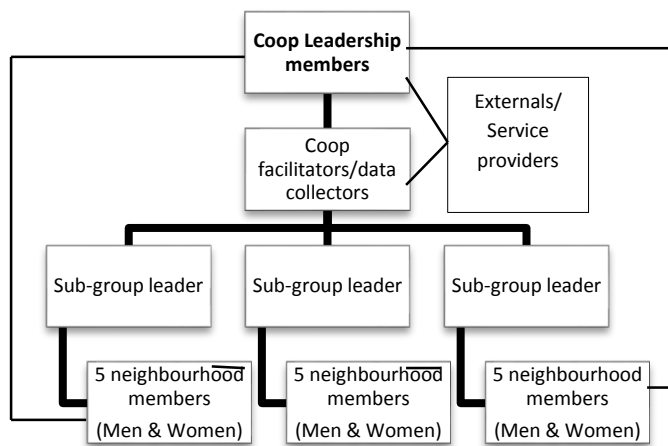
Being a member in one of these committees provide opportunities to have more interactions with various support services and increase their chance of getting capacity development trainings. Moreover, the various roles expected to be played by these committees gives members the opportunity to exercise their agency (Emana, 2009). Across the seven breeding cooperatives assessed, women observed having less participations in these different committees. In Menze woredas, all the committee members are men (Figure 2). Of reasons mentioned why women are less represented in cooperatives leadership includes such as women lack the required experiences and skills to run such cooperatives where men are also members. They are generally constrained with time for meetings more than their men counterparts. Moreover, misconception regarding “only men are endowed with leadership skill” is also evident from the statements made by women FGD participants- “women spouse cannot be a leader in association where her husband is also a member” (women FGD participant, 10th August 2017, T/Abergelle Tigray. Similarly, it is argued in the literature that their limited access to, control over, and ownership of productive assets and information restricted them from meeting conditions of leadership (FAO, 2011b; World Bank, 2009). Wanyama (2010) noted that the persistence of negative cultural attitudes towards women leadership by women can be seen clearly in the fact that women tend to be less represented in elected positions and women themselves may be reluctant to vote for other women.

On the other hand, it is generally believed that community members (men and women) have different assets, experiences, and attitudes, which they bring to the group effort, and these affect the functioning of the group in various ways (Sseguyaa et al, 2015). Regardless of gender equality, therefore, ensuring women's participation in the leadership positions can bring

additional factor for group success. Since, as to SNV (2014), leadership in a group context involves innovation and working with creativity that can be obtained from diverse perspective and experiences critical to work out complex problems and control rapidly changing conditions (Clugston, 2014). Participation of both men and women in the cooperative brings such diversity of perspectives to the group.

4.2.5 Communication mechanisms and processes

Group effectiveness largely depends on communication mechanisms put in place for vertical, horizontal and downward information sharing to ensure that all members have access to and use of the information. In case of the current breeding cooperatives, communication takes place between leadership and members (downward communication), between leadership and between externals (service providers), between members and service providers, within members at coop level (horizontal communication), and between HH members at HH level. Across the study sites, both men and women members of the breeding coops witnessed that data collectors who are serving as facilitators are the main means through which information is being accessed. However, in some sites such as *Boka Shuta Sheep Cooperative* in Bonga, well organized communication mechanism has put in place for effective information sharing and for management mechanism which includes downward, upward and horizontal communication arrangements (figure 3). Members of the cooperatives were organized in to smaller sub-groups (1 to 5 members) whereby under one leader five members who are closer to each other were grouped. The purpose, according to the respondents, was to deliver and receive information effectively, to enhance experience sharing and to ensure a close follow-up of selected breeding rams in use.



Note: **—————** main information channel **—————** alternative information channel

Figure 3. Organizational structure for effective information sharing & management, Boka Shuta Breeding Sheep Cooperative in Bonga CBBP target sites

The sub-group leader has multiple roles such as channelling information from higher level (such as coop executive board) to members grouped under him/her and from members to

management committee, monitor day to day activities of members with respect to the breeding rams, and resolve any problems created among members in his/her group, facilitate and ensure the reporting's of necessary data to the data collectors/facilitators, and encourage members to engage in the community mobilization activities through sharing of information about the benefits of the breeding cooperative to their neighbours and the like. The executive committee (coop leadership) have more often contact with facilitators than subgroup leaders and coop members. However, they also noted that whenever need arise they do reach members directly through subgroup leaders in person or via telephone.

During the discussions it was noted that since women are mostly available at home than their male spouses, facilitators including visitors (service providers) often interact with them for delivering instructions and for receiving data regarding breeding rams and cooperative affairs. However, whenever there is general meetings or any kinds of trainings organized at cooperative level, it is men (registered coop member) who is attending. This was reflected in the statements made by one of the women FGD participants.

[...] Because of our presence at home, it is us who often give information regarding our animals to data recorders and any visitors. So, it would be good if we get the opportunity to participate in the trainings for better reporting [...], (women FGD participant, 17th July, 2017, Boka Shuta Kebele, Bonga Woreda).

Although, men FGD participants argued that they share what they have learned during various learning events with their spouses, the women group suggested that this happen rarely and not common with all HHs. Since the gender role exercises has shown that most of the sheep/goat management activities are being done by women, unless the capacity development activities also include women whose spouses are members of the cooperatives, the capacity development interventions organized by the cooperative management bodies and service providers will unlikely bring the intended impact.

4.2.6 Factors motivating or impeding participation

In the assessed breeding cooperatives, men and women do have their own reasons why they are motivated or demotivated to join the breeding cooperatives. Gender differentials were apparent in both factors as indicated in the table below. The women group came up with longlist of motivating and demotivating factors. For women, gaining respect, relief from domestic work and new windows of opportunities are part of motivating factors in addition to what the men group has mentioned. Similarly, demotivating factors are related to coop leadership and capacity for men group whereas for women mostly related to gender relations at HH level.

Table 4. Factors motivating or impeding participation of men and women in breeding coops

<i>Factors</i>	<i>Men Group</i>	<i>Women Group</i>
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Motivating factors	<ul style="list-style-type: none"> - To generate more income - To have access to better breeds - For better access market information - To have better access to animal health services & input for fattening sheep - To have access to trainings & improved management practices - For collective actions- improve social relations 	<ul style="list-style-type: none"> - To generate more income and teach our children, buy other HH assets - For better access market information - To avoid early selling of our animals - To have better market price for our animals - For collective actions- improve social relations - For gender equality – equally participate with men and gain respect - For asset creation- Create opportunity to own asset - To have access to better breeds - To have access to participate in trainings & meetings - To have relief from domestic work burden- we consider as leisure time whenever we participate in coop’s activities including trainings & meetings. - To get reputation from the community
Demotivating factors	<ul style="list-style-type: none"> - Failing to obtain/meet aspirations set at the beginning-e.g. expected animal health services - Bad experiences from previous cooperative movements - Anticipated mischief practices by cooperative management - Limited financial capacity of cooperatives to purchase all the supplied rams by coop members 	<ul style="list-style-type: none"> - Work burden back at home - Bad experiences from previous cooperative movements - Lack of support/encouragement from male spouses - Lack of own sheep/goats flock - Lack of awareness/exposure to the benefit of breeding coops - Only men often contacted/invited to be a member- wrong assumptions that household head is the right person to be contacted during mobilization and registration for membership for such coops.

As evident from the document review, during community consultation in the process of setting up the community based breeding program at various levels and locations, in most cases, only men and women head of households were invited and consulted. Women spouses were represented through their husbands and thus have very limited information about the basics of establishing breeding cooperatives in their communities. During the FGDs women groups witnessed that as a result of their exclusion in the community consultation and breeding cooperative setting up processes, they have been hiding their sheep and goats during selection and tagging and used to giving wrong information to facilitators at the beginning. This is apparent in the statement below.

At the beginning, we were hiding our sheep/goats from externals such as researchers and facilitators when they came to select and tag our animals thinking that they will take them away or tax us. We were also fearing that if our animals, the good ones as they are looking for them, were exposed to the eyes of someone whom we do not know might get die. But now, as a result of more exposure and awareness creation, we fully understood the purpose and became willing to cooperate, (women FGD participant, 17th July, 2017, Boka Shuta Kebele, Bonga Woreda).

Scholars argue that cooperatives play an important role in economic and social development of both men and women through offering a number of services and opportunities (Emana, 2009; World Bank, 2009). However, in Ethiopia, women participation in agricultural cooperatives is generally very low as compared to their male counterparts. They face major obstacles in joining and being active members of typically male-dominated cooperatives. Various factors are sought to be responsible for this. Firstly, prevailing gender norms and relations responsible for women to assume lower socio-economic status, expectations that they are primarily responsible for all domestic work and their uneven reproductive, productive and community work burdens. Secondly, their restricted freedom and mobility as compared to their male counterparts which limits their opportunities to access and participate in formal groups. Thirdly, their restricted access to, ownership, and control over of productive resources often used as primarily conditions for group membership and leadership such as land, credit, and information, as compared to men (FAO, 2011b; World Bank, 2009).

4.2.7 Gender based constraints and opportunities

There is growing evidence that, although cooperatives have been recognized as beneficial to both particularly women through improving their access to technical and managerial skills, finance, agricultural inputs and services as well as to marketing and business networks, women have very low level of participation in cooperatives. Of various factors, their lower socio-economic status, resulted from their restricted access to, ownership and, control over, and information, as compared to their men counterparts often constrained them from meeting required conditions of formal group membership and leadership (Woldu *et al.*, 2013; FAO, 2011b; World Bank, 2009).

In this study, we have generated similar evidences why women's participation in the breeding cooperatives across the CBBP target sites in the study areas is very limited, especially that of women in male headed households. In both men and women FGDs, participants pointed out key gender based constraints (GBCs) to women's participation in breeding cooperatives. These are the wrong perception in the community that only men are HH makers (productive assets such as animals are named after men), women's low level of awareness/ knowledge about breeding coops their functions and benefits, lack of control over of HH assets (e.g. Sheep/goats flock), and women's domestic work burden "[...] men have two hands while women have only one [...]", Coop leadership members FGD participant, 24th July, 2017, Molale woreda, Menz Gera Midir). One of the key problem to women's participation in the breeding coop is the stereotype perceptions about women's status in the HH and community which systematically undermine their control over of productive resources such as sheep/goats required to fulfil conditions for breeding cooperative membership (table 5). Membership to a cooperative provides women with an opportunity to ownership and control over resources (Mosedale, 2005; Naryaan, 2002) which in-turn improves their participation in social programs through provision of additional services (Barham and Chitemi, 2009). Lack of access to one of these trap women in to a vicious circle where it is difficult to break out with their own effort.

It is apparent from the discussions with the various groups of the breeding cooperatives that misconception about men's upper hand within the household on the sides of both and lack of

agency on the sides of women was seen as the main factors determining women’s ability to become a member of the breeding cooperative. Although, sheep/goats are owned jointly, in most of the HHs, women have only use right in practice. This means that the control right over the animals in reality belongs to men and women do not have more than use right. However, there are cases where positive deviants are observed in this regard which could be used as a lively example for teaching others. In the FGDs with the leadership members, it is noted that there are male members of the breeding cooperative who after being convinced of the benefits from their membership allowed their spouses to be personally registered as a member for the households’ greater benefit from the breeding cooperative. This is evident in the following statement.

In our community there is a belief and practices that although husband and wife jointly own animals, it is household head who decides on HH assets such as live animals. The reason behind is that we believe if women take the right of controlling over the animals, the men will lose leadership role in the HH and as a result trust between couples will get deteriorated which could even lead to separation. Although I know this, however, after sometimes of my membership in *Serara Bokota Sheep Breeding Cooperative* and generated tangible benefits from the breeding cooperative, I have discussed all the benefits of being a membership with my wife and suggested here that it is good for us if she became a member of this cooperative as well. Now, both of us is a member of this breeding cooperative, (Coop leadership members FGD participant, 24th July, 2017, Doyogena Woreda).

Research has shown that throughout Ethiopia, women’s access to resources tends to be controlled by their husbands or other male kin. Women’s lack of independent status and their exclusion from leadership or political processes are embedded in culture, and result in an internalised sense of social inferiority on the part of women themselves (Flintan, 2006).

Table 5. Gender based constraints (GBCs), consequences, causes/factors leading to GBCs, and action to address GBCs

<i>GBCs</i>	<i>Consequences</i>	<i>Causes/Factors leading to GBCs</i>	<i>Action to address GBCs</i>
- Wrong perception in the community that men are HH makers (productive assets are to be named after men)	- Only men, in men headed households, observed as registered member of the breeding coop - Low level of women’s participation	- Women believed that if their husbands are member, they are also a member & thus excluded - Usually men appear representing the HH for social & economic activities in the community	- Awareness creation for men & community at large - Encourage dialogue/ conversation at HH and community level to bring positive change in communities thinking about ownership & control over of HH resources - Establish women’s only breeding coop
- Women’s low self-esteem and & limited agency	- Exclusion from membership to social groups - Unfair power relations within the HH	- Wrong perception in the community & about oneself and	- Provide women opportunity to own resources - Improve their agency - Make women’s contribution to HH’s existence visible

- Women's low level of awareness/knowledge about the breeding coops	- Low/limited participation of women small ruminant keepers	- Women's restricted mobility- women (in MHH) excluded from community meetings, trainings etc. - Men's wrong perception about their spouses	- Awareness creation men & women and special trainings for women in the community - Use of effective women members to mobilize other women in the community
- Lack of women's (in MHH) control over of HH Assets (e.g. Sheep/goats flock)	- Lack of interest to be a member of the breeding coop - Women unable to register as a member	- Men dominance and traditions that shape their thinking that control over of HH productive resources belongs to head of HH (who is usually men)	- Gender sensitization works for both men & women- joint ownership & control over improves HH productivity and livelihoods - Enable women to own & control over primary products (animals) not only secondary products alone.
- Women's work burden	- Lack of time for productive activities - Un able to attend coop meetings & training programs	- Gender norms	- Involve men and children in domestic activities - Identify and work on positive deviance in this regard - Introduce labour saving technologies including for women's domestic work

Note: MHH: Male Headed Household; HH: House Hold

Similarly, FGDs with men members in *Tabibalech Sheep Breeding Coop* at Molale woreda, pointed out the fact that there are good experiences in the community that could be used as a live example to teach other farmers in order to improve the long standing cultural constraints to women's control over of productive HH assets such income. This evident in the statements made by one of the participants —“[...] now days learned husbands are giving the role of managing and controlling HH income to their wife for better HH's livelihood achievements [...]”, (men group FGD participant, 24th August 2017, Molale woreda, Menz Gera Midir). Moreover, according to the discussions with the woreda office of livestock development in the same area, today gender issues are widely acknowledged by development experts. This was as a result of efforts made by various actors and could be a promising step towards bringing a long-lasting solution to gender inequality in livestock production. “[...] the good thing is that, now, everyone agreed and know that most of the sheep breeding cooperative activities are undertaken by women. We hope that this is the beginning of resolving gender based constraints and help women benefit from their work [...]”, (Woreda livestock expert, 23rd August 2017, Molale woreda, Menz Gera Midir).

All the seven cooperatives assessed have able to raise capital although they are at different stage. They able to obtain land for the construction of collection centre and other buildings to be used for office and other purposes. For example, some cooperatives such as *Bodena and Senamba Sheep Cooperative* in Molale, Menz Gera Midir district, has acquired hectares of land for crop and forage plantation with the aim to generate extra income in order to raise financial capital for the cooperative so that they could buy all rams supplied by members during

marketing. Currently, participants suggested that the coop is under performing due to its weak financial capacity. Hence, members are eager to get involved in activities that help the cooperative accumulate capital. This was evident from a statement made by during interview with woreda cooperative promotion officer “[...] one of coop member said that, during sharing of dividend, ‘I do not want to take my share, I want to give to the cooperative for its capital growth so that it can buy all the rams supplied by members during every selection times’”, (22nd August 2017, cooperative promotion officer, Molale Woreda, Menz Gera Midir). Such mental models could be used by the cooperative’s leadership as an example to convince other members to work harder for the cooperatives goal.

4.2.8 Methods/principles of facilitation and leadership skills

The breeding cooperatives in focus adopted principles of cooperative to function as a primary cooperative. Members participation in the management of cooperative’s affairs are mainly done through attending general meetings. Both men and women members have equal stake in the decisions taken by the cooperative’s administration according to the participants on men and women FGDs. However, their capacity to influence decisions in such social groups is always questionable due to the fact that women often fear speaking in public gatherings (Sseguyaa *et al*, 2015) as a result of their low self-esteem and confidence (FAO, 2011b; World Bank (2009). Consequently, women’s presence in general meetings alone cannot guarantee their effective participation in decisions that affect their lives without having the knowledge of factors constraining them and putting in place facilitation mechanisms that ensure their quality participation.

Similarly, leadership skill and knowledge play an important role in ensuring quality participation of both men and women members in cooperative affairs. This could happen if and only if cooperative leaders have well understandings of gender based constraints disabling women’s active participation in cooperative activities and decisions making regarding cooperative matters. Discussion with cooperative and leadership members has confirmed that they lack the basic leadership knowledge and facilitation skills. All the participants of the FGDs with various groups noted the same story. They lack the capacity to notice existing gender based constraints affecting the performance of the cooperatives they are in charge of leadership position. Though, they witnessed women members, who are very small in number, are performing more than their men counterparts, they do not have mechanisms in place that enables them increase women’s membership and exploit more their potential/agency for the betterment of their cooperatives. They require tailor made capacity development interventions that aimed at strengthening their leadership skills and ability to identify gender based constraints with strategies how to overcome them.

4.2.9 Reflection and synthesization of learning processes

The cooperative leadership across the study sites are composed of different committees with various roles. The committees (management, controlling, marketing, fund rising, training and mobilization committees etc.) have been established in order to put in place effective administration mechanisms. Although, all these committees are not uniformly present across

the assessed cooperatives, they are represented in aggregated form as management committee with more or less similar activities. The training and mobilization committee is responsible to organize various capacity development activities for the leadership and cooperative members. They are also responsible for doing the documentation and systematization of learning processes. Nevertheless, they lack the capacity as mentioned by participants in the FGDs. Even if the cooperatives have registered a number of success stories, it is hard to find such stories in documented form. Although, the coop leadership documented minutes of leadership meetings, no documenting practices observed with regards to cooperative success factors and failures across the assessed breeding cooperatives. Yet, it is very urgent to support respective cooperatives to start systematically documenting the process, success stories and challenges encountered which could be used for own development and shared with others interested in setting up similar interventions.

It was noted during the assessment that woreda offices and development partners such as NGOs are showing interest in the breeding cooperative and thinking to expand similar approaches to other sheep/goats potential areas. However, if they could not able to find documented experiences/lessons from the existing breeding cooperatives which can serve as lively cases, they might not effective in intensifying the approach.

4.2.10 Partnerships with other development actors

The breeding cooperatives assessed developed partnership with various development actors in the respective study sites such as research centres, woreda cooperative promotion office, woreda office of agriculture and livestock development agency, and kebele administration. These actors are providing different services to the breeding cooperatives although their level of engagement and coordination among them varies across the study areas with active engagement and good coordination at Bonga, moderate at Doyogena and weak coordination at Menz and T/Abergelle sites.

The research centre is providing various services such as technical support, trainings, vet services and market facilitation whereas the woreda office of cooperative promotion across the study areas are providing services including facilitation during establishment, formation of management committees, develop by-laws, legalization, financial audition, trainings, market facilitation, facilitate land acquisition and etc. which are key for the functioning of the breeding cooperatives. The woreda office of agriculture and livestock development agency at Bonga and Doyogena started providing vet services and market facilitation to the breeding cooperatives while kebele administrations provided land to be used for building collections centres and offices across the study areas and forage development as in the case of Molale Woreda.

Among the service providers identified, respective research centres and cooperative promotion offices found to be the key supporters as witnessed across the study areas. They have the records of their cooperatives membership profiles disaggregated by gender although they are not questioning why women members are very small as compared to men members. As a result, they do not have mechanism in place to increase women members in the breeding cooperatives

as they are not as such aware of why women are not joining the breeding cooperatives in the first place.

Nevertheless, some of these actors such as the Woreda livestock development agency at Molale woreda, noted the importance of considering gender issues in promoting breeding cooperatives.

We understand that there is gender issues in sheep production and breeding cooperatives. The good thing is that, now, everyone (experts) know and agreed that most of the sheep and coop activities are undertaken by women. We hope that this is the beginning step for resolving gender issues and help women benefit from their work. Hence, immediate activities we need to work on is increasing the visibility of women's contribution in sheep production and breeding coops at household and in the community. And thus gender sensitization works are something that we need to arrange in sustainable manner, (Woreda livestock development officer, 23rd August 2017, Molale woreda, Menz Gera Midir).

The breeding cooperatives require different supports and services from various service providers to sustainably function with its full potential. Effective service provision requires good coordination mechanisms among service providers. The various service providers in the study areas play different roles important to the survival, growth and smooth functioning of the cooperatives. The breeding cooperatives are composed of men and women members. Service providers need to know the composition and moreover the interests and priorities of their target groups to better serve and meet their objectives. Nevertheless, across the study areas, the contacted service providers indicated that there is no as such strong communication and sense of working together for common goal. Such sentiments are heard from the Molale woreda office of agriculture "... we have no information as such about the breeding cooperatives. We often not communicate and seek support from each other as service providers ...". They also mentioned that ensuring coordination among these actors is a matter of an urgent issue to help grow, expand cooperatives and benefit both men and women members. The Doyogena Livestock Development Office suggested that having MoU among service providers could be the first step in ensuring coordination and commitment of service providers to the breeding cooperatives. This would also help to develop data sharing culture among service providers such as research and livestock development office which is currently not the case. Similarly, the Doyogena Woreda Cooperative Promotion Agency believed that the work of facilitating, establishing and monitoring breeding cooperatives has to be the role of the respective Woreda Cooperative Promotion Agency and thus need to own the work and take the leading role. This is evident from the following statements made by Doyogena Coop Promotion expert.

Currently, with regards to the breeding cooperatives in our area, we are playing a supportive role with weak linkage with other service providers including the research centre who is playing the leading role at the moment. Strong coordination mechanisms need to be in place in order to ensure sustainable and efficient provisions of services to the breeding cooperatives by service providers and the cooperative promotion office

has to play the leading role in this regards, (Getachew, 17th July 2017, Doyogena Coop Promotion Office).

On the other hand, there are initiatives to expand the breeding cooperatives in more woredas in the three regions covered by the study. For example, the woreda office of agriculture at Mehal Meda in Menz is planning to establish several breeding cooperatives in potential Kebeles of the target and similar other woredas. Likewise, the T/Abergelle woreda office of agriculture is hopping to use the existing breeding cooperative as a model to teach other farmers in other areas. They stated that they are convinced to make the existing cooperatives activities part of their annual plan to ensure that woreda will sustainably engage in providing required services to the goat breeding cooperative in their area.

5. Implications: What have we learnt

The process of setting up CBBP was participatory in addressing the participation of important SR value chain actors although the views of women in male headed households were not captured as they were not consulted. In-terms of targeting agro-ecology and farming system, site selections were well justified. Yet, gender context targeting was not equally considered. Nevertheless, efforts were made to understand and consider gender issues in the course of implementations. The programs so far have achieved important economic and social benefits for the participating men and women in the target sites.

The gender participation study, at least, aided to highlight the main gender issues in CBBP particularly in breeding cooperatives that affect the equal participation of female and male SR keepers in the breeding cooperatives in the study areas. The gender issues identified could be categorized in to two: gender based constraints (GBCs) emerging from gender relations at HH/community level and issues related to coop leadership/service providers' characteristics. Addressing these gender issues in the breeding cooperatives would help to ensure gender equality in voice and participation.

The gender based constraints (GBCs) as a result of the existing gender relations at HH/community level identified includes the wrong perception about men and women; low level of women's agency partly as a result of restricted mobility prevented them from taking part in trainings and meeting opportunities; lack of control over of HH assets (e.g. sheep/goats flock) due to unequal power relations at HH; and women's domestic work load which takes much of their time. These, generally, constrained women from meeting required conditions of formal group membership and leadership. The existing evidence has shown that the few women members, mostly head of HHs, has managed to access to and control over of important assets as a result of their membership to the breeding cooperatives implying that the breeding cooperatives can create similar opportunities to the women in male headed HHs if the other GBCs are addressed concurrently.

The coop leadership/service providers' characteristics recognized as part of the responsible factors to women's low level participation in breeding cooperatives is the limited ability of the leadership to recognize the GBCs and put in place mechanisms to react up on it. Moreover, it is also their lack of understanding the cooperative principles. The leadership and cooperative facilitators did not know that the cooperative principles actually allow women spouses to become members of cooperatives as long as they can fulfill membership conditions. Gender capacity development of coop leadership and facilitators is quite important to bring an improvement in this regard.

Although, documentation and synthetization of learning process is not observed being practiced with the breeding cooperatives, positive deviant cases are noted that can be used as an entry point in order to tackle the identified gender based constraints which are often very challenging to overcome through conventional approaches. Gender responsive approaches that are derived from communities' best practices (positive deviants) would be effective in overcoming GBCs to achieve women's quality participation in research and development

interventions. Likewise, the drivers of (de)motivation to participate in sheep/goats breeding cooperatives needs to be rigorously studied employing a more advanced research methodologies in order to establish robust evidences that can inform the gender strategy development for the flagship.

The breeding cooperatives across the study areas are obtaining various services although the demand for services outplays the current services at their disposal. If the existing service providers coordinate their services, the discussants believe that the current level of support would be greatly improved. Devising a functional coordination mechanisms and putting in place is crucial to insure sustainable support to the breeding cooperatives.

6. Action points for intervention

Capacity Development: The respective cooperative promotion agency has all the required human resources required to provide capacity development for, especially, the cooperative's leadership on issues such as cooperative principle, financial management, leadership skills etc. This could be supported with technical trainings on how to identify/recognize and act upon the gender based constraints (GBC) hampering participation of women in the breeding cooperatives by the research centres backstopped with ICARDA technical staffs. Moreover, the capacity development should also include synthetization and documentation of learning process of, particularly, success stories which could be used for scaling up/out strategies.

Introduce Gender Transformative Approaches: Much of the GBCs observed affecting women's ability to access social groups such as the breeding cooperatives and services offered by the various service providers could be overcome by a carefully identifications of best practices/ positive deviant case stories within the community and by integrating this with gender transformative approaches.

Introduce New Business Models: Members of the breeding cooperatives across the target sites supply rams/bucks in a regular manner. Out of all the supplied rams/bucks, about half of them are likely rejected either because it does not qualify all the required selection criteria or the cooperative can't afford to buy all because of lack of capital. These animals, then, allowed to be fattened by the HH for marketing. Nevertheless, particularly, women farmers are not fattening as a result of their limited access to fattening inputs due to various factors of which restricted mobility is one. Hence, it seems viable business opportunity for youth if they are supported to be organized as input suppliers which might be a win-win situation for both women and youth in the target areas.

Researchable Issues: More research is recommended to identify the drivers of (de)motivation to participate in sheep/goats breeding cooperatives using a more rigorous research methodologies in order to establish robust evidences that can inform the gender strategy development for the flagship. Moreover, understanding community perceptions with regards to the concept of control over of resource (resources generated as a result of one's membership to the breeding cooperatives) dynamics is essential as it helps in identifying and targeting gendered interventions in the CBBPs.

Coordination: Facilitate/initiate coordination meeting among the service providers that would lead to the establishment of MoU among the actors. The respective woreda cooperative promotion office is willing to take the leading role once the initial phase is laid out for them.

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Annex

Table 6. Gender roles in Sheep production, Boqa Shuta & Alargeta kebeles, Bonga district

Activities	Women Group			Men Group			Remarks
	M	W	Ch	M	W	Ch	
Shade construction	√	-	-	√	-	-	Preparing construction materials & building.
Breed Selection	√√	√	-	√√	√	-	This work includes breed selection during mating and purchase from market for production purpose
Feed preparation	-	√√	√	√	√√	√	Collection/caring of fodder from field, chopping & Mixing of feeds.
Supplementary feeding	√	√	-	√	-	-	Men's work if purchased from market but women's work if it is feeding with HH leftover.
Barn cleaning	-	√√	√		√		Regular removal of dungs from barns/draining of animal shed.
Health monitoring	√	√√	√	√	√	√	Taking to vet clinics for treatment is done by men while diseased animals are taken care of by women.
Water collection & watering	-	√	√	-	√	-	In the dry seasons, water is mostly fetched from river/streams away from home.
Herding	-	-	√	√	√	√√	Usually when it done away from homestead. Taking animals to the field for grazing & grazing animals.
Separating & Tethering (during night)	-	√√	√	-	√	-	Kids & weak animals are separated from flock for special management and big ones tied overnight
Flock monitoring	√	-	-	√	-	-	In case barn is separate from living rooms, barn will be monitored at least twice overnight.
Managing pregnant animal & Assisting during delivery	-	√√	-	-	√	-	Special care is done for pregnant animals. During delivery, sometimes they need to be assisted.
Marketing	√√	√	-	√√	√	-	Selling and buying animals from market
Managing income from sheep	√	-	-	√√	√	-	Income management includes control over of its expenditures & re-investment

Note: # of √ indicates level of participation in the particular activity.

Table 7. Gender participation in breeding cooperative activities, Boqa Shuta & Alergeta kebeles, Bonga district

Activities	Women Group			Men Group			Remarks
	M	W	Ch	M	W	Ch	
Registration fee preparation & registration	-	-	-	√	√	√	All HH members who wanted to be registered as breeding coop members need to make registration fee preparation
Ram selection at home & tagging	√√	√	-	√	√	√	This activity includes identification of good ram from flock to be supplied to the breeding cooperative for selection. Women participate only when men are not around.
Bringing ram to selection centre	√√	√	√	√√	√	√	It also includes tracking the animals to selection point.
Ram selection at breeding coop	√√	√	-	√	-	√	Women participate only when men are not around.
Participate in asset building of the coop	-	-	-	√	√	-	This activities includes meeting room construction and others properties of the coop.
Community mobilization	-	-	-	√	-	-	Registered member, mostly men, of the coop has the responsibility to create awareness about the benefit of the coop.
Managing the breeding ram	√	√√	√	√	√√	√	Men usually do the work of monitoring but the daily management of the ram is done mostly by women.
Monitoring inbreeding	-	-	-	√√	√	√	Men instruct all HH members to care for inbreeding.
Castration	√	√	-	-	-	-	Castrations of culled ram is usually done by technicians

Fattening of culled ram	√	√√	-	-	-	-	Feeding and daily care of the animal is the work of women although she is not member of the coop.
Participate in meetings arranged by the coop	√	√		√	√	√	Women & youth participate only if they are registered as member of the coop.
Reporting	√	√		√	√		Both men & women do but women do this work as they always available at home with the animals.
Forage plantation				√			Mostly done by husband who usually plough land.
Leadership meetings	√	√		√			Only those who are registered member and selected as member of the leadership make participation in this meeting.
Marketing at coop	√	√		√			Marketing of selected ram is done by the coop management committee where men mostly present.
Sharing dividend	√√	√		√			Women participate only if she is registered as member of the coop.
Income management				√		√	Includes decision on how to use & where to re-invest.

Table 8. Gender roles in sheep production, Serara Boqota and Ancha Sadicho Akebeles, Doyogena district

Activities	Women Group			Men Group			Description
	M	W	Ch	M	W	Ch	
Shade construction	√			√			
Breed Selection				√			This work includes breed selection during mating and purchase from market for production purpose
Feed preparation & feeding		√√	√	√	√√	√	
Supplementary feeding		√		√√	√		From market (men group), HH leftover (women group)
Barn cleaning		√√	√		√√	√	
Health monitoring		√		√√	√√		Men took sick animals to vet clinic, while women does all the identification & management activities.
Water collection & watering		√		√	√√	√	
Breeding (mating) management	√√	√		√√		√	Includes identification and assisting during mating. Women participate in identifying good breeds while men alone assist during mating.
Herding	√	√	√		√	√	
Separating & Tethering (during night)		√√	√		√√	√	
Managing pregnant animal & Assisting during delivery	√	√√		√√	√	√	
Washing fattened animals for marketing		√		√√		√	
Marketing	√√	√		√√		√	Children assist in taking the animals to market places.
Income management	√√	√		√			Includes decision on how to use & where to re-invest.

Table 9. Gender participation in breeding cooperative activities, Serara Boqota and Ancha Sadicho kebeles, Doyogena district

Activities	Women Group			Men Group			Description
	M	W	Ch	M	W	Ch	

Registration fee preparation & making registration				√			All HH members who wanted to be registered as breeding coop members need to make registration fee preparation
Ram selection at home & tagging	√	√		√	√	√	This activity includes identification of good ram from flock to be supplied to the breeding cooperative for selection. Women participate only when men are not around.
Bringing ram to selection centre	√	√		√		√	It also includes tracking the animals to selection point.
Ram selection at breeding coop	√			√			Women participate only when men are not around.
Participate in asset building of the coop	√	√					This activities includes meeting room construction and others properties of the coop.
Community mobilization				√			Sharing information about the benefits of the breeding coop and encouraging others to join the coop.
Managing the breeding ram		√					
Health monitoring				√	√	√	Mainly coordinating vet services.
Attend meetings arranged by the coop				√			Women & youth participate only if they are registered as member of the coop.
Reporting				√	√	√	Women do reporting in the absence of men, but the women group claim that in most cases men's are not present at home for various reasons.
Marketing	√	√		√			
Sharing dividend	√	√		√			Women participate only if she is registered as member of the coop.
Income management				√			Making decisions about re-investment.

Table 10. Gender roles in sheep production, Hadinet kebele, T/Abergelle district

Activities	Women group			Men Group			Description
	M	W	Ch	M	W	Ch	
Shade construction	√			√			
Feed preparation & feeding	√			√	√	√	Feeding the animals are done mainly by women although others participate in feed collection as to men group.
Supplementary feeding		√		√	√		
Barn cleaning		√	√√		√√	√	
Health monitoring	√		√	√		√√	
Water collection & watering		√			√	√	Watering is the work of women whereas children do the work of collection as to men group.
Herding	√	√	√√	√	√	√√	
Separating & Tethering (during night)			√	√	√	√	
Breeding management	√	√	√	√√		√	Selection of breed is usually done by men while all the management activities are done by women & children
Managing pregnant animal & Assisting during delivery	√		√	√		√√	
Marketing	√			√			
Income management	√	√		√	√		

Table 11. Gender participation in breeding cooperative activities, Hadinet kebele, T/Abergelle district

Activities	Women Group			Men Group			Description
	M	W	Ch	M	W	Ch	
Registration fee preparation & registration	√			√			
Ram selection at home & tagging	√			√			
Bringing ram to selection point	√			√			
Ram selection at breeding coop	√			√			
Participate in asset building of the coop	√			√			
Community mobilization	√			√			
Managing the breeding ram	√		√	√		√√	
Castration	√			√			
Fattening of culled ram	√	√	√	√			
Monitoring inbreeding	√		√	√		√√	
Participate in meetings arranged by the coop	√			√	√		
Reporting	√			√			
Forage plantation	√			√			
Health monitoring	√			√		√	
Marketing at coop market centre	√			√			
Sharing dividend	√		√	√			
Income management	√		√	√			

Note: engagement in most of the coop activities are determined by membership-ness.

Table 12. Gender roles in sheep production, Mehal Meda and Molale kebele, Menz Gera district

Activities	Women group			Men Group			Description
	M	W	Ch	M	W	Ch	
Shade construction	√√	√	√	√√	√	√	
Breed selection	√	√		√√	√	√	
Feed preparation & feeding	√	√	√	√√	√	√	Includes the work of forage plantation, collection, cutting & feeding as to women group.
Supplementary feeding	√√	√√	√	√√	√√	√√	From market (men group), HH leftover (women group)
Barn cleaning		√√	√		√√	√	Cleaning is done every morning as to women group.
Health monitoring	√√	√	√√	√	√√	√	Taking to vet clinic is usually the work of men & children; diseased animals are taken care of by women
Water collection & watering		√	√√		√	√√	This work includes taking animals to water points during dry season which is usually done by children.
Herding		√	√√	√	√√	√√	
Separating & Tethering (during night)	√	√	√	√	√	√√	Kids are separated from flock for safety during every night.
Breeding (mating) management	√√	√	√	√	√		Includes identification and assisting during mating. Women participate in identifying good breeds while men alone assist during mating.
Managing pregnant animal & Assisting during delivery	√	√√	√	√			

Washing fattened sheep for marketing	√	√	√	√	√	√√	
Shearing	√						Removing hair
Marketing	√√	√		√√	√		
Income management	√	√	√	√√	√		

Table 13. Gender participation in breeding cooperative activities, Mehal Meda & Molale kebeles, Menz Gera district

Activities	Women Group			Men Group			Description
	M	W	Ch	M	W	Ch	
Registration fee preparation & registration	√√	√		√√	√		All HH members who wanted to be registered as breeding coop members need to make registration fee preparations.
Ram selection at home & tagging	√	√	√	√	√	√	This activity includes identification of good ram from flock to be supplied to the breeding cooperative for selection. Women participate only when men are not around.
Bringing ram to selection point	√√	√	√	√√	√	√	It also includes tracking the animals to selection point.
Ram selection at breeding coop	√√	√		√	√		Women participate only when men are not around.
Participate in asset building of the coop	√	√	√	√√	√	√	This activities includes meeting room construction and others properties of the coop.
Community mobilization	√	√		√	√	√	
Managing the breeding ram	√	√	√	√	√	√	
Castration	√			√			Castrations of culled ram is usually done by technicians
Fattening of culled ram	√	√			√	√	
Monitoring inbreeding	√	√		√	√	√	
Participate in meetings arranged by the coop	√√	√		√√	√		Women & youth participate only if she is registered as member of the coop or husband is not around.
Reporting	√√	√	√	√√	√	√	Reporting is done by children as well because they are usually with animals as to women group.
Forage plantation	√√	√	√	√			
Monitoring health of selected ram	√	√		√	√	√	Mainly coordinating vet services.
Leadership meetings	√			√			Only those who are registered member and selected as member of the leadership make participation in this meeting.
Marketing at coop market centre	√	√		√			Estimating price/kg and negotiating. Women only participate in setting the price at home otherwise, it men.
Sharing dividend	√			√√	√		Women participate only if she is registered as member of the coop otherwise it men who does this work.
Income management	√	√		√	√		

Table 14. List of participants on the FGDs and KIIs

S.No	Target Site	Name	Sex	Respondent Category	Roles in/to the Breeding Coops	Other Roles
1	Menz Gera Midir District, Amahar Region	Wude Getahun	F	WMHH	Registered Member	Farmer, 07 Sena Amba
2		Ijigayehu Abebe	F	WMHH	Registered Member	Farmer, 07 Sena Amba
3		Beletu Tesfaneh	F	WHH	Spouse is member	Farmer, 07 Sena Amba
4		Shuweki Wondimagegn	F	WHH	Spouse is member	Farmer, 07 Sena Amba
5		Sinkinesh Bizu	F	WMHH	Registered Member	Farmer, 07 Sena Amba
6		Maseresha Temeselehu	F	WHH	Spouse is member	Farmer, 07 Sena Amba
7		Tadelech Aschenaki	F	WMHH	Registered Member	Farmer, 07 Sena Amba
8		Birishet Aschalew	F	WHH	Spouse is member	Farmer, 07 Sena Amba
9		Abozenech Tenaw	F	WHH	Spouse is member	Farmer, 07 Sena Amba
10		Amsale Tibebe	F	WMHH	Registered Member	Farmer, 07 Sena Amba
11		Admasu Asefa	M	MHH	Registered Member	Farmer, 07 Sena Amba
12		Tesfa Tilahun	M	MHH	Registered Member	Farmer, 07 Sena Amba
13		Tefera Aschenaki	M	MHH	Registered Member	Farmer, 07 Sena Amba
14		Agachew Kasahe	M	MHH	Registered Member	Farmer, 07 Sena Amba
15		Belay Asefa	M	MHH	Registered Member	Farmer, 07 Sena Amba
16		Tebikew Cherinet	M	MHH	Registered Member	Farmer, 07 Sena Amba
17		Addis Beshawuredi	M	MHH	Registered Member	Farmer, 07 Sena Amba
18		Geremew Lema	M	MHH	Registered Member	Farmer, 07 Sena Amba
19		Aschenaki Bewalehu	M	MHH	Registered Member	Farmer, 07 Sena Amba
20		K/Getachew T/Wold	M	MHH	Registered Member	Farmer, 07 Sena Amba
21		Getamesahi Tilahun	M	MHH	Registered Member	Leadership Member
22		Semiyehu Ferede	M	MHH	Registered Member	Leadership Member
23		Shimelis Kifelehu	M	MHH	Registered Member	Leadership Member
24		Kefalehi Negash	M	MHH	Registered Member	Leadership Member
25		Desalehu Hailu	M	MHH	Registered Member	Leadership Member
26		Dinku Aschenaki	M	MHH	Registered Member and Coop Facilitator	Coop Facilitator
27		Yifiru Demeke	M	Expert	Service Provider	Woreda Livestock office
28		Asirat	M	Expert	Service Provider	Woreda Livestock office
29		Shewandagn	M	Expert	Service Provider	Woreda Coop Promotion office
30	YeshidinberMulatu	M	Expert	Service Provider	Legal officer, WCPO	
31	Menz Mama Midir, Amhara Region	Tiruwork gebre	F	WHH	Registered Member	Farmer, Yecha Molale
32		W/Medin Guchale	F	WMHH	Spouse is member	Farmer, Yecha Molale
33		Mabirat Tilaye	F	WHH	Registered Member	Farmer, Yecha Molale
34		Bizunesh Wondmagegn	F	WMHH	Spouse is member	Farmer, Yecha Molale
35		Genet Tesfa	F	WMHH	Spouse is member	Farmer, Yecha Molale
36		Bizuayehu G/Hiwot	F	WHH	Registered Member	Farmer, Yecha Molale
37		Membere Woldmariam	F	WMHH	Spouse is member	Farmer, Yecha Molale
38		Tirunesh Demisie	F	WHH	Registered Member	Farmer, Yecha Molale
39		Tsighe Mamo	F	WHH	Registered Member	Farmer, Yecha Molale
40		Habtamu Buchale	M	WHH	Coop facilitator	DA
41		Gebre Habte	M	Expert	Service Provider	Molale Woreda Coop Mgmt. Officer
42		Getacher Tesfaye	M	Expert	Service Provider	Molale Woreda Coop P&M Officer
43		Adeferes W/Meskel	M	Expert	Service Provider	Woreda Animal Health Mgmt Process Owner
44		Abeje kelkel	M	Expert	Service Provider	Woreda Livestock Development Expert
45		Aseggedech Tibebe	F	Expert	Service Provider	Woreda Livestock Expert
46		Tesfaye Deribe	M	Expert	Service Provider	Woreda Livestock Expert
47		Asefa Inayilalu	M	MHH	Registered Member	Farmer, Yecha kebele
48		Behailu Mekasha	M	MHH	Registered Member	Farmer, Yecha kebele
49		Ayele T/Yohanis	M	MHH	Registered Member	Farmer, Yecha kebele

50		G/Meskel W/Yohanis	M	MHH	Registered Member	Farmer, Yecha kebele
51		Yeshidagn Tefere	M	MHH	Registered Member	Farmer, Yecha kebele
52		Asaye W/Amanuel	M	MHH	Registered Member	Farmer, Yecha kebele
53		Moges Ishete	M	MHH	Registered Member	Leadership Member
54		Sintayehu G/Haile	M	MHH	Registered Member	Leadership Member
55		Begash Agonafer	M	MHH	Registered Member	Leadership Member
56		Getahun Mamo	M	MHH	Registered Member	Leadership Member
57	Tirfe G/Egziabiher	M	MHH	Registered Member	Leadership Member	
58	Abergelle, Tigray Region	Tamene Abay	M	MHH	Registered Member	Farmer, Aadinet Kebele
59		Made Beyene	M	MHH	Registered Member	Farmer, Aadinet Kebele
60		K/Girmay Beyene	M	MHH	Registered Member	Farmer, Aadinet Kebele
61		Gerase Gesew	M	MHH	Registered Member	Farmer, Aadinet Kebele
62		Hagos G/Michael	M	MHH	Registered Member	Farmer, Aadinet Kebele
63		Kahsay Geday	M	MHH	Registered Member	Farmer, Aadinet Kebele
64		Hadush W/Hiwot	M	MHH	Registered Member	Farmer, Aadinet Kebele
65		K/G/zher Meles	M	MHH	Registered Member	Farmer, Aadinet Kebele
66		Abriha Goshu	M	MHH	Registered Member	Farmer, Aadinet Kebele
67		Alemayehu Geytsey	M	MHH	Registered Member	Farmer, Aadinet Kebele
68		Belay G/Medin	M	MHH	Registered Member	Farmer, Aadinet Kebele
69		Hagos Abreha	M	MHH	Registered Member	Farmer, Aadinet Kebele
70		Senbetu Alemayehu	F	WHH	Registered Member	Farmer, Aadinet Kebele
71		Beletech Kiros	F	WHH	Registered Member	Farmer, Aadinet Kebele
72		Temertsu Abriha	F	WHH	Registered Member	Farmer, Aadinet Kebele
73		Mulualem Aferese	F	WHH	Registered Member	Farmer, Aadinet Kebele
74		Minayesh Tafere	F	WHH	Registered Member	Farmer, Aadinet Kebele
75		Zenebech G/Michael	F	WMHH	Spouse is member	Farmer, Aadinet Kebele
76		Tsehay Alemayeh	F	WHH	Registered Member	Farmer, Aadinet Kebele
78		Tsehayereda W/Aregay	F	WHH	Registered Member	Farmer, Aadinet Kebele
79		Birzay Desalegn	F	WMHH	Spouse is member	Farmer, Aadinet Kebele
80		Weresech Legesse	F	WHH	Registered Member	Farmer, Aadinet Kebele
81		Tadele Adaneh	M	MHH	Registered Member	Leadership Member
82		Desalegn Takele	M	MHH	Registered Member	Leadership Member
83		G/Meskel G/Egziabiher	M	MHH	Registered Member	Leadership Member
84		Asefeta Gessesew	M	MHH	Registered Member	Leadership Member
85		G/Mariam Mesferia	M	MHH	Registered Member	Leadership Member
86		Shishay Abriluley	M	MHH	Registered Member	Leadership Member
87		Muruts Haile	M	Facilitator	Facilitator	
88		Beyene Goshu	M	Kebele Admin.	Kebele Admin.	
89		Sindayo Gebrezgi	M	DA	Service provider	
90		Hiwet Girma	F	DA	Service provider	
91		Bonga, SNNP Region	Garo Ayele		Facilitator	Service provider
92	Temesgen Getahun			Expert	Service provider	Woreda Coop Promotion Head
93	Marito Gebre			Expert	Service provider	Woreda Livestock & Fishery office
94	Tamiru Takele		M	MHH	Registered Member	Leadership Member
95	Menegash Ambo		M	MHH	Registered Member	Leadership Member
96	Zerihun Haile		M	MHH	Registered Member	Leadership Member
97	Habtamu Haile		M	MHH	Registered Member	Leadership Member
98	Fikire Kebeto		F	WHH	Registered Member	Leadership Member
99	G/Michael Mamo		M	MHH	Registered Member	Leadership Member
100	Zelege Haile		M	MHH	Registered Member	Leadership Member
101	Birihanu Gebre		M	MHH	Registered Member	Farmer, Boka Shuta
102	Adelo W/Senbat		M	MHH	Registered Member	Farmer, Boka Shuta
103	Abebe Ambo		M	MHH	Registered Member	Farmer, Boka Shuta
104	Kochito Abate		M	MHH	Registered Member	Farmer, Boka Shuta
105	Atireso Takele		M	MHH	Registered Member	Farmer, Boka Shuta

106		Admasu Arude	M	MHH	Registered Member	Farmer, Boka Shuta
107		Kento Garamo	M	MHH	Registered Member	Farmer, Boka Shuta
108	Doyogena Woreda, SNNP Region	Gizaw H/yesus	M	MHH	Registered Member	Farmer, Boka Shuta
109		W/Michael Gibo	M	MHH	Registered Member	Farmer, Boka Shuta
110		Eshetu Haile	M	MHH	Registered Member	Farmer, Boka Shuta
111		Hailemariam Gebre	M	MHH	Registered Member	Farmer, Boka Shuta
112		Worknesh Bonyo	F	WHH	Registered Member	Farmer, Boka Shuta
113		Gebayinesh Gayo	F	WHH	Registered Member	Farmer, Boka Shuta
114		Messeret Assefa	F	WMHH	Spouse is Member	Farmer, Boka Shuta
115		Kocheche Tamiru	F	WHH	Registered Member	Farmer, Boka Shuta
116		Aselefech Yeshe	F	WHH	Registered Member	Farmer, Boka Shuta
117		Ayelech Yerbusho	F	WHH	Registered Member	Farmer, Boka Shuta
118		Workinesh W/Michael	F	WMHH	Spouse is Member	Farmer, Boka Shuta
119		Almaz Gibo	F	WHH	Registered Member	Farmer, Boka Shuta
120		Assenakech Gebre	F	WHH	Registered Member	Farmer, Boka Shuta
121		Aniko Areno	M	MHH	Registered Member	Farmer, Alergeta
122		Getachew Gebre	M	MHH	Registered Member	Farmer, Alergeta
123		Tesema Keto	M	MHH	Registered Member	Farmer, Alergeta
124		Melaku Kochito	M	MHH	Registered Member	Farmer, Alergeta
125		Girma Gebre	M	MHH	Registered Member	Farmer, Alergeta
126		Gaweto Girma	M	MHH	Registered Member	Farmer, Alergeta
127		Lema Gebre	M	MHH	Registered Member	Farmer, Alergeta
128		Sebile Kero	M	MHH	Registered Member	Farmer, Alergeta
129		Mengash W/Yohanis	M	MHH	Registered Member	Farmer, Alergeta
130		Aberash Assefa	F	WHH	Registered Member	Farmer, Alergeta
131		Aberash Keto	F	WHH	Registered Member	Farmer, Alergeta
132		Almaz Haile Michael	F	WHH	Registered Member	Farmer, Alergeta
133		Abiyot Assefa	F	WHH	Registered Member	Farmer, Alergeta
134		Alemnesh Assefa	F	WHH	Registered Member	Farmer, Alergeta
135		Adugna Ademo	F	WHH	Registered Member	Farmer, Alergeta
136		Almaz Haile	F	WHH	Registered Member	Farmer, Alergeta
137		Worke Amamo	F	WHH	Registered Member	Farmer, Alergeta
138		Birtukan Assefa	F	WHH	Registered Member	Farmer, Alergeta
139		Azelach Assefa	F	WHH	Registered Member	Farmer, Alergeta
140		Abeyansh H/Michael	F	WHH	Registered Member	Farmer, Alergeta
141		Agenagnaw Assefa	M	MHH	Registered Member	Leadership Member, Boqa Shuta
142		Gezahegn Gareno	M	WHH	Registered Member	Leadership Member, Boqa Shuta
143		H/Mariam Gebre	M	MHH	Registered Member	Leadership Member, Boqa Shuta
144		Aselefech Yeshe	F	MHH	Registered Member	Leadership Member, Boqa Shuta
145		Getahun Gebeyehu	M	Expert	Woreda Coop Promotion office	
146		Alemu Bufebo	M	Facilitator	Serara Bokota	
147		Matiyos Desta	M	Facilitator	Areka Agri. Res. Centre	
148		Mulatu Handone	M	Facilitator	Ancha Sadicha	
149	Belay Elias	M	Expert	Service provider	Woreda Livestock and Fishery office	
150	Tadesse Ergicho	M	Facilitator	Ancha Sadicha		
151	Markos Obola	M	Facilitator	Serara Bokota		
152	Dutamo Gadama	M	MHH	Registered Member	Farmer, Ancha Sadicha	
153	Kebede Agore	M	MHH	Registered Member	Farmer, Ancha Sadicha	
154	Terefe Amado Tadele Moor	M	MHH	Registered Member	Farmer, Ancha Sadicha	
155	Opiso Habebo	M	MHH	Registered Member	Farmer, Ancha Sadicha	
156	Wolde Basha	M	MHH	Registered Member	Farmer, Ancha Sadicha	

157		Selemon Shanko	M	MHH	Registered Member	Farmer, Ancha Sadicha
158		Abera Basore	M	MHH	Registered Member	Farmer, Ancha Sadicha
159		Kebebush Desalegn	F	WHH	Registered Member	Farmer, Ancha Sadicha
160		TAdelech Petros	F	WHH	Registered Member	Farmer, Ancha Sadicha
161		Abebech Abera	F	WHH	Registered Member	Farmer, Ancha Sadicha
162		Abebech Lombamo	F	WHH	Spouse is Member	Farmer, Ancha Sadicha
163		Alemitu Ergicho	F	WMHH	Registered Member	Farmer, Ancha Sadicha
164		Shega Tesfaye	F	WHH	Registered Member	Farmer, Ancha Sadicha
165		Abayinesh Tefera	F	WHH	Registered Member	Farmer, Ancha Sadicha
166		Amelework Adise	F	WHH	Registered Member	Farmer, Ancha Sadicha
167		Martha Melese	F	WMHH	Spouse is Member	Farmer, Ancha Sadicha
168		Mulunesh Degu	F	WHH	Registered Member	Farmer, Ancha Sadicha
169		Change Dale	M	MHH	Registered Member	Farmer, Ancha Sadicha
170		Hailu Bizore	M	MHH	Registered Member	Farmer, Ancha Sadicha
171		Tafera Shenebo	M	MHH	Registered Member	Farmer, Ancha Sadicha
172		Ababe Erang	M	MHH	Registered Member	Farmer, Ancha Sadicha
173		Kebebush Bekele	F	WHH	Registered Member	Farmer, Ancha Sadicha
174		Ayele Hibibo	M	MHH	Registered Member	Farmer, Ancha Sadicha
175		Dasta Tirebo	M	MHH	Registered Member	Farmer, Ancha Sadicha
176		Titina Edilu	F	WHH	Registered Member	Farmer, Ancha Sadicha
177		Sheguta Dale	M	MHH	Registered Member	Farmer, Ancha Sadicha
178		Mulugeta Daniel	M	MHH	Registered Member	Farmer, Ancha Sadicha
179		Matiyos Shamebo	M	MHH	Registered Member	Farmer, Serara Bokota
180		Tesema Deboche	M	MHH	Registered Member	Farmer, Serara Bokota
181		Abera Abate	M	MHH	Registered Member	Farmer, Serara Bokota
182		Abiro Boke	M	MHH	Registered Member	Farmer, Serara Bokota
183		Abera Boke	M	MHH	Registered Member	Farmer, Serara Bokota
184		Abo Herome	M	MHH	Registered Member	Farmer, Serara Bokota
185		Birhano Latebo	M	MHH	Registered Member	Farmer, Serara Bokota
186		Mulachew Anchiso	M	MHH	Registered Member	Farmer, Serara Bokota
187		Shitaye Demise	F	WMHH	Spouse is Member	Farmer, Serara Bokota
188		Shubise Badero	F	WHH	Registered Member	Farmer, Serara Bokota
189		Aster Gebre	F	WHH	Registered Member	Farmer, Serara Bokota
190		Fikre Haile	F	WMHH	Spouse is Member	Farmer, Serara Bokota
191		Zenebech Haile	F	WHH	Registered Member	Farmer, Serara Bokota
192		Adanech Arficho	F	WHH	Registered Member	Farmer, Serara Bokota
193		Mulu Ayele	F	WMHH	Spouse is Member	Farmer, Serara Bokota
194		Abebech G/Michael	F	WHH	Registered Member	Farmer, Serara Bokota
195		Anebo Chefamo	M	Kebele Admin	Service provider	Serara Bokota, Kebele Administration
196		Alefa Handiso	M	Kebele Admin	Service provider	Serara Bokota, Kebele Administration
197		Detame Desalegn	F	Kebele Admin	Service provider	Serara Bokota, Kebele Administration